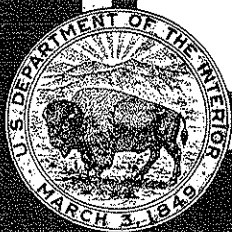


Water Resources Data for New Mexico Water Year 1977



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NM-77-1

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

CALENDAR FOR WATER YEAR 1977

1976

OCTOBER

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Water Resources Data for New Mexico Water Year 1977



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NM-77-1

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

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. W. Menard, Director

For additional information on the
water program in New Mexico write to
District Chief, Water Resources Division
U.S. Geological Survey
P. O. Box 26659
Albuquerque, New Mexico 87125

1978

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 W. E. Hale, District Chief, and A. Clebsch Jr., Regional Hydrologist, Central Region. It was done in cooperation with the State of New Mexico and with other agencies.

This report is one of a series issued by State. General direction for the series is by J. S. Cragwall, Jr., Chief Hydrologist, U.S. Geological Survey, and G. W. Whetstone, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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16. Abstracts Water resources data for the 1977 water year for New Mexico consist of records of discharge and water quality of streams; stage, contents and water quality of lakes and reservoirs; and water levels and water quality in wells and springs. This report contains discharge records for 212 gaging stations; stage and contents for 24 lakes and reservoirs; water quality for 69 gaging stations, 15 partial-record stations, 1 reservoir, 3 springs and 161 wells; and water levels for 98 observation wells. Also included are 149 crest-stage partial-record stations and 3 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in New Mexico.			
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VI GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

[Letter after station name designates type of data: (b) biological, (c) chemical, (d) discharge, (e) elevation, stage or contents, (m) microbiological, (s) sediment, (t) water temperature]

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WATER RESOURCES DATA FOR NEW MEXICO, 1977

INTRODUCTION

Water resources data for the 1977 water year for New Mexico consist of records of discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This report contains discharge records for 212 gaging stations; stage and contents for 24 lakes and reservoirs; water quality for 69 gaging stations, 15 partial-record stations, 1 reservoir, 3 springs, and 161 wells; and water levels for 98 observation wells. Also included are 149 crest-stage partial-record stations and 3 low-flow 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, 604 South Pickett Street, Alexandria, Virginia, 22304.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released in separate reports. Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. 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, this report is identified as "U.S. Geological Survey Water-Data Report NM-77-1." Water-Data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia, 22161.

COOPERATION

The U.S. Geological Survey and organizations of the State of New Mexico have had cooperative agreements for the systematic collection of streamflow records since 1930, for ground-water levels since 1934, 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,
J. B. Walker, succeeded by J. L. Cathey, commissioner for New Mexico,
R. B. McGowen, Jr., commissioner for Texas.

New Mexico State Highway Department, J. A. Bird, State Highway engineer.

Costilla Creek Compact Commission, S. E. Reynolds, commissioner for New Mexico,
C. J. Kuiper, commissioner for Colorado.

Albuquerque Metropolitan Arroyo Flood Control Authority, J. D. Smith,
executive engineer.

Financial assistance for the collection of water-resources data published in this report was furnished by the Corps of Engineers, U.S. Army, for 25 gaging stations; by the Bureau of Reclamation, U.S. Department of Interior, for 7 gaging stations; by the Bureau of Land Management, U.S. Department of Interior, for 5 gaging stations; by the Bureau of Indian Affairs, U.S. Department of Interior, for 4 gaging stations; by the National Park Service, U.S. Department of Interior, for 1 gaging station; by the Federal Highway Administration, U.S. Department of Transportation, for research study on small drainage areas, and by the Environmental Protection Agency for several water-quality stations.

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

Organizations that furnished data are recognized in the station descriptions.

HYDROLOGIC CONDITIONS

As is common in New Mexico, streamflow varied considerably during the 1977 water year. This holds true with respect to both time and geographic location. The variations are related to differences in precipitation, temperature, topography, and geology. The yearly mean discharge for the 1977 water year and the relation to the median of yearly mean discharge for the base period 1941-70 for five index stations is given below.

Station	Discharge ft ³ /s	Percent of median
Rayado Creek at Sauble Ranch	5.26	49
Rio Grande below Taos Junction Bridge	283	45
Pecos River at Santa Rosa	57.8	68
Delaware River near Red Bluff	2.60	25
Gila River near Gila	84.5	99

The mean discharge for the water year was deficient (in lowest 25 percent of record for base period) for most unregulated streams except in the Gila River basin where it was near median. The mean annual discharge was lowest of record for the Animas River near Cedar Hill. The mean discharge for the months of May and June were the lowest of record for the Rio Grande below Taos Junction Bridge.

Storage in Conchas Lake and Lake Sumner increased during the year but storage in all other major reservoirs decreased significantly during the year.

No major floods occurred during the year.

The low annual runoff over most of the state degraded the chemical quality of the surface water. This was particularly true in the Rio Grande and San Juan River basins where the weighted average of dissolved-solids content was higher than for several preceding years. The weighted average of dissolved solids was the highest since 1967 for Rio Grande at Otowi Bridge and San Juan River at Shiprock.

Ground-water levels continued to decline throughout most of the state due to below average precipitation and heavy ground-water withdrawal. New minimum levels were observed in 32 wells.

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 about 326,000 gallons or 1,233 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 + 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 + 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in 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 + 1.0°C on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/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 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 (FT³/S, ft³/S) 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 the amount of substance present in true chemical solution. In practice, however, the term includes all forms of substance that will pass through a 0.45-micrometer membrane filter, and thus may include some very small (coloidal) suspended particles. Analyses are performed on filtered samples.

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

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

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. 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 (CaCO₃).

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

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 syntnetic detergent compounds.

Micrograms per gram (UG/G, $\mu\text{g}/\text{g}$) 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, $\mu\text{g}/\text{L}$) 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.

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

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

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

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells/mL of sample.

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

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

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

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

Milligrams of carbon per area or volume per unit time [$\text{mg C}/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg C}/(\text{m}^3 \cdot \text{time})$] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [$\text{mg O}_2/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg O}_2/(\text{m}^3 \cdot \text{time})$] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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 homogenous 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 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 (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45 micrometer filter.

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 (as used in tables of chemical analyses) refers to the amount of a substance that is present both in solution and in suspension. Analyses are performed on representative samples of water-suspended sediment mixtures.

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.

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 following 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, minutes, and seconds 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 1 below.

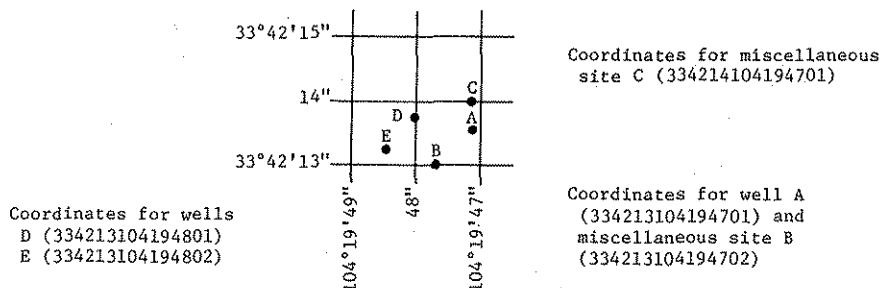


Figure 1.--System for numbering wells, springs, and miscellaneous sites.

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; 08407500, Pecos River near Red Bluff; 08481500, Rio Tularosa near Bent; and 09368000, San Juan River at Shiprock.

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

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States. Included in this program are stations 08313000, Rio Grande at Otowi Bridge, near San Ildefonso; 08358300, Rio Grande conveyance channel at San Marcial; 08358400, Rio Grande floodway at San Marcial; 09368000, San Juan River at Shiprock; and 09431500, Gila River near Red Rock.

Surveillance network stations are surface-water stations selected for water-quality examinations for water-quality control purposes. These stations are usually located at key regulatory streamflow gaging stations or near the statelines. Data for major inorganic constituents, nutrients, dissolved oxygen, and bacteria are collected at all these stations. Data for trace elements, radiochemicals, and pesticides are collected at some of these stations. Included in this network are stations 07221500, Canadian River near Sanchez; 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; 08363840, Rio Grande at Vinton Bridge near Anthony; 08379500, Pecos River near Anton Chico; 08383500, Pecos River near Puerto de Luna; 08396500, Pecos River near Artesia; 08405260, Pecos River below Six Mile Dam; 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. In this report records are published on a calendar year basis except for annual maximums at crest-stage stations, which are published on a water-year basis..

The description 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 station 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 above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "National Geodetic Vertical Datum of 1929" as used by the Topographic Division of the Geological Survey unless otherwise qualified.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station 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 record 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 two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is 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 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Other data available

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

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

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

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

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

Water analysis

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

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water temperature

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

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

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

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

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

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

Biological data

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

Parameter Codes

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 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 1.

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.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four 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, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office. Prices are effective January 1978 but are subject to change.

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. \$1.60.
- 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. \$0.85
- 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. \$1.90.
- 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. \$1.75.
- 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. \$1.00.
- 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. \$0.35.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. \$0.40.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS.--Continued

- 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. \$1.00.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. \$0.35.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968, 13 pages. \$1.00.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. \$1.40.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. \$1.25.
- 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. \$1.20.
- 3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. \$0.35. Not currently available.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. \$0.70.
- 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. \$2.50.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. \$0.65.
- 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. \$2.50.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. \$2.10.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4 Chapter A1. 1968. 39 pages. \$1.60.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. \$0.35.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972, 18 pages. \$0.65.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. \$0.75.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. \$0.65.
- 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. \$1.10.
- 5-A1. *Methods for collection and analysis of water samples for dissolved minerals and gases*, by Eugene Brown, M. W. Skougstad, and M. J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. \$2.40.
- 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. \$0.80.
- 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. \$0.90.
- 5-A4.* *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P.E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages. \$20.00.
- 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. \$16.00.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. \$2.10.
- 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. \$2.30.
- 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. \$0.70.
- 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. \$1.10.

*These publications are available ONLY from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. They are in looseleaf format and are subscription items. Additional supplements will be issued to subscribers at no extra cost. Checks should be made payable to Superintendent of Documents. Requester should emphasize to Superintendent of Documents that this is a subscription item.

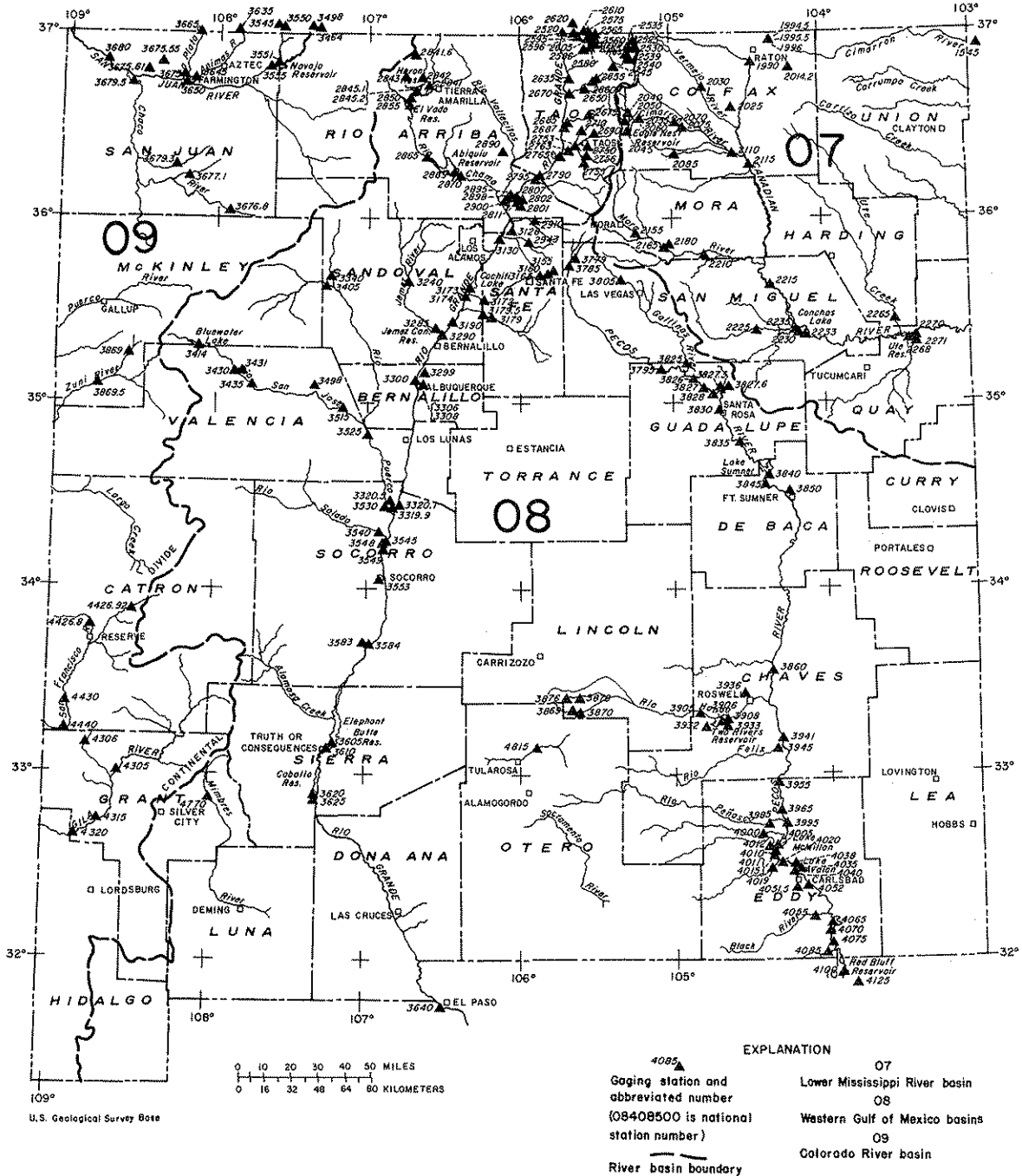


Figure 3.-- Map of New Mexico showing location of surface-water gaging stations.

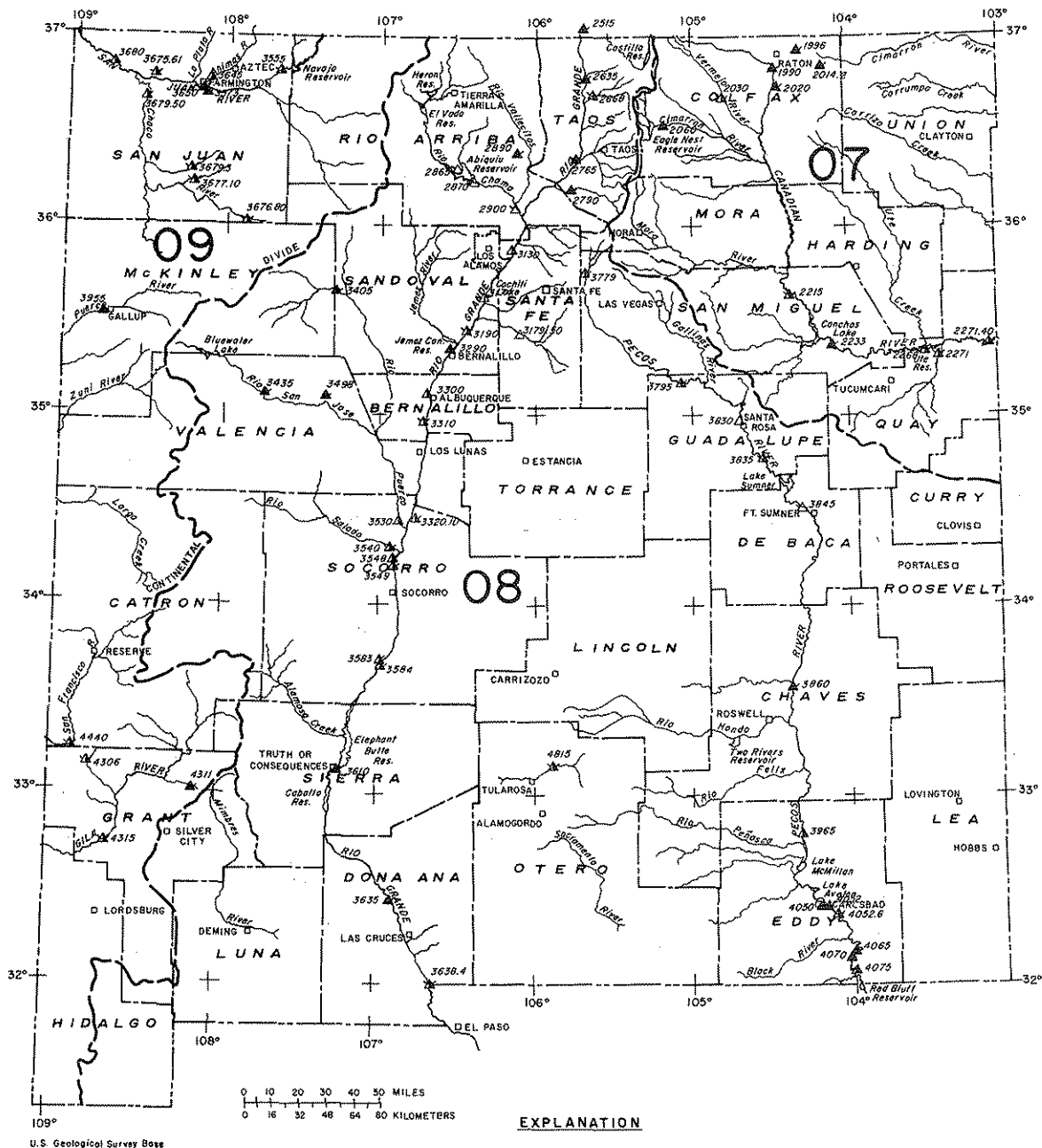


Figure 4.-- Map of New Mexico showing location of water-quality gaging stations.

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ARKANSAS RIVER BASIN

07154500 CIMARRON RIVER NEAR KENTON, OK

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.00	.05	.07	.02	.04	.00	4.6	34	.00	1.2	458
2	.00	.00	.05	.06	.03	.04	.00	3.5	25	.00	63	101
3	.00	.00	.05	.04	.02	.03	.00	2.5	23	.00	18	48
4	.00	.00	.08	.03	.04	.03	.00	1.8	18	.00	3.5	281
5	.00	.00	.05	.02	.04	.04	.00	1.0	16	.00	193	65
6	.00	.00	.03	.03	.03	.04	.00	.48	9.0	25	1470	60
7	.00	.00	.03	.04	.03	.04	.00	.30	7.0	36	134	17
8	.00	.00	.03	.04	.04	.04	.00	.22	6.0	.24	45	1.8
9	.00	.00	.05	.04	.04	.04	.00	.13	4.9	.00	25	.83
10	.00	.00	.05	.05	.03	.02	.00	.10	3.5	.00	111	.39
11	.00	.00	.05	.05	.04	.72	1.9	.22	2.5	.00	45	32
12	.00	.00	.03	.03	.02	16	681	.21	1.0	.00	104	46
13	.00	.00	.03	.02	.03	3.8	30	.24	.65	.00	471	9.5
14	.00	.00	.03	.02	.04	2.0	.83	5700	.13	.00	67	1.8
15	.00	.00	.03	.02	.06	3.2	.39	358	.05	.00	30	.83
16	.00	.00	.05	.03	.06	1.4	.13	32	.03	.00	16	3.5
17	.00	.00	.05	.03	.05	.92	.10	3.5	.00	.00	434	1.8
18	.00	.00	.05	.03	.04	.67	.08	3.0	.00	.00	88	1.0
19	.00	.00	.05	.03	.04	.39	2040	2.5	.00	.00	66	.83
20	.00	.00	.05	.08	.05	.18	618	1.8	28	.37	86	1.0
21	.00	.00	.05	.13	.06	.08	28	438	3.8	.30	48	.74
22	.00	.00	.05	.08	.04	.03	9.5	60	.22	393	390	.57
23	.00	.00	.05	.02	.02	.00	5.2	51	.00	68	83	.39
24	.00	.00	.04	.02	.02	.00	3.2	285	5.6	6.2	49	.65
25	.00	.00	.04	.02	.05	.00	.91	7050	34	.31	44	.74
26	.00	.03	.04	.06	.08	.00	.22	312	5.0	204	33	.48
27	.00	.14	.04	.03	.06	.00	.10	94	1.2	473	27	.39
28	.00	.05	.04	.02	.04	.00	.08	63	.16	58	24	.39
29	.00	.03	.02	.09	---	.00	.10	51	.00	8.5	19	.48
30	.00	.05	.02	.06	---	.00	47	45	.00	2.2	38	.39
31	.00	---	.05	.03	---	.00	---	38	---	1.8	182	---
TOTAL	.05	.30	1.33	1.32	1.12	29.75	3466.74	14603.10	228.74	1276.92	4407.7	1136.50
MEAN	.002	.010	.043	.043	.040	.96	116	471	7.62	41.2	142	37.9
MAX	.05	.14	.08	.13	.08	16	2040	7050	34	473	1470	458
MIN	.00	.00	.02	.02	.02	.00	.00	.10	.00	.00	1.2	.39
AC-FT	.10	.6	2.6	2.6	2.2	59	6880	28970	454	2530	8740	2250
CAL YR 1976	TOTAL	4319.02	MEAN	11.8	MAX	1650	MIN	.00	AC-FT	8570		
WTR YR 1977	TOTAL	25153.57	MEAN	68.9	MAX	7050	MIN	.00	AC-FT	49890		

ARKANSAS RIVER BASIN

07199000 CANADIAN RIVER NEAR HEBRON, NM

LOCATION.--Lat 36°47'14", long 104°27'42", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, near right bank at downstream end of bridge pier on U.S. Highways 64 and 85, 3.1 mi (5.0 km) north of Hebron, 5.0 mi (8.0 km) upstream from Chicorica Creek, 8.0 mi (12.9 km) south of Raton, and at mile 888.1 (1,429.0 km).

DRAINAGE AREA.--229 mi² (593 km²).

WATER-DISCHARGE RECORDS

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 (1,904 m), from topographic map. See WSP 1921 for history of changes prior to Aug. 18, 1965.

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

AVERAGE DISCHARGE.--31 years, 7.37 ft³/s (0.209 m³/s), 5,340 acre-ft/yr (6.58 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,400 ft³/s (1,770 m³/s) June 17, 1965, gage height, 28.2 ft (8.60 m), from floodmarks, present datum, from rating curve extended above 1,300 ft³/s (37 m³/s) on basis of slope-area measurement of peak flow; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1942 reached a stage of about 28 ft (8.5 m), present datum, at site 150 ft (46 m) upstream, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
July 25	1800	1,150	32.6	4.76	1.451	Aug. 20	1630	1,180	33.4	4.78	1.457
July 27	1730	*a7,150	202	7.75	2.362	Sept. 10	2000	1,690	47.9	5.12	1.561

a From rating curve extended above 250 ft³/s (7.1 m³/s) as explained above.

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.05	.06	.05	.07	.06	.03	.06	.04	.03	46	.00
2	.02	.05	.06	.05	.07	.08	.03	.06	.04	.03	.01	.01
3	.02	.05	.07	.04	.07	.08	.03	.08	.03	.03	.00	.73
4	.96	.05	.07	.03	.08	.11	.03	.06	.02	.01	.00	.32
5	.04	.05	.07	.03	.08	.11	.03	.06	.02	.02	.56	.03
6	.04	.06	.06	.02	.08	.11	.04	.06	.02	24	.01	.02
7	.03	.06	.06	.01	.08	.11	.04	.06	.02	6.6	.00	.01
8	.03	.06	.07	.01	.08	.11	.04	.06	.02	.03	.00	.01
9	.03	.06	.07	.01	.08	.14	.04	.06	.02	.02	.00	.01
10	.03	.06	.07	.01	.09	.11	.04	.08	.02	.01	1.0	75
11	.03	.06	.07	.01	.09	.91	.06	.08	.03	.00	.34	12
12	.03	.05	.07	.02	.09	.60	.04	1.1	.03	.00	.00	.00
13	.04	.05	.07	.04	.09	.11	.04	1.5	.03	.00	.00	.00
14	.04	.05	.08	.04	.09	.06	.06	1.0	.03	.00	.00	.00
15	.04	.06	.08	.04	.09	.04	.17	.21	.03	.00	.00	.00
16	.04	.07	.08	.04	.10	.04	.08	.10	.02	.00	.00	.00
17	.04	.07	.07	.04	.10	.04	.04	.05	.02	.00	9.9	.00
18	.04	.08	.07	.04	.10	.06	.08	.04	.02	.00	5.7	.00
19	.04	.08	.06	.04	.10	.08	2.4	.04	.04	.00	1.1	.00
20	.04	.08	.05	.05	.10	.17	.56	.04	.06	.00	38	.00
21	.04	.07	.04	.05	.09	.21	.10	.04	.04	12	21	.00
22	.04	.07	.04	.05	.09	.21	.08	.04	.04	50	.04	.00
23	.04	.07	.04	.05	.08	.17	.06	.04	.11	.25	.04	.00
24	.04	.06	.05	.05	.06	.17	.06	.10	5.3	.15	.03	.00
25	.04	.06	.05	.05	.06	.14	.06	.30	.10	65	.02	.00
26	.04	.06	.06	.05	.06	.08	.06	.10	.05	47	.02	.00
27	.04	.05	.06	.06	.06	.06	.06	.05	3.6	357	.02	.00
28	.04	.04	.05	.06	.07	.04	.06	.04	.03	.61	.02	.00
29	.05	.05	.05	.06	---	.03	.06	.04	.06	.00	.86	.00
30	.05	.06	.05	.07	---	.03	.06	.04	.05	.00	.14	.00
31	.05	---	.05	.07	---	.04	---	.04	---	.00	.02	---
TOTAL	2.07	1.79	1.90	1.24	2.30	4.31	4.54	5.63	9.94	562.79	124.83	88.14
MEAN	.067	.060	.061	.040	.082	.14	.15	.18	.33	18.2	4.03	2.94
MAX	.96	.08	.08	.07	.10	.91	2.4	1.5	5.3	357	.46	.75
MIN	.02	.04	.04	.01	.06	.03	.03	.04	.02	.00	.00	.00
AC-FT	4.1	3.6	3.8	2.5	4.6	8.5	9.0	11	20	1120	248	175

CAL YR 1976 TOTAL 1675.74 MEAN 4.58 MAX 684 MIN .00 AC-FT 3320
WTR YR 1977 TOTAL 809.48 MEAN 2.22 MAX 357 MIN .00 AC-FT 1610

NOTE.--No gage-height record Oct. 21 to Nov. 27.

ARKANSAS RIVER BASIN

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07199000 CANADIAN RIVER NEAR HEBRON, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPECIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
OCT 21...	0925	.04	3030	7.7	2.0	1300	1100	290	140	310	3.7	5.5
DEC 15...	1455	.09	3000	7.7	.0	1200	1000	280	130	300	3.7	4.3
JAN 11...	1405	.01	4150	7.4	.0	2000	1500	420	220	510	5.0	7.9
FEB 09...	1220	.10	1910	7.8	.5	760	600	190	70	170	2.7	2.8
MAR 09...	1045	.12	2920	7.8	6.0	1200	980	280	130	290	3.6	4.6
APR 06...	1500	.04	2810	7.8	15.0	1100	920	260	120	290	3.7	5.9
MAY 02...	1700	.03	2870	6.8	21.5	1100	940	250	120	300	3.9	5.4
JUN 01...	1245	.04	2770	7.7	9.0	1100	910	260	120	300	3.9	4.7
JUN 28...	1435	.03	2920	7.8	--	--	--	--	--	--	--	--
JUL 27...	1500	.04	2290	6.8	--	980	810	270	75	210	2.9	12
AUG 22...	1755	.05	2770	7.7	25.0	1200	1000	300	110	240	3.0	8.9
SEP 29...	1520	.01	3440	7.7	16.0	1500	1300	340	150	300	3.4	8.1

DATE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTIT- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT 21...	296	0	1600	24	.3	9.2	2850	2530	.01	.00	70	10
DEC 15...	265	0	1500	22	.2	8.4	--	2380	.08	--	--	--
JAN 11...	511	0	2400	43	.4	15	--	3870	.18	--	--	--
FEB 09...	199	0	900	13	.2	5.0	--	1450	.06	--	--	--
MAR 09...	316	0	1500	22	.2	7.7	--	2390	.04	--	--	--
APR 06...	270	0	1400	21	.4	7.5	2520	2240	.04	.01	60	30
MAY 02...	220	0	1400	27	.3	9.6	--	2220	.01	--	--	--
JUN 01...	280	0	1500	24	.2	10	--	2360	.01	--	--	--
JUN 28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 27...	210	0	1300	16	.4	10	--	2000	.48	--	--	--
AUG 22...	250	0	1400	19	.4	11	--	2210	.18	--	--	--
SEP 29...	230	0	1900	20	.3	10	3110	2840	.05	.00	90	10

ARKANSAS RIVER BASIN

07199450 LAKE MALOYA NEAR RATON, NM

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

DRAINAGE AREA.--20.8 mi² (53.9 km²).

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

GAGE.--Nonrecording gage. Altitude of gage is at mean sea level, from topographic map.

REMARKS.--Reservoir is formed by an earthfill dam, completed in 1907; capacity, 59 acre-ft (72,700 m³). Reservoir enlarged in 1916; capacity, 1,130 acre-ft (1.39 hm³), spillway elevation, 7,479.0 ft (2,279.60 m). Reservoir enlarged again in 1948; capacity, 4,000 acre-ft (4.93 hm³), spillway elevation, 7,511.0 ft (2,289.35 m). Elevation of lowest outlet, 7,439.0 ft (2,267.41 m). No dead storage. Water is for municipal use of city of Raton.

COOPERATION.--Elevations furnished by city of Raton. Capacity table furnished by New Mexico Interstate Stream Commission.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 3,970 acre-ft (4.90 hm³) May 31, 1975, elevation, 7,510.79 ft (2,289.289 m); minimum observed, 2,120 acre-ft (2.61 hm³) Sept. 30, 1977, elevation, 7,493.49 ft (2,284.016 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,070 acre-ft (3.79 hm³) Apr. 30, elevation, 7,503.08 ft (2,286.939 m); minimum observed, 2,120 acre-ft (2.61 hm³) Sept. 30, elevation, 7,493.49 ft (2,284.016 m).

07199550 LAKE ALICE NEAR RATON, NM

LOCATION.--Lat 36°57'15", long 104°23'06", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, near spillway of dam on Chicorica Creek, 4.4 mi (7.1 km) northeast of Raton, and at mile 19.2 (30.9 km).

DRAINAGE AREA.--29.4 mi² (76.1 km²).

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

GAGE.--Nonrecording gage. Altitude of gage is at mean sea level, from topographic map.

REMARKS.--Reservoir is formed by an earthfill dam, completed in 1892; capacity 100 acre-ft (123,000 m³), spillway elevation, 7,078.0 ft (2,157.37 m). Reservoir rehabilitated in 1941; capacity, 71 acre-ft (87,500 m³), spillway elevation, 7,089.6 ft (2,160.91 m). Elevation of lowest outlet, 7,064.1 ft (2,153.14 m). No dead storage. Water is for municipal use of city of Raton.

COOPERATION.--Elevations furnished by city of Raton.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 70 acre-ft (86,300 m³) May 31, 1975, elevation, 7,089.55 ft (2,160.895 m); minimum observed, 48 acre-ft (59,200 m³) Dec. 31, 1976, elevation, 7,085.3 ft (2,159.60 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 62 acre-ft (76,400 m³) Feb. 28, elevation 7,087.9 ft (2,160.39 m); minimum observed, 48 acre-ft (59,200 m³) Dec. 31, elevation, 7,085.3 ft (2,159.60 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
07199450 LAKE MALOYA				07199550 LAKE ALICE		
Sept. 30, 1976.....	7,497.50	2,500	-	7,087.4	59	-
Oct. 31.....	7,496.69	2,420	- 80	7,087.1	58	- 1
Nov. 30.....	7,496.03	2,360	- 60	7,086.7	56	- 2
Dec. 31.....	7,495.27	2,290	- 70	7,085.3	48	- 8
CAL YR 1976	-	-	-790	-	-	-14
Jan. 31, 1977.....	7,493.95	2,170	-120	7,087.3	58	+10
Feb. 28.....	7,493.52	2,130	- 40	7,087.9	62	+ 4
Mar. 31.....	7,500.25	2,780	+650	a7,087.7	60	- 2
Apr. 30.....	7,503.08	3,070	+290	a7,087.4	59	- 1
May 31.....	7,502.52	3,010	- 60	7,087.13	58	- 1
June 30.....	7,500.22	2,770	-240	7,086.83	56	- 2
July 31.....	7,497.36	2,490	-280	7,085.79	51	- 5
Aug. 31.....	7,496.05	2,360	-130	7,087.60	60	+ 9
Sept. 30.....	7,493.49	2,120	-240	7,086.57	55	- 5
WTR YR 1977	-	-	-380	-	-	- 4

a estimated

07199600 CHICORICA CREEK NEAR YANKEE, NM

LOCATION.--Lat 36°55'50", long 104°22'24", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, on right bank 1.0 mi (1.6 km) upstream from East Fork, 1.8 mi (2.9 km) downstream from Lake Alice, 2.8 mi (4.5 km) southwest of Yankee, 4.2 mi (6.8 km) northeast of Raton, 4.1 mi (6.6 km) downstream from Lake Maloya, and at mile 17.4 (28.0 km).

DRAINAGE AREA.--32.5 mi² (84.2 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 6,795 ft (2,070 m), from topographic map.

REMARKS.--Water-discharge records fair except those for winter period, which are poor. Flow regulated by Lake Maloya (station 07199450) and Lake Alice (station 07199550). See tabulation below for monthly diversion from these reservoirs for municipal supply of city of Raton. A ditch on left bank 600 ft (180 m) upstream could divert entire flow of Chicorica Creek during periods of low flow; this ditch was plugged Oct. 11, 1975, and no further diversions have been noted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5.0 ft³/s (0.142 m³/s) June 6, 1976, gage height, 2.40 ft (0.732 m) from rating curve extended above 0.16 ft³/s (0.005 m³/s) on basis of slope-area measurement at gage height 9.25 ft (2.819 m); no flow several days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 17, 1965, reached a stage of 9.25 ft (2.819 m), present datum, from floodmarks (discharge, 2,230 ft³/s or 63.2 m³/s, by slope-area measurement). The flood of May 18, 1955, was computed as 2,230 ft³/s (63.2 m³/s) by flow-over-dam method at Lake Maloya 4.1 mi (6.6 km) upstream and, according to a local resident, exceeded the flood of June 1965 at the present site.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2.8 ft³/s (0.079 m³/s) Aug. 17, gage height, 2.04 ft (0.622 m), from rating curve extended as explained above; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.11	.11	.06	.10	.05	.03	.16	.02	.00	.00	.00
2	.04	.11	.12	.06	.11	.05	.03	.05	.01	.00	.00	.00
3	.06	.11	.14	.06	.10	.05	.03	.04	.01	.00	.00	.05
4	.13	.11	.15	.05	.10	.04	.02	.04	.00	.00	.01	.13
5	.08	.11	.15	.05	.10	.05	.03	.05	.00	.00	.00	.00
6	.10	.10	.13	.06	.10	.05	.03	.04	.00	.00	.00	.00
7	.20	.10	.14	.05	.10	.05	.03	.04	.00	.00	.00	.00
8	.12	.11	.15	.02	.11	.02	.03	.04	.00	.00	.00	.00
9	.09	.11	.14	.03	.13	.02	.03	.04	.00	.00	.00	.00
10	.08	.12	.14	.06	.15	.03	.03	.04	.00	.00	.00	.12
11	.08	.12	.13	.08	.16	.05	.04	.04	.00	.00	.00	.14
12	.07	.10	.13	.07	.15	.10	.04	.05	.00	.00	.00	.06
13	.08	.13	.14	.08	.11	.15	.04	.17	.00	.00	.00	.03
14	.08	.13	.14	.07	.08	.12	.04	.13	.00	.00	.00	.02
15	.08	.11	.13	.08	.06	.10	.41	.04	.00	.00	.00	.00
16	.08	.12	.13	.08	.05	.10	.18	.03	.00	.00	.00	.00
17	.09	.14	.13	.08	.03	.12	.07	.02	.00	.00	.29	.00
18	.09	.12	.12	.08	.04	.10	.14	.02	.00	.00	.10	.00
19	.10	.12	.10	.09	.03	.09	.33	.02	.00	.00	.12	.00
20	.09	.12	.05	.08	.03	.09	.30	.09	.00	.00	.11	.01
21	.09	.12	.02	.09	.02	.09	.15	.12	.00	.02	.07	.00
22	.10	.14	.05	.09	.03	.09	.09	.02	.06	.04	.03	.00
23	.10	.12	.06	.08	.05	.06	.05	.01	.02	.00	.00	.01
24	.09	.12	.06	.09	.10	.06	.05	.01	.18	.00	.00	.00
25	.10	.11	.07	.08	.05	.05	.04	.08	.00	.06	.00	.00
26	.13	.11	.08	.09	.05	.04	.04	.02	.00	.02	.00	.00
27	.13	.10	.09	.10	.04	.04	.04	.01	.00	.00	.00	.00
28	.12	.08	.09	.10	.04	.04	.05	.00	.00	.00	.00	.00
29	.13	.09	.08	.10	---	.04	.10	.00	.00	.00	.00	.00
30	.12	.10	.07	.09	---	.03	.29	.01	.00	.00	.00	.00
31	.11	---	.05	.10	---	.03	---	.01	---	.00	.00	---
TOTAL	2.96	3.39	3.29	2.30	2.22	2.00	2.78	1.44	.30	.14	.73	.57
MEAN	.095	.11	.11	.074	.079	.065	.093	.046	.010	.005	.024	.019
MAX	.20	.14	.15	.10	.16	.15	.41	.17	.18	.06	.29	.14
MIN	.00	.08	.02	.02	.02	.02	.02	.00	.00	.00	.00	.00
AC-FT	5.9	6.7	6.5	4.6	4.4	4.0	5.5	2.9	.6	.3	1.4	1.1
(†)	112	98	94	91	86	104	113	161	245	227	176	161

CAL YR 1976 TOTAL 42.31 MEAN .12 MAX 1.5 MIN .00 AC-FT 84 † 1680
WTR YR 1977 TOTAL 22.12 MEAN .061 MAX .41 MIN .00 AC-FT 44 † 1670

† Diversion, in acre-feet, from Lake Maloya and Lake Alice for municipal supply of city of Raton.

NOTE.--No gage-height record Dec. 29 to Feb. 9.

ARKANSAS RIVER BASIN

07199600 CHICORICA CREEK NEAR YANKEE, NM -- Continued

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPECIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SURP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
OCT 21...	1420	.16	385	7.8	9.5	120	0	31	11	29	1.1	2.4
DEC 15...	1320	.14	487	8.1	.0	180	0	46	16	40	1.3	1.8
JAN 11...	1138	.08	599	7.9	.0	180	0	45	16	40	1.3	1.6
FEB 09...	1024	.11	480	8.0	.5	180	0	45	16	42	1.4	1.4
MAR 09...	1310	.01	469	8.2	6.0	170	0	42	15	41	1.4	1.2
APR 06...	1350	.04	571	8.2	13.0	180	0	46	15	66	2.2	1.9
MAY 03...	1030	.04	579	7.1	15.5	190	0	46	18	57	1.8	2.2
JUN 01...	1445	.02	549	8.3	8.0	180	0	39	19	56	1.8	2.3
JUN 28...	1200	.01	222	8.1	--	--	--	--	--	--	--	--
AUG 22...	1610	.01	535	7.3	24.5	39	0	11	2.8	91	6.3	4.7
SEP 20...	1650	.03	401	8.4	14.5	140	0	34	14	35	1.3	4.2

DATE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (REST- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTIT- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT 21...	200	0	30	2.6	.3	12	227	217	.06	.00	30	20
DEC 15...	265	0	45	3.8	.2	15	--	299	.13	--	--	--
JAN 11...	265	0	48	4.4	.2	14	--	300	.13	--	--	--
FEB 09...	246	0	57	5.5	.2	12	--	301	.03	--	--	--
MAR 09...	234	0	61	4.4	.2	9.8	--	290	.08	--	--	--
APR 06...	260	0	95	5.0	.4	11	369	370	.24	.01	30	40
MAY 03...	270	0	86	5.7	.2	12	--	361	.15	--	--	--
JUN 01...	240	0	94	5.5	.2	7.4	--	342	.02	--	--	--
JUN 28...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 22...	160	0	100	4.6	.3	9.0	--	308	1.2	--	--	--
SEP 20...	200	4	42	2.9	.2	13	233	248	.10	.00	30	20

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 (1.6 km) downstream from Throttle Dam and 13 mi (21 km) southeast of Raton.

DRAINAGE AREA.--49.5 mi² (128.2 km²).

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Water-discharge records good except hose for winter period and those above .5 ft³/s (0.14 m³/s), which are poor. Flow regulated by Throttle Reservoir, capacity 3,300 acre-ft (4.07 km³) 1 mi (1.6 km) upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 526 ft³/s (14.9 m³/s) Sept. 4, 1977, gage height, 4.24 ft (1.292 m), from rating curve extended above 4.4 ft³/s (0.12 m³/s) on basis of slope-area measurement of peak flow; no flow Jan. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 526 ft³/s (14.9 m³/s) Sept. 4, gage height, 4.24 ft (1.292 m), from rating curve extended as explained above; no flow Jan. 10.

REVISIONS.--The maximum discharges for the period May to September 1975 and water year 1976 have been revised to 94 ft³/s (2.66 m³/s) Aug. 9, 1975, gage height 2.75 ft (0.838 m), and 146 ft³/s (4.13 m³/s) July 15, 1976, gage height, 3.01 ft (0.917 m), superseding figures published in reports for 1975 and 1976.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.22	.20	.08	.09	.10	.06	2.1	2.2	1.0	4.6	.80
2	.19	.23	.20	.08	.09	.15	.06	2.0	2.2	1.1	1.7	1.0
3	.18	.25	.20	.07	.09	.15	.06	2.1	2.2	1.1	1.6	.69
4	.20	.25	.20	.06	.09	.15	.07	2.2	2.2	1.3	1.6	1.90
5	.20	.28	.20	.05	.09	.10	.05	1.7	2.2	3.0	1.9	.25
6	.20	.30	.20	.05	.10	.12	.05	1.8	2.3	2.5	1.8	2.5
7	.21	.35	.25	.03	.10	.20	.05	1.8	2.2	2.5	1.8	1.5
8	.22	.37	.25	.01	.10	.20	.05	1.8	2.1	3.6	1.9	1.0
9	.22	.38	.20	.01	.10	.20	.05	1.9	2.3	2.2	1.9	.95
10	.21	.45	.20	.02	.10	.20	.04	1.8	2.1	2.1	1.9	.95
11	.21	.40	.20	.05	.12	.10	.35	1.6	2.1	2.1	1.7	.95
12	.22	.35	.20	.05	.15	.12	.80	1.7	2.0	2.0	1.2	.95
13	.22	.30	.25	.05	.15	.20	1.0	1.4	2.0	2.1	1.2	.95
14	.25	.30	.25	.05	.15	.20	1.0	1.8	2.0	2.1	1.2	.95
15	.25	.30	.25	.05	.12	.20	1.9	1.2	2.2	2.1	1.4	.95
16	.25	.30	.20	.06	.15	.19	2.3	1.1	2.1	2.1	1.4	.95
17	.25	.30	.20	.06	.20	.14	1.7	1.1	2.2	1.9	1.5	.95
18	.25	.30	.20	.06	.20	.16	1.7	.98	2.2	1.8	1.4	.95
19	.26	.30	.15	.06	.20	.14	1.9	.47	2.1	1.8	1.5	.95
20	.26	.30	.10	.06	.20	.12	1.9	1.4	1.8	7.0	1.7	.94
21	.24	.30	.10	.07	.20	.10	1.8	2.1	1.9	1.6	4.5	.94
22	.20	.30	.10	.07	.15	.10	1.8	2.1	1.6	1.4	1.5	.87
23	.16	.30	.10	.07	.15	.09	1.9	2.1	1.6	1.4	1.3	.87
24	.18	.30	.10	.07	.20	.09	2.4	2.8	2.1	1.3	1.2	.87
25	.18	.30	.10	.07	.20	.09	2.5	2.1	1.4	2.0	1.2	.87
26	.19	.25	.10	.08	.15	.09	2.5	2.0	1.3	1.7	1.2	.87
27	.20	.20	.15	.08	.10	.07	2.5	2.0	1.3	1.7	1.2	.87
28	.20	.15	.15	.08	.10	.07	2.5	2.1	1.4	1.7	1.2	.81
29	.20	.15	.10	.08	---	.07	2.6	2.1	1.5	1.7	.97	.81
30	.22	.15	.10	.08	---	.06	2.1	2.2	1.3	1.7	.85	.81
31	.22	---	.05	.08	---	.06	---	2.1	---	3.7	.81	---
TOTAL	6.63	8.63	5.25	1.84	3.84	4.03	37.69	55.65	58.1	65.3	50.83	310.78
MEAN	.21	.29	.17	.059	.14	.13	1.26	1.80	1.94	2.11	1.64	10.4
MAX	.26	.45	.25	.08	.20	.20	2.6	2.8	2.3	7.0	4.6	190
MIN	.16	.15	.05	.01	.09	.06	.04	.47	1.3	1.0	.81	.80
AC-FT	13	17	10	3.6	7.6	8.0	75	110	115	130	101	616
CAL YR 1976	TOTAL 332.25	MEAN .91	MAX 7.1	MIN .05	AC-FT 659							
WTR YR 1977	TOTAL 608.57	MEAN 1.67	MAX 190	MIN .01	AC-FT 1210							

NOTE.--No gage-height record Feb. 2 to Mar. 8.

ARKANSAS RIVER BASIN

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

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPECIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
OCT 21...	1245	.27	699	7.9	8.0	290	110	62	32	32	.8	4.1
DEC 15...	1210	.34	838	7.8	.0	360	130	76	41	44	1.0	3.9
FEB 08...	1510	.10	824	8.0	.5	370	130	77	42	41	.9	3.9
MAR 09...	1215	.22	837	8.1	6.5	360	140	78	41	44	1.0	3.8
APR 06...	1015	.05	1140	7.8	4.0	510	280	110	58	65	1.2	3.1
MAY 03...	0840	2.0	562	7.2	10.5	240	78	54	26	26	.7	3.3
JUN 01...	0930	2.2	589	8.3	6.0	240	87	51	28	29	.8	3.5
28...	0920	1.5	609	7.8	23.0	--	--	--	--	--	--	--
JUL 27...	1030	1.7	650	7.2	17.0	240	69	57	24	29	.8	3.7
AUG 22...	1415	1.6	322	7.2	20.0	140	38	35	12	13	.5	3.4
SEP 20...	1115	.95	467	7.9	13.0	210	88	50	21	22	.7	4.1

DATE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTH0. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT 21...	220	0	180	4.1	.4	7.0	457	432	.25	.07	60	80
DEC 15...	283	0	200	5.5	.4	8.7	--	521	.45	--	--	--
FEB 08...	281	0	220	5.7	.4	7.7	--	537	.08	--	--	--
MAR 09...	275	0	240	5.7	.4	6.2	--	555	.11	--	--	--
APR 06...	290	0	400	8.5	.5	9.6	829	798	.02	.01	60	10
MAY 03...	200	0	130	3.4	.2	7.0	--	349	.23	--	--	--
JUN 01...	190	0	140	3.4	.2	3.0	--	352	.02	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 27...	210	0	130	3.5	.3	10	--	363	.45	--	--	--
AUG 22...	120	0	57	2.0	.3	8.7	--	193	.47	--	--	--
SEP 20...	150	0	130	2.9	.3	7.9	288	313	.28	.00	50	20

07202000 CHICORICA CREEK NEAR HEBRON, NM

LOCATION.--Lat 36°46'13", long 104°23'45", in SW¼SE¼SW¼ sec.4, T.29 N., R.24 E., Colfax County, Hydrologic Unit 11080001, at highway bridge near east boundary of Maxwell Grant, 300 ft (91 m) downstream from Una de Gato Creek, 4.4 mi (7.1 km) northeast of Hebron, and 9 mi (14.5 km) south of Raton.

DRAINAGE AREA.--381 mi² (987 km²).

PERIOD OF RECORD.--Water years 1966 to current year.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG. C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
OCT 13...	1205	.29	1640	8.0	14.0	660	440	140	76	110	1.9	5.2
DEC 15...	1405	1.7	2420	7.1	1.0	840	590	170	100	260	3.9	7.1
JAN 11...	1225	1.3	2420	7.0	.0	810	560	160	100	250	3.8	8.3
FEB 09...	1130	1.2	2290	7.4	.5	760	450	150	94	240	3.8	7.8
MAR 09...	1130	.58	2800	8.0	4.0	1100	790	210	140	310	4.1	5.2
APR 06...	1415	.32	2330	7.9	14.0	920	710	170	120	240	3.4	4.7
MAY 03...	1115	1.9	1810	6.7	17.0	650	440	130	80	190	3.2	4.3
JUN 01...	1215	.23	2450	8.0	8.0	--	--	--	--	--	--	--
JUN 28...	1340	.00	2120	7.6	--	800	590	160	97	220	3.4	5.7
JUL 27...	1410	4.8	1280	6.8	--	460	330	100	52	130	2.6	7.2
AUG 22...	1700	10	522	7.3	22.0	200	97	52	16	32	1.0	4.3
SEP 20...	1545	3.0	741	8.1	16.0	330	160	73	36	44	1.1	4.2

DATE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRATE PLUS NITRAIE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT 13...	270	0	680	18	.4	8.8	1300	1170	.08	.00	110	0
DEC 15...	305	0	990	52	.3	13	--	1780	8.3	--	--	--
JAN 11...	306	0	990	56	.5	14	--	1760	5.8	--	--	--
FEB 09...	380	0	880	55	.5	14	--	1630	.00	--	--	--
MAR 09...	374	0	1400	58	.4	9.0	--	2320	.67	--	--	--
APR 06...	250	0	1100	31	.5	7.1	2030	1800	.08	.01	110	10
MAY 03...	260	0	790	29	.4	5.2	--	1360	.20	--	--	--
JUN 01...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 28...	260	0	1000	29	.5	8.9	--	1650	.29	--	--	--
JUL 27...	160	0	560	25	.4	7.9	--	967	1.2	--	--	--
AUG 22...	120	0	160	5.2	.3	.8	--	331	.19	--	--	--
SEP 20...	210	0	240	5.4	.4	8.7	500	516	.12	.00	60	10

ARKANSAS RIVER BASIN

07202500 EAGLE TAIL DITCH NEAR MAXWELL, NM

LOCATION.--Lat 36°38'55", long 104°33'31", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, on left bank 25 ft (8 m) upstream from concrete drop structure, 300 ft (91 m) upstream from Crow Creek, and 7.5 mi (12.1 km) north of Maxwell.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,110 ft (1,860 m), from topographic map. Prior to May 1975, at site about 200 ft upstream at different datum.

REMARKS.--Records fair. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 217 ft³/s (6.15 m³/s) Aug. 27, 1946, from rating curve extended above 85 ft³/s (2.4 m³/s); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 118 ft³/s (3.34 m³/s) July 22, from rating curve extended above 40 ft³/s (1.1 m³/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00
2	.80	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.47	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.7	.00
4	.34	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.0	33
5	.20	.00	.01	.00	.00	.00	.00	.00	.00	.00	.16	106
6	1.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	35	16
7	.82	.00	.02	.00	.00	.00	.00	.00	.00	.00	5.7	8.6
8	.44	.00	.05	.00	.02	.00	.00	.00	.00	.00	.62	5.7
9	.21	.00	.04	.00	.05	.00	.00	.00	.00	.00	.08	4.3
10	.01	.00	.05	.00	.03	.00	.00	.00	.00	7.2	.00	3.9
11	.00	.00	.04	.00	.01	.00	.00	.00	.00	.21	.35	49
12	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	4.7	20
13	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.54	8.8
14	.00	.00	.05	.00	.00	.00	.00	.96	.00	.00	.02	1.7
15	.00	.00	.05	.00	.00	.00	.00	.76	.00	.00	.00	.33
16	.00	.23	.04	.00	.00	.04	.00	.00	.00	.00	1.6	.12
17	.00	.55	.03	.00	.00	.14	.00	.00	.00	.00	.90	.00
18	.00	.23	.02	.00	.00	.00	.00	.00	.00	.00	7.1	.00
19	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	30	.00
20	.00	.00	.00	.00	.00	.00	1.0	.00	.00	.00	13	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	35	31	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	118	50	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.4	17	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	9.3	.02	2.5	.00
25	.00	.00	.00	.00	.00	11	.00	.00	1.3	.00	.67	.00
26	.00	.00	.00	.00	.00	9.9	.00	.00	.21	25	.10	.00
27	.00	.00	.00	.00	.00	5.6	.00	.00	.00	5.2	.00	.00
28	.00	.00	.00	.00	.00	3.8	.00	.00	.00	22	.00	.00
29	.00	.00	.00	.00	---	2.1	.00	.00	.00	3.5	.00	.00
30	.00	.00	.00	.00	---	.91	.00	.00	.00	.47	.00	.00
31	.00	---	.00	.00	---	.40	---	.00	---	.01	.00	---
TOTAL	5.79	1.01	.50	.00	.11	33.89	1.07	1.72	10.81	288.01	208.74	257.45
MEAN	.19	.034	.016	.000	.004	1.09	.036	.055	.36	9.29	6.73	8.58
MAX	1.4	.55	.05	.00	.05	11	1.0	.96	9.3	118	50	106
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	11	2.0	1.0	.00	.2	67	2.1	3.4	21	571	414	511

CAL YR 1976 TOTAL 828.89 MEAN 2.26 MAX 129 MIN .00 AC-FT 1640
WTR YR 1977 TOTAL 809.10 MEAN 2.22 MAX 118 MIN .00 AC-FT 1600

NOTE.--No gage-height record Dec. 8 to Mar. 9.

07203000 VERMEJO RIVER NEAR DAWSON, NM

LOCATION.--Lat 36°40'50", long 104°47'08", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, on left bank 1.3 mi (2.1 km) north of Dawson, 2.3 mi (3.7 km) upstream from Rail Canyon, and at mile 22.5 (36.2 km).

DRAINAGE AREA.--301 mi² (780 km²).

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Altitude of gage is 6,365 ft (1,940 m), from topographic map. See WSP 1311 or 1731 for history of changes prior to Sept. 24, 1953.

REMARKS.--Water-discharge records poor. Diversions for irrigation of small acreage and mountain meadows above station.

AVERAGE DISCHARGE.--53 years (water years 1916-17, 1920, 1928-77), 18.0 ft³/s (0.510 m³/s), 13,040 acre-ft/yr (16.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1926).--Maximum discharge, 12,600 ft³/s (357 m³/s) June 17, 1965, gage height, 15.25 ft (4.648 m), from rating curve extended above 400 ft³/s (11 m³/s) on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred Aug. 2, 1921, when discharge probably exceeded 10,000 ft³/s (280 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 800 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 6	1915	2,060 58.3	7.15 2.179	Aug. 20	2130	1,460 41.3	6.28 1.914
July 25	1845	*a3,870 110	9.40 2.865	Aug. 21	2115	1,930 54.7	6.96 2.121
Aug. 19	1615	1,910 54.1	6.93 2.112				

a From rating curve extended above 95 ft³/s (2.69 m³/s) as explained above.

Minimum daily discharge, 0.50 ft³/s (0.014 m³/s) Jan. 8, but may have been less during periods of ice effect.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	2.6	1.5	1.2	2.2	3.5	2.9	6.1	6.5	3.5	4.8	3.5
2	1.6	2.7	1.5	1.1	2.5	4.0	3.3	4.5	4.0	2.6	9.8	4.2
3	1.5	2.7	1.5	1.1	2.3	4.0	3.0	4.0	4.1	2.4	6.9	5.9
4	1.6	2.9	1.6	1.1	2.4	3.5	2.5	5.0	5.3	1.8	6.0	6.5
5	1.7	3.0	1.4	.90	2.4	3.5	2.9	4.4	3.6	1.8	5.4	4.7
6	2.0	3.1	1.2	1.0	2.5	4.0	3.0	4.5	6.8	1.8	4.6	4.0
7	3.0	2.9	1.7	.90	2.6	7.3	2.7	5.0	5.2	2.0	4.3	3.5
8	2.7	3.0	1.7	.50	2.9	7.7	2.5	4.8	4.2	5.5	4.1	2.8
9	2.4	2.8	1.5	.80	3.2	5.5	2.3	4.6	4.4	3.0	30	2.3
10	2.3	2.7	1.5	1.4	3.2	4.7	2.3	4.2	4.8	5.8	6.6	2.0
11	2.1	2.6	1.4	1.1	3.2	4.0	2.7	5.0	4.0	2.4	6.2	2.1
12	1.8	2.5	1.5	.90	3.2	3.5	2.5	6.6	3.8	1.6	5.8	12
13	1.7	2.0	1.7	1.5	3.3	3.7	2.4	9.5	3.1	1.2	5.6	4.1
14	1.8	2.1	1.7	1.2	3.3	3.8	2.4	19	2.5	1.1	5.3	3.7
15	1.8	1.8	1.6	1.7	2.0	3.5	4.7	8.5	2.6	1.5	25	3.4
16	1.9	1.9	1.5	1.3	3.0	3.1	4.5	6.1	2.8	11	8.6	2.8
17	2.0	2.0	1.5	1.3	3.5	2.9	3.6	4.0	2.8	62	119	2.6
18	2.1	2.0	1.4	1.5	3.5	2.8	3.5	4.0	2.4	8.3	194	2.3
19	2.1	2.0	1.2	2.2	3.5	2.8	32	3.8	2.0	4.9	331	2.2
20	2.1	1.8	1.3	1.8	3.5	3.2	21	4.5	1.9	142	330	2.0
21	2.0	1.7	1.3	1.8	3.5	3.3	8.8	4.6	1.9	103	380	1.5
22	1.9	1.8	1.1	2.0	3.3	2.9	6.9	4.2	22	69	120	1.2
23	1.9	2.0	1.2	1.9	3.0	2.7	6.0	3.6	15	16	23	1.2
24	2.0	1.8	1.2	1.9	3.7	3.0	5.6	4.0	7.8	7.2	39	1.3
25	2.1	1.7	1.2	1.8	3.3	3.0	9.2	4.8	7.9	346	12	2.2
26	2.3	1.4	1.2	2.0	2.9	2.9	7.0	3.6	8.5	114	7.4	2.0
27	2.3	1.0	1.4	2.1	2.7	2.9	5.8	3.2	10	92	5.8	1.8
28	2.4	.90	1.4	2.1	2.5	3.1	16	2.9	4.8	20	5.6	1.5
29	2.6	1.0	1.2	2.0	---	2.6	50	2.1	14	15	5.0	1.2
30	3.0	1.2	1.2	1.9	---	2.2	8.8	2.0	20	10	4.2	1.2
31	2.7	---	1.0	2.0	---	2.4	---	17	---	7.6	3.7	---
TOTAL	65.0	63.60	43.3	46.00	83.1	112.0	230.8	170.1	249.9	1066.0	1761.9	91.7
MEAN	2.10	2.12	1.40	1.48	2.97	3.61	7.69	5.49	8.33	34.4	56.8	3.06
MAX	3.0	3.1	1.7	2.2	3.7	7.7	50	19	68	346	380	12
MIN	1.5	.90	1.0	.50	2.0	2.2	2.3	2.0	1.9	1.1	3.7	1.2
AC=FT	129	126	86	91	165	222	458	337	496	2110	3490	182

CAL YR 1976 TOTAL 3346.53 MEAN 9.14 MAX 500 MIN .87 AC=FT 6640
WTR YR 1977 TOTAL 3983.40 MEAN 10.9 MAX 380 MIN .50 AC=FT 7900

ARKANSAS RIVER BASIN

07203000 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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHANGE (CFS) (00061)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)
OCT 21...	1700	1.9	535	--	11.5	--	--	--
FEB 09...	1535	3.9	500	8.1	1.0	--	200	43
APR 07...	1005	2.7	547	7.6	4.0	2	--	--
MAY 02...	1600	4.8	460	7.9	21.0	--	170	34
JUN 27...	1615	5.6	463	7.8	25.0	--	180	43
JUL 29...	1030	18	480	--	17.0	--	--	--
AUG 23...	1110	21	517	7.5	19.0	--	--	--

DATE	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
OCT 21...	--	--	--	--	--	--	--	--	--
FEB 09...	56	15	28	.9	1.9	193	0	100	6.4
APR 07...	--	--	--	--	--	--	--	--	--
MAY 02...	43	14	33	1.1	2.6	160	0	91	5.9
JUN 27...	50	14	32	1.0	3.0	170	0	95	4.5
JUL 29...	--	--	--	--	--	--	--	--	--
AUG 23...	--	--	--	--	--	--	--	--	--

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTH0- PHOS- (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT 21...	--	--	--	--	--	--	--	--
FEB 09...	.7	7.8	309	312	.24	.01	20	20
APR 07...	--	--	--	--	--	--	--	--
MAY 02...	.7	6.3	280	276	.17	.01	20	0
JUN 27...	.6	9.0	273	292	--	--	30	10
JUL 29...	--	--	--	--	--	--	--	--
AUG 23...	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

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07203000 VERMEJO RIVER NEAR DAWSON, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)
OCT 21...	1700	1.9	11.5	23	.12
FEB 09...	1535	3.9	1.0	33	.35
APR 07...	1005	2.7	4.0	15	.11
MAY 02...	1600	4.8	21.0	58	.75
JUN 27...	1615	5.6	25.0	274	4.1
JUL 29...	1030	18	17.0	200	9.7

ARKANSAS RIVER BASIN

07204000 MORENO CREEK AT EAGLE NEST, NM

LOCATION.--Lat 36°33'14", long 105°16'03", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on right bank 175 ft (53 m) upstream from U.S. Highway 64, 250 ft (76 m) northwest of intersection of U.S. Highway 64 and State Highway 38, about 1,000 ft (300 m) upstream from high-water line of Eagle Nest Lake at Eagle Nest.

DRAINAGE AREA.--73.8 mi² (191.1 km²).

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

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

GAGE.--Water-stage recorder. Concrete control since Oct. 3, 1952. Datum of gage is 8,197.39 ft (2,498.564 m) above mean sea level. See WSP 1921 for history of changes prior to Oct. 26, 1955. Oct. 26, 1955, to Nov. 12, 1974, water-stage recorder at site 160 ft (49 m) downstream at datum 1.41 ft (0.430 m) lower.

REMARKS.--Records fair. Diversions for irrigation of about 1,200 acres (4.9 km²) above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 240 ft³/s (6.80 m³/s) Sept. 1, 1946, gage height, 3.10 ft (0.945 m), site and datum then in use; maximum gage height, 3.55 ft (1.082 m) May 12, 1973; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39 ft³/s (1.10 m³/s) at 1830 hours July 25, gage height 2.40 ft (0.732 m), no other peak above base of 35 ft³/s (0.99 m³/s); minimum, 0.05 ft³/s (0.001 m³/s) Aug. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.65					---	2.2	1.0	.38	.46	.30
2	.24	.64					---	2.1	.93	.36	.37	.34
3	.27	.68					---	1.9	.93	.33	.32	.57
4	.34	.71					---	1.8	.87	.74	.26	.61
5	.51	.74					---	1.6	.81	.76	.20	.82
6	.59	.69					---	1.5	.87	.63	.16	.60
7	.56	.67					---	1.4	1.2	.50	.11	.45
8	.52	.75					---	1.3	.94	.55	.10	.35
9	.50	.69					1.6	1.2	.84	.51	.12	.29
10	.35	.68					1.8	1.1	.83	.30	.13	.24
11	.31	.65					2.2	1.1	.78	.21	.23	.23
12	.29	.63					1.8	1.1	.76	.19	.63	.31
13	.27	.60					1.5	1.5	.56	.14	.41	.44
14	.26	.70					1.8	1.6	.44	.14	.27	.42
15	.27	.65					2.3	1.6	.35	.21	.26	.37
16	.27	.65					1.9	1.5	.29	.54	.24	.33
17	.29	---					1.8	1.2	.26	.35	1.4	.29
18	.33	---					1.6	1.1	.24	.18	1.3	.26
19	.31	---					2.1	1.1	.21	.36	1.2	.24
20	.32	---					2.7	1.1	.21	.32	1.1	.22
21	.35	---					2.7	1.1	.19	.33	1.0	.18
22	.44	---					2.9	1.0	.25	1.8	.98	.18
23	.47	---					2.7	.95	.46	1.6	.95	.24
24	.49	---					3.2	.94	1.8	1.0	.95	.16
25	.48	---					4.0	.91	2.3	3.9	.70	.16
26	.57	---					3.6	.89	1.3	2.2	.54	.18
27	.56	---					3.6	.84	.86	1.6	.43	.20
28	.57	---					2.0	.79	.78	2.2	.39	.15
29	.71	---					2.1	.76	.70	1.2	.35	.15
30	.67	---					2.3	.71	.54	.86	.36	.12
31	.69	---					---	.89	---	.66	.33	---
TOTAL	13.04	---					---	38.78	22.50	25.05	16.25	9.40
MEAN	.42	---					---	1.25	.75	.81	.52	.31
MAX	.71	---					---	2.2	2.3	3.9	1.4	.82
MIN	.24	---					---	.71	.19	.14	.10	.12
AC=FT	26	---					---	77	45	50	32	19

ARKANSAS RIVER BASIN

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07204500 CIENEGUILLA CREEK NEAR EAGLE NEST, NM

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

DRAINAGE AREA.--56 mi² (145 km²).

PERIOD OF RECORD.--April 1928 to September 1955 and June 1964 to current year (no winter records except in water years 1932, 1948 and 1951). Monthly discharge only for some periods, published in WSP 1311 and 1731. Records for December 1930 to March 1931, published in WSP 732, are unreliable and should not be used. Published as "near Therma" 1928-34.

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

GAGE.--Water-stage recorder. Concrete control since Sept. 25, 1947. Altitude of gage is 8,195 ft (2,498 m), from topographic map. Prior to May 8, 1928, nonrecording gage, and May 8, 1928 to Sept. 1, 1934, water-stage recorder at site 0.2 mi (0.3 km) downstream at different datums.

REMARKS.--Records good. Diversions for irrigation of about 1,000 acres (4.0 km²) above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 505 ft³/s (14.3 m³/s) June 16, 1965, gage height, 5.61 ft (1.710 m), from rating curve extended above 110 ft³/s (3.1 m³/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34 ft³/s (0.96 m³/s) Aug. 19, gage height, 3.52 ft (1.073 m), no peak above base of 70 ft³/s (2.0 m³/s); minimum determined, 0.14 ft³/s (0.004 m³/s) June 19-20, Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.95	2.1					---	7.6	1.8	.82	.91	.84
2	.94	2.1					---	6.6	2.1	.89	.78	4.1
3	.84	2.0					---	5.9	1.9	.91	.69	11
4	.91	2.0					---	5.2	1.3	1.9	.59	4.6
5	1.5	2.0					---	4.4	1.0	3.1	.67	3.6
6	1.4	2.0					---	4.2	1.0	2.0	.50	2.5
7	1.6	2.0					---	3.8	3.6	1.1	.26	2.1
8	1.6	1.9					14	3.4	1.8	1.8	.17	1.8
9	2.1	1.8					11	3.2	1.5	2.1	.22	1.5
10	2.1	1.7					10	3.1	1.1	1.0	.48	1.4
11	1.9	1.7					11	2.9	.95	.62	.78	1.4
12	1.8	1.6					8.8	3.0	.97	.54	1.7	1.6
13	1.7	1.5					8.3	4.7	.64	.46	1.1	2.9
14	1.7	2.0					8.3	6.4	.46	.44	.51	2.2
15	1.7	1.8					9.0	6.1	.35	.70	.61	1.8
16	1.6	1.8					8.6	4.7	.26	1.6	.64	1.6
17	1.5	---					8.6	3.6	.22	1.7	4.6	1.5
18	1.4	---					9.2	3.0	.17	1.0	4.3	1.3
19	1.4	---					14	2.8	.15	.60	8.6	1.3
20	1.5	---					17	2.8	.15	.57	9.6	1.1
21	1.5	---					13	2.9	.17	2.1	3.0	.97
22	1.8	---					12	2.5	.44	2.1	2.4	.98
23	1.9	---					11	2.3	2.2	2.0	2.6	1.6
24	2.1	---					11	2.2	3.6	1.2	2.0	1.3
25	2.0	---					12	2.6	5.6	1.1	1.7	1.1
26	2.1	---					12	2.3	2.9	1.4	1.3	1.0
27	2.0	---					11	2.1	1.8	3.8	1.0	1.0
28	2.1	---					9.0	1.9	1.3	2.4	.94	1.1
29	2.5	---					9.0	1.8	1.2	1.5	.90	1.0
30	2.2	---					8.6	1.7	1.2	1.0	.91	.95
31	2.3	---					---	1.6	---	.94	.96	---
TOTAL	52.64	---	---	---	---	---	---	111.3	41.83	43.39	55.42	61.14
MEAN	1.70	---	---	---	---	---	---	3.59	1.39	1.40	1.79	2.04
MAX	2.5	---	---	---	---	---	---	7.6	5.6	3.8	9.6	11
MIN	.84	---	---	---	---	---	---	1.6	.15	.44	.17	.84
AC-FT	104	---	---	---	---	---	---	221	83	86	110	121

ARKANSAS RIVER BASIN

07205000 SIXMILE CREEK NEAR EAGLE NEST, NM

LOCATION.--Lat 36°31'07", long 105°16'29", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on left upstream wingwall of concrete control, 250 ft (76 m) downstream from concrete box culvert on U.S. Highway 64, and 2.6 mi (4.2 km) southwest of Eagle Nest.

DRAINAGE AREA.--10.5 mi² (27.2 km²).

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

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

GAGE.--Water-stage recorder. Concrete control Sept. 11, 1931 to May 1933, and since Sept. 13, 1934. Datum of gage is 8,195.16 ft (2,497.885 m) above mean sea level. Prior to May 18, 1928, nonrecording gage at site 88 ft (27 m) upstream at datum 0.98 ft (0.299 m) higher. May 18, 1928 to Sept. 11, 1938, water-stage recorder at site 88 ft (27 m) upstream at datum 0.43 ft (0.131 m) higher.

REMARKS.--Records good. Diversions for irrigation of about 300 acres (1.2 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years (water years 1932, 1959-75), 2.51 ft³/s (0.071 m³/s), 1,820 acre-ft/yr (2.24 km³/yr).

EXTREMES FOR PERIOD OF RECORD (1930-55 and SINCE 1957).--Maximum discharge, 128 ft³/s (3.62 m³/s) Aug. 5, 1969, gage height, 2.86 ft (0.871 m), from rating curve extended above 32 ft³/s (0.91 m³/s); maximum gage height recorded, 3.38 ft (1.030 m) Apr. 2, 1937 (ice jam), site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8.6 ft³/s (0.24 m³/s) Apr. 19, gage height, 0.99 ft (0.302 m), no peak above base of 15 ft³/s (0.42 m³/s); minimum determined, 0.29 ft³/s (0.008 m³/s) Aug. 3, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	1.6					---	3.1	1.4	.73	.55	.51
2	.66	1.5					---	2.8	1.4	.75	.51	.77
3	.66	1.5					---	2.5	1.4	.92	.46	1.4
4	.71	1.5					---	2.2	1.4	1.2	.46	1.6
5	.81	1.6					1.6	2.0	1.3	1.4	.44	2.0
6	.92	1.5					1.9	1.8	1.4	1.3	.39	1.4
7	1.4	1.6					2.7	1.6	1.5	1.1	.36	1.2
8	1.3	1.6					3.7	1.5	1.4	2.5	.37	1.1
9	1.2	1.7					4.1	1.4	1.3	2.3	.45	.97
10	1.2	1.6					4.6	1.8	1.3	1.2	.54	.93
11	1.2	1.5					5.0	1.1	1.3	.88	.64	.89
12	1.2	1.4					4.4	1.2	1.3	.78	.87	1.3
13	1.1	1.3					3.9	1.5	1.2	.70	.74	1.7
14	1.1	1.4					4.0	2.4	1.1	.72	.72	1.9
15	1.1	1.4					4.4	2.5	1.0	.78	.68	1.7
16	1.2	1.5					4.1	2.3	.78	.90	.59	1.6
17	1.2	---					3.3	2.5	.68	1.3	3.1	1.5
18	1.1	---					3.6	2.3	.63	.88	2.9	1.4
19	1.0	---					6.2	2.2	.65	.67	2.0	1.4
20	1.2	---					5.9	2.3	.66	1.4	1.6	1.3
21	1.2	---					5.2	2.2	.75	1.7	1.4	1.2
22	1.3	---					4.5	2.0	.85	1.2	1.1	1.3
23	1.3	---					4.5	1.8	1.0	1.1	.99	1.8
24	1.3	---					5.1	1.8	1.5	.92	1.1	1.4
25	1.3	---					5.5	1.7	1.4	.94	.98	1.3
26	1.3	---					5.3	1.7	1.1	1.0	.85	1.3
27	1.4	---					5.3	1.6	.90	1.1	.75	1.3
28	1.7	---					5.3	1.5	.81	.98	.69	1.3
29	1.8	---					5.3	1.4	.78	.76	.66	1.3
30	1.4	---					4.1	1.4	.78	.67	.62	1.1
31	1.6	---					---	1.4	---	.60	.56	---
TOTAL	36.52	---	---	---	---	---	---	59.5	32.97	33.38	28.07	39.87
MEAN	1.18	---	---	---	---	---	---	1.92	1.10	1.08	.91	1.33
MAX	1.8	---	---	---	---	---	---	3.1	1.5	2.5	3.1	2.0
MIN	.66	---	---	---	---	---	---	1.1	.63	.60	.36	.51
AC-FT	72	---	---	---	---	---	---	118	65	66	56	79

ARKANSAS RIVER BASIN

35

07205500 EAGLE NEST LAKE NEAR EAGLE NEST, NM

LOCATION.--Lat 36°31'53", long 105°13'44", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, at upstream face of Eagle Nest Dam on Cimarron River, 2.5 mi (4.0 km) southeast of Eagle Nest, 6.7 mi (10.8 km) west of Ute Park, and at mile 48.7 (78.4 km).

DRAINAGE AREA.--167 mi² (433 km²).

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 read several times a month at random intervals. Datum of gage is 8,056.8 ft (2,455.71 m) above mean sea level. Prior to October 1964 gage heights were raised by addition of 8,000 ft (2,438.4 m) and called elevations.

REMARKS.--Lake is formed by concrete dam with spillway cut in natural rock, completed June 30, 1918; storage began in June 1917. Capacity, 79,120 acre-ft (97.6 hm³) between gage heights 35.0 ft (10.67 m), sill of outlet gate, and 137.0 ft (41.76 m), crest of ungated spillway. Dead storage negligible. Records given herein represent usable contents. Water released is used for irrigation. Lake is recreational area. Diversions for irrigation of about 2,500 acres (10 km²) above reservoir.

COOPERATION.--Supplemental gage readings furnished by employee of Springer Land and Cattle Co. and by Cimarron River watermaster.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 78,800 acre-ft (97.2 hm³) May 31, 1942, gage height, 136.9 ft (41.73 m); minimum observed, 635 acre-ft (783,000 m³) Dec. 14, 1954, gage height, 61.33 ft (18.693 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 15,700 acre-ft (19.4 hm³) Mar. 29, gage height, 97.50 ft (29.718 m); minimum observed, 9,810 acre-ft (12.1 km³) Sept. 26, gage height, 89.20 ft (27.188 m).

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	14270	14460	---	---	14900	---	---	---	---	10560	---
2	---	---	---	---	---	---	---	15170	13230	---	---	---
3	---	---	---	---	---	---	---	15170	---	---	---	---
4	---	14120	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	15540	15500	---	---	11440	---	10150
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	12820	---	---	---
8	---	---	---	---	---	15450	---	---	---	---	10270	---
9	---	---	---	---	---	---	---	15010	---	---	---	---
10	---	---	---	---	14820	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	11270	---	---
12	---	---	---	---	---	---	15290	---	---	---	---	10090
13	---	---	14480	---	---	---	---	---	12220	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	10030	---
16	---	14240	---	---	---	---	---	14580	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	14540	---	---	---	---	---	---	---	---	10970	---	---
19	---	---	---	---	---	---	15170	---	---	---	---	9840
20	14520	---	14540	---	---	---	---	---	11940	---	---	---
21	---	---	---	---	---	15660	---	---	---	---	---	9970
22	---	---	---	---	---	---	---	---	---	---	10090	---
23	---	---	---	---	---	---	---	13970	---	---	10210	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	14500	---	---	---	---	---	15250	---	---	10720	---	---
26	---	---	---	---	---	---	---	---	---	---	---	9810
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	14900	---	---	---	11670	10540	---	---
29	---	---	---	---	---	15700	---	---	11570	---	10090	---
30	---	14450	---	---	---	---	15200	13370	11550	---	---	9750
31	14300	---	14580	14750	---	15600	---	13300	---	10550	10100	---
(†)	---	---	96.10	---	---	---	---	---	---	---	---	---
(†)	-200	+150	+130	+170	+150	+700	-400	-1900	-1750	-1000	-450	-350

CAL YR 1976..... ‡ -5220

WTR YR 1977..... ‡ -4750

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

‡ Change in contents, in acre-feet.

NOTE.--Monthend contents interpolated or estimated on basis of inflow to and releases from Lake except Dec. 31.

ARKANSAS RIVER BASIN

07206000 CIMARRON RIVER BELOW EAGLE NEST DAM, NM

LOCATION.--Lat 36°31'55", long 105°13'43", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on left bank 300 ft (91 m) downstream from Eagle Nest Dam, 2.5 mi (4.0 km) southeast of Eagle Nest, 6.7 mi (10.8 km) west of Ute Park, and at mile 48.6 (78.2 km).

DRAINAGE AREA.--167 mi² (433 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1281: Drainage area.

GAGE.--Water-stage recorder. Parshall flume since May 15, 1951. Altitude of gage is 8,080 ft (2,463 m), from topographic map. Prior to May 15, 1951, at datum 0.81 ft (0.247 m) higher.

REMARKS.--Water-discharge records good except those below 2 ft³/s (0.06 m³/s), which are poor. Flow regulated by Eagle Nest Lake (station 07205500). Diversions for irrigation of about 2,500 acres (10 km²) above station.

AVERAGE DISCHARGE.--27 years, 13.7 ft³/s (0.388 m³/s), 9,930 acre-ft/yr (12.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 205 ft³/s (5.81 m³/s) June 14, 1955, gage height, 2.79 ft (0.850 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 113 ft³/s (3.20 m³/s) May 14, gage height, 2.02 ft (0.616 m); no flow Aug. 31 to Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	23	.05	.05	.02	.05	29	23	47	25	14	.00
2	.11	23	.05	.05	.02	.05	29	27	59	15	20	.00
3	.11	23	.05	.05	.02	.05	29	27	58	10	19	1.7
4	.11	8.7	.05	.05	.02	.05	29	28	58	13	14	5.9
5	.08	.11	.05	.05	.02	.05	30	27	65	14	14	5.9
6	.05	.11	.05	.02	.02	.05	32	27	68	14	13	5.7
7	.05	.11	.08	.02	.02	.07	32	6.7	57	14	20	5.4
8	.05	.11	.08	.02	.02	.10	32	25	44	14	26	5.3
9	.03	.11	.08	.02	.02	.10	32	33	44	14	32	5.3
10	.03	.11	.08	.02	.02	.10	36	38	44	21	34	5.0
11	.03	.11	.08	.05	.02	.10	38	42	44	24	33	4.6
12	.03	.11	.08	.05	.02	.10	38	42	44	28	34	9.4
13	.05	.11	.08	.05	.02	.10	38	42	27	32	26	11
14	.05	.11	.08	.05	.02	.10	38	18	21	32	22	11
15	.05	.09	.08	.05	.02	.10	34	40	21	37	19	11
16	.05	.05	.08	.05	.05	.10	21	52	21	26	18	11
17	.03	.09	.08	.05	.05	.10	16	53	21	29	15	8.2
18	.02	.10	.05	.05	.05	.10	16	53	5.8	32	9.2	8.9
19	.02	.05	.05	.05	.05	.10	18	53	24	32	6.5	10
20	.05	.05	.05	.05	.05	.10	20	53	32	32	3.4	11
21	.04	.05	.05	.02	.10	.10	19	23	38	32	4.1	9.8
22	.02	.10	.05	.02	.10	1.5	19	51	40	27	4.0	10
23	.01	.08	.05	.02	.10	3.5	19	63	40	20	3.7	7.6
24	1.2	.06	.05	.02	.10	3.5	25	62	40	19	3.4	6.6
25	12	.05	.05	.02	.10	3.8	28	59	15	19	3.8	6.5
26	22	.02	.08	.02	.05	16	28	54	23	18	1.4	6.4
27	22	.02	.10	.02	.05	24	28	48	29	14	.51	6.5
28	22	.02	.10	.02	.05	23	28	18	31	14	.51	6.6
29	22	.02	.10	.02	---	26	28	6.4	30	14	.39	6.5
30	23	.02	.08	.02	---	29	18	26	25	14	.10	6.3
31	23	---	.05	.02	---	29	---	34	---	14	.00	---
TOTAL	148.45	79.67	2.09	1.07	1.20	161.07	827	1154.1	1115.8	663	414.01	209.10
MEAN	4.79	2.66	.067	.035	.043	5.20	27.6	37.2	37.2	21.4	13.4	6.97
MAX	23	23	.10	.05	.10	29	38	63	68	37	34	11
MIN	.01	.02	.05	.02	.02	.05	16	6.4	5.8	10	.00	.00
AC-FT	294	158	4.1	2.1	2.4	319	1640	2290	2210	1320	821	415

CAL YR 1976 TOTAL 6358.93 MEAN 17.4 MAX 108 MIN .00 AC-FT 12610
WTR YR 1977 TOTAL 4776.56 MEAN 13.1 MAX 68 MIN .00 AC-FT 9470

NOTE.--No gage-height record Nov. 21 to Mar. 24.

07206000 CIMARRON RIVER BELOW EAGLE NEST DAM, NM -- Continued

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (CA+MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POSSIBILITIES (K) (MG/L) (00935)
DEC 13...	1330	.08	122	7.5	.0	51	0	15	3.3	4.4	.3	.8
JAN 13...	1040	.05	425	7.9	.5	180	17	55	10	18	.6	1.2
FEB 11...	1155	.02	231	7.7	.0	97	0	29	5.9	9.2	.4	1.0
MAY 03...	1515	29	387	6.8	9.0	150	0	43	9.5	16	.6	2.6
JUN 02...	1500	59	330	8.4	13.0	150	2	44	9.7	15	.5	2.3
JUL 28...	1430	13	342	7.3	--	150	0	44	9.7	16	.6	2.3
AUG 23...	1615	3.6	356	7.2	18.0	140	0	42	9.4	15	.5	2.6
SEP 21...	1045	9.9	358	8.3	15.0	160	0	46	9.9	18	.6	2.4

DATE	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SiO2) (MG/L) (00955)	DIS-SOLVED (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS-SOLVED ORTHOPHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)
DEC 13...	63	0	6.7	1.3	.3	13	76	77	.26	.02	10	10
JAN 13...	197	0	47	9.4	.3	11	--	249	.08	--	--	--
FEB 11...	124	0	12	4.4	.3	13	--	137	.21	--	--	--
MAY 03...	180	0	19	4.7	.5	10	--	195	.29	--	--	--
JUN 02...	180	0	20	5.1	.6	6.7	--	192	.05	--	--	--
JUL 28...	190	0	22	5.4	.6	3.2	--	199	.37	--	--	--
AUG 23...	190	0	16	5.1	.6	2.7	--	190	.61	--	--	--
SEP 21...	190	0	24	6.8	.5	7.9	196	209	.05	.00	30	10

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

DRAINAGE AREA.--294 mi² (761 km²).

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

REVISED RECORDS.--WSP 1281: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Nov. 6, 1963. Datum of gage is 6,599.58 ft (2,011.552 m) above mean sea level.

REMARKS.--Records good except those for winter period and those for July, which are poor. Flow regulated by Eagle Nest Lake (station 07205500). Diversions above station for irrigation of about 3,500 acres (14 km²), part of which is below station. Philmont ditch (formerly known as Cimarroncito ditch) diverts from left bank 1.5 mi (2.3 km) above station, flumes under river 0.9 mi (1.4 km) above and bypasses station for off-channel storage and irrigation below; see tabulation below for monthly diversions. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--27 years, 20.3 ft³/s (0.575 m³/s), 14,710 acre-ft/yr (18.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft³/s (439 m³/s) June 17, 1965, gage height, 12.42 ft (3.786 m), from flood-mark, from rating curve extended above 800 ft³/s (23 m³/s) on basis of slope-area measurements at gage heights 4.88 ft (1.487 m) and 12.42 ft (3.786 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 105 ft³/s (2.97 m³/s) June 6, gage height, 2.11 ft (0.643 m); minimum, 0.14 ft³/s (0.004 m³/s) Feb. 23, Mar. 3, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	27	2.8	2.2	2.2	4.2	29	28	31	21	15	3.0
2	3.7	27	2.8	2.5	2.5	3.4	29	36	46	20	15	3.0
3	3.2	28	2.9	2.5	2.4	2.9	30	37	46	18	20	3.9
4	3.2	26	3.0	2.5	2.4	4.2	30	36	46	18	16	6.9
5	3.7	11	2.9	2.5	2.3	4.3	31	36	49	19	15	7.1
6	3.6	6.5	2.7	2.6	2.4	4.3	33	36	60	18	14	6.9
7	4.0	5.1	3.0	2.5	2.4	4.4	33	30	58	17	14	6.8
8	3.5	4.6	3.0	2.0	2.4	4.6	34	19	43	16	19	6.4
9	3.3	4.1	2.9	2.2	2.4	4.3	34	37	44	16	25	6.0
10	3.2	3.9	2.8	2.5	2.5	4.2	37	41	43	16	28	5.9
11	3.8	3.9	2.8	2.4	2.8	3.9	42	42	43	20	30	5.7
12	3.7	4.2	3.0	2.3	3.1	3.9	41	40	42	23	31	5.2
13	3.7	3.6	3.2	2.6	3.4	4.2	42	42	36	26	29	5.9
14	3.6	3.3	3.2	2.5	3.1	4.1	43	36	23	30	22	4.5
15	3.4	3.3	3.0	2.7	2.5	3.9	43	25	21	30	20	4.4
16	3.4	3.7	3.0	2.5	2.8	4.1	35	47	20	35	19	4.2
17	3.6	4.1	2.9	2.5	2.9	4.1	24	48	20	26	22	3.9
18	3.4	4.1	2.8	2.4	2.6	4.0	23	48	19	30	19	2.5
19	3.1	3.9	2.7	2.4	2.5	4.0	25	49	12	30	13	3.2
20	3.0	3.7	2.2	2.2	2.6	4.2	29	50	24	30	13	3.9
21	2.8	3.9	2.3	2.2	2.8	4.1	28	39	29	30	14	3.8
22	2.8	3.5	2.5	2.3	3.0	4.1	27	31	30	30	11	3.6
23	2.7	3.7	2.6	2.2	1.9	3.9	27	55	31	25	8.7	4.2
24	2.9	3.0	2.7	1.9	3.4	4.3	29	57	36	18	8.7	3.2
25	2.7	3.0	2.8	1.6	2.9	5.1	36	53	30	18	7.5	2.8
26	15	2.9	3.0	2.3	2.4	5.3	36	50	15	18	6.9	2.3
27	21	2.5	3.2	2.2	2.7	16	37	42	24	17	5.6	.83
28	23	2.6	2.4	2.4	3.2	19	36	31	26	12	4.5	.67
29	25	2.7	2.1	2.3	---	20	36	11	29	13	4.3	.61
30	25	2.7	2.0	2.2	---	26	33	12	21	14	3.8	.44
31	27	---	1.8	2.1	---	28	---	24	---	15	3.5	---
TOTAL	220.5	211.5	85.0	72.2	74.5	217.0	992	1168	997	669	477.5	121.75
MEAN	7.11	7.05	2.74	2.33	2.66	7.00	33.1	37.7	33.2	21.6	15.4	4.06
MAX	27	28	3.2	2.7	3.4	28	43	57	60	35	31	7.1
MIN	2.7	2.5	1.8	1.6	1.9	2.9	23	11	12	12	3.5	.44
AC-FT	437	420	169	143	148	430	1970	2320	1980	1330	947	241
(†)	0	0	0	0	0	0	0	215	180	176	187	11

CAL YR 1976 TOTAL 7691.50 MEAN 21.0 MAX 91 MIN 1.8 AC-FT 15260 † 690
WTR YR 1977 TOTAL 5305.95 MEAN 14.5 MAX 60 MIN .44 AC-FT 10520 † 769

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

07207500 PONIL CREEK NEAR CIMARRON, NM

LOCATION.--Lat 36°34'25", long 104°56'46", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on left bank 1.6 mi (2.6 km) downstream from confluence of North and South Ponil Creeks, and 4.7 mi (7.6 km) northwest of Cimarron.

DRAINAGE AREA.--171 mi² (443 km²).

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

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

GAGE.--Water-stage recorder. Altitude of gage is 6,630 ft (2,021 m), from topographic map. Prior to May 8, 1922, at site 0.1 mi (0.2 km) downstream at different datum. May 8, 1922 to Aug. 8, 1929, at site 0.4 mi (0.6 km) upstream at different datum.

REMARKS.--Records fair except those for winter period, which are poor. Diversions for irrigation of about 250 acres (1.0 km²) above station. Diversions 1,000 ft (300 m) below station for irrigation of about 300 acres (1.2 km²). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years (water years 1916-25, 1928, 1951-77), 11.0 ft³/s (0.312 m³/s), 7,970 acre-ft/yr (9.83 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,630 ft³/s (159 m³/s) June 17, 1965, gage height, 11.13 ft (3.392 m), from rating curve extended above 110 ft³/s (3.1 m³/s) on basis of slope-area measurements at gage heights 4.55 ft (1.387 m), 5.80 ft (1.768 m), 7.15 ft (2.179 m), and 11.13 ft (3.392 m); no flow many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Discharge for flood of Aug. 8, 1929, which destroyed gage, was estimated as 5,200 ft³/s (150 m³/s) by State Engineer.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 6	1730	652 18.5	4.42 1.347	Aug. 17	1615	470 13.3	3.85 1.173
July 20	1715	*al, 790 50.7	6.80 2.073	Aug. 19	2130	515 14.6	4.00 1.219
July 26	1330	372 10.5	1.064	Aug. 20	1800	360 10.2	3.44 1.049
July 26	2115	488 13.8	3.91 1.192	Sept. 4	2400	443 12.5	3.76 1.146
Aug. 16	1630	274 7.76	3.05 .930				

a From rating curve extended above 120 ft³/s (3.4 m³/s) as explained above.

No flow June 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.8	.70	.90	.90	1.4	2.5	17	1.8	.18	1.1	.63
2	1.2	1.8	.70	.85	1.2	1.1	2.1	16	1.9	.16	.67	.80
3	1.0	1.7	.70	.85	.80	1.1	1.9	15	1.6	5.0	.74	1.6
4	1.3	1.8	.80	.85	.80	1.2	1.4	15	1.4	2.1	.47	16
5	1.4	1.8	.70	.75	.80	1.9	2.4	13	1.0	2.2	.33	72
6	2.0	1.7	.55	.85	.80	1.9	2.2	13	49	1.3	.23	8.0
7	2.8	1.6	.70	.75	.75	2.7	2.2	11	11	12	.09	2.5
8	2.4	1.6	1.0	.45	.75	2.3	2.7	11	5.2	2.2	.08	2.0
9	2.1	1.6	.90	.70	.80	2.3	3.3	10	3.1	2.0	.14	1.5
10	2.1	1.4	.90	1.0	.80	2.7	5.6	9.6	2.1	1.1	.14	1.0
11	1.8	1.6	.85	.90	.80	2.0	7.6	9.1	1.5	.54	.66	1.0
12	1.6	1.7	.85	.80	.90	1.6	6.9	9.5	1.6	.29	.94	4.0
13	1.5	1.5	1.0	1.0	1.0	2.1	6.5	11	1.0	.19	.74	3.0
14	1.6	1.0	1.0	.90	1.1	2.2	7.0	11	.73	.11	.37	2.5
15	1.5	1.1	.90	1.1	.90	1.8	11	9.7	.41	.09	2.0	2.0
16	1.5	.75	.90	.90	1.0	2.0	9.3	8.2	.22	4.5	17	1.7
17	1.6	.90	.90	.90	1.4	2.3	9.4	7.4	.11	4.0	62	1.4
18	1.5	.90	.80	1.0	1.4	1.8	10	6.4	.05	1.0	18	1.1
19	1.5	.90	.70	1.4	1.2	1.7	14	5.8	.03	.44	34	.90
20	1.5	.80	.80	.90	1.4	1.8	20	6.1	.02	132	72	.80
21	1.4	1.1	.80	.95	1.4	1.8	17	6.2	.02	22	26	.60
22	1.4	.75	.75	1.2	1.5	1.7	16	5.2	.01	4.7	17	.41
23	1.4	.75	.70	1.1	1.0	2.0	14	4.4	.03	2.3	5.2	.39
24	1.6	.80	.70	1.0	1.3	2.4	14	4.0	.22	1.4	3.4	.44
25	1.6	.90	.75	.90	1.8	2.6	16	3.8	.56	5.1	2.3	.37
26	1.7	.90	.80	.95	1.4	2.7	17	3.5	.58	45	1.6	.36
27	1.8	.60	.90	1.2	1.2	2.8	16	3.0	.34	21	1.1	.38
28	1.6	.50	.80	.90	1.1	2.8	17	2.6	.30	7.6	.97	.35
29	1.8	.55	.80	.80	---	1.9	18	2.2	.33	7.9	.91	.36
30	1.8	.60	.80	.80	---	1.5	18	2.0	.27	3.2	.81	.36
31	1.8	---	.50	.80	---	2.0	---	1.7	---	1.7	.74	---
TOTAL	51.2	35.40	24.65	28.35	30.20	62.1	291.0	253.4	86.43	293.30	271.73	128.45
MEAN	1.65	1.18	.80	.91	1.08	2.00	9.70	8.17	2.88	9.46	8.77	4.28
MAX	2.8	1.8	1.0	1.4	1.8	2.8	20	17	.49	132	72	72
MIN	1.0	.50	.50	.45	.75	1.1	1.4	1.7	.01	.09	.08	.35
AC-FT	102	70	49	56	60	123	577	503	171	582	539	255

CAL YR 1976 TOTAL 1548.77 MEAN 4.23 MAX 76 MIN .00 AC-FT 3070
WTR YR 1977 TOTAL 1556.21 MEAN 4.26 MAX 132 MIN .01 AC-FT 3090

ARKANSAS RIVER BASIN

07208500 RAYADO CREEK AT SAUBLE RANCH, NEAR CIMARRON, NM

LOCATION.--Lat 36°22'20", long 104°58'10", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on right bank at Sauble Ranch (Carson-Maxwell Base Camp of Philmont Scout Ranch), 2.5 mi (4.0 km) upstream from State Highway 21, 4.0 mi (6.4 km) downstream from Bonito Creek, and 9.8 mi (15.8 km) southwest of Cimarron.

DRAINAGE AREA.--65 mi² (168 km²).

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

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

GAGE.--Water-stage recorder. Concrete control since Oct. 13, 1976. Altitude of gage is 6,720 ft (2,048 m), from topographic map. See WSP 1921 for history of changes prior to Oct. 1, 1954. Oct. 1, 1954 to June 16, 1965, at site 270 ft (82 m) downstream at datum 2.79 ft (0.850 m) lower.

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

AVERAGE DISCHARGE.--58 years (water years 1912, 1914, 1916-20, 1924, 1928-77), 13.8 ft³/s (0.391 m³/s), 10,000 acre-ft/yr (12.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (1909-12, and SINCE 1913).--Maximum discharge, 9,000 ft³/s (250 m³/s) June 17, 1965, gage height, 11.5 ft (3.51 m), from floodmarks, from rating curve extended above 70 ft³/s (2.0 m³/s) on basis of field estimate of peak flow; minimum, 0.03 ft³/s (0.001 m³/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, 29 ft³/s (0.82 m³/s) Aug. 16, gage height, 3.03 ft (0.924 m), no peak above base of 100 ft³/s (2.8 m³/s); minimum, 0.29 ft³/s (0.008 m³/s) Dec. 30, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.8	4.7	1.7	2.7	2.5	4.8	13	5.2	6.6	5.6	5.9
2	3.0	3.8	4.5	1.8	2.8	2.8	3.8	12	4.9	7.1	5.4	6.2
3	3.0	3.8	4.1	1.8	2.6	2.4	2.5	11	4.7	8.2	5.2	11
4	3.2	3.8	3.9	1.5	2.5	2.0	4.0	11	4.3	18	4.7	7.9
5	3.1	3.8	3.8	1.4	2.4	2.2	4.3	10	3.9	12	4.8	7.5
6	3.5	3.6	3.4	1.7	2.4	3.0	4.2	10	4.8	11	4.3	6.3
7	6.0	3.6	3.9	1.4	2.4	3.4	6.7	9.7	8.4	10	4.0	5.7
8	5.0	3.6	3.5	.60	2.5	3.5	8.0	9.3	6.0	12	3.9	5.2
9	4.5	3.1	3.3	1.0	2.5	3.3	8.8	9.2	5.0	12	4.4	4.8
10	4.2	3.1	3.0	2.0	2.5	3.5	11	8.9	4.4	9.3	4.3	4.6
11	4.0	3.8	3.0	2.2	2.5	3.0	12	8.6	4.0	8.3	4.9	4.3
12	3.9	2.8	3.2	2.2	2.6	3.0	11	8.5	3.9	7.7	5.7	4.4
13	3.9	1.6	3.4	2.5	2.5	3.3	9.9	11	3.5	7.2	5.0	6.5
14	3.9	2.8	3.4	2.3	2.4	3.5	9.3	14	3.2	7.6	4.1	5.9
15	3.8	2.8	3.2	2.5	2.2	3.4	11	11	2.8	7.9	4.8	5.0
16	3.8	2.1	3.2	2.3	2.4	3.8	9.9	9.9	2.6	7.6	7.9	4.6
17	3.7	2.6	3.2	2.4	2.5	3.6	10	8.7	2.4	7.6	15	4.1
18	3.6	3.8	3.3	3.0	2.4	3.3	11	8.2	2.4	6.6	20	3.9
19	3.5	4.0	3.0	3.6	2.5	3.3	12	7.9	2.4	5.3	15	3.8
20	3.3	3.1	2.8	3.0	2.5	3.6	13	7.6	2.4	5.1	18	3.6
21	3.5	2.8	2.8	3.0	2.6	3.9	11	7.6	2.5	7.8	14	3.3
22	3.5	2.8	2.8	3.3	2.5	4.2	11	7.0	2.5	6.8	14	3.2
23	3.6	2.9	2.4	2.5	2.2	5.1	10	6.6	5.8	6.0	12	3.7
24	3.8	2.3	2.4	2.4	2.8	5.9	11	6.7	13	5.8	11	3.6
25	3.6	2.1	2.4	2.1	2.7	6.4	15	6.7	13	7.0	8.8	3.1
26	3.8	1.8	2.4	2.5	2.2	6.5	13	6.4	9.3	13	7.7	2.8
27	3.6	.60	2.6	2.7	2.1	6.2	12	5.9	7.6	11	6.9	2.9
28	3.6	.60	2.0	2.8	2.1	4.9	13	5.4	8.5	8.6	6.5	2.8
29	4.0	1.3	1.9	2.6	---	3.6	13	5.1	9.3	7.3	6.4	2.7
30	3.8	4.5	1.5	2.6	---	3.8	13	4.8	7.3	6.6	6.0	2.5
31	4.0	---	1.2	2.6	---	4.3	---	4.8	---	6.1	5.8	---
TOTAL	116.8	87.10	94.2	70.00	69.0	117.2	289.2	266.5	160.0	263.1	246.1	141.8
MEAN	3.77	2.90	3.04	2.26	2.46	3.78	9.64	8.60	5.33	8.49	7.94	4.73
MAX	6.0	4.5	4.7	3.6	2.8	6.5	15	14	13	18	20	11
MIN	3.0	.60	1.2	.60	2.1	2.0	2.5	4.8	2.4	5.1	3.9	2.5
AC-FT	232	173	187	139	137	232	574	529	317	522	488	281

CAL YR 1976 TOTAL 2606.50 MEAN 7.12 MAX 29 MIN .60 AC-FT 5170
WTR YR 1977 TOTAL 1921.00 MEAN 5.26 MAX 20 MIN .60 AC-FT 3810

07211000 CIMARRON RIVER AT SPRINGER, NM

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

DRAINAGE AREA.--1,032 mi² (2,673 km²).

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

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

GAGE.--Water-stage recorder. Concrete control since Nov. 5, 1954. Altitude of gage is 5,770 ft (1,759 m), from topographic map. See WSP 1311 or 1731 for history of changes prior to July 17, 1942.

REMARKS.--Records good except those for winter period and those for August, which are fair. Flow partly regulated by Eagle Nest Lake (station 07205500). Diversions for irrigation of about 23,000 acres (93 km²) above station and a few hundred acres between station and mouth. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--53 years (water years 1921, 1925, 1927-77), 16.7 ft³/s (0.473 m³/s), 12,100 acre-ft/yr (14.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1930).--Maximum discharge, 29,500 ft³/s (835 m³/s) June 18, 1965, gage height, 19.96 ft (6.084 m), from floodmarks, from rating curve extended above 1,800 ft³/s (51 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in 1954, 1956-57.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 22 ft (6.7 m) Sept. 29, 1904 (backwater from debris on railroad bridge). Another major flood occurred June 11, 1913. Maximum discharge of these floods probably exceeded 10,000 ft³/s (280 m³/s), but probably were less than the 1965 flood.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 280 ft³/s (7.9 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 29	0845	434 12.3	4.87 1.484	Aug. 2	2000	*482 13.7	4.92 1.500
July 26	1845	335 9.49	4.70 1.433	Aug. 18	0215	440 12.5	4.86 1.481

Minimum discharge, 0.06 ft³/s (0.002 m³/s), part or all of each day July 20-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.7	1.7	1.5	2.9	2.9	2.0	4.6	2.5	6.3	.37	1.5
2	1.6	1.3	1.7	1.6	2.8	2.7	1.6	3.9	3.0	3.9	91	1.5
3	1.5	1.4	1.7	1.6	2.6	2.2	1.8	3.0	2.4	3.0	51	1.3
4	1.4	1.3	1.7	1.6	2.6	2.6	1.8	2.6	3.2	2.0	4.2	1.2
5	1.4	1.4	1.7	1.6	2.5	2.6	2.3	2.3	3.2	1.4	2.6	1.1
6	1.7	1.5	1.6	1.8	2.6	2.8	2.3	2.3	3.8	1.5	2.6	1.1
7	1.7	1.5	1.8	1.7	2.6	2.8	2.3	2.1	7.3	1.4	2.1	1.0
8	2.0	1.6	1.7	1.2	2.6	2.7	2.3	2.0	6.7	1.0	1.7	.77
9	2.0	1.4	1.7	1.5	2.7	2.5	2.4	1.9	5.2	1.3	1.4	.71
10	1.7	1.4	1.8	1.8	3.1	2.5	2.7	1.9	4.2	.83	1.3	.63
11	1.5	1.4	1.8	1.7	3.1	2.5	3.8	2.0	3.5	.41	3.0	.65
12	1.3	1.5	1.7	1.5	3.1	2.8	4.4	2.5	3.4	.38	2.7	.65
13	1.3	1.5	1.7	1.5	3.3	2.4	3.9	8.5	3.0	.26	3.6	.73
14	1.3	1.7	1.7	1.7	3.2	2.3	4.1	7.5	2.8	.23	4.8	.73
15	1.2	1.7	1.7	1.8	3.0	2.1	6.3	4.7	2.4	.26	4.3	.70
16	1.0	1.5	1.7	2.0	3.2	2.1	6.9	4.0	2.3	.24	6.0	.62
17	1.1	1.5	1.5	2.3	3.6	2.5	5.0	3.0	2.1	.18	9.4	.57
18	1.4	1.5	1.5	2.3	3.5	2.3	5.1	2.4	2.1	.15	141	.44
19	1.8	1.7	1.5	2.5	3.4	2.3	7.0	2.4	2.7	.13	21	.48
20	2.0	1.7	1.5	2.5	3.0	2.4	7.4	2.9	1.7	.09	64	.37
21	2.2	1.5	1.5	2.8	3.0	2.2	7.6	3.3	1.6	.07	24	.29
22	2.5	1.7	1.5	2.8	3.1	2.1	5.7	3.2	1.4	.08	25	.40
23	2.0	1.7	1.6	3.0	1.9	2.1	4.9	2.7	1.3	.06	10	.19
24	2.0	1.5	1.7	3.0	2.0	1.8	4.5	3.6	2.7	.08	8.0	.23
25	2.0	1.5	1.8	3.0	2.8	1.7	4.4	4.3	2.4	.23	5.0	.25
26	1.9	1.4	1.8	3.0	2.7	1.8	3.8	4.5	2.0	.46	3.0	.20
27	2.0	1.2	2.0	3.0	2.8	1.7	3.5	3.6	1.6	9.9	2.0	.22
28	2.1	1.5	1.8	2.9	2.9	1.6	3.1	3.0	1.1	1.8	1.8	.44
29	2.1	1.5	1.7	2.9	---	1.6	3.3	3.0	107	.89	1.6	.38
30	1.9	1.4	1.6	2.8	---	1.7	4.2	2.6	15	.87	1.5	.23
31	1.7	---	1.4	2.9	---	1.8	---	2.2	---	.64	1.5	---
TOTAL	53.0	45.1	51.8	67.8	80.6	70.1	120.4	102.5	203.6	85.58	501.47	19.58
MEAN	1.71	1.50	1.67	2.19	2.88	2.26	4.01	3.31	6.79	2.76	16.2	.65
MAX	2.5	1.7	2.0	3.0	3.6	2.9	7.6	8.5	107	46	141	1.5
MIN	1.0	1.2	1.4	1.2	1.9	1.6	1.6	1.9	1.1	.06	.37	.19
AC-FT	105	89	103	134	160	139	239	203	404	170	995	39

CAL YR 1976 TOTAL 640.81 MEAN 1.75 MAX 5.6 MIN .04 AC-FT 1270
WTR YR 1977 TOTAL 1401.53 MEAN 3.84 MAX 141 MIN .06 AC-FT 2780

ARKANSAS RIVER BASIN

07211500 CANADIAN RIVER NEAR TAYLOR SPRINGS, NM

LOCATION.--Lat 36°17'49", long 104°29'36", in NW¼SE¼ sec. 21, T.24 N., R.23 E., Colfax County, Hydrologic Unit 11080003, on left bank at head of gorge, 2.0 mi (3.2 km) south of Taylor Springs, 2.3 mi (3.7 km) downstream from Cimarron River, 2.4 mi (3.9 km) upstream from Chico Creek, 7.1 mi (11.4 km) southeast of Springer, and at mile 847.9 (1,364.3 km), corrected.

DRAINAGE AREA.--2,850 mi² (7,380 km²).

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

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

GAGE.--Water-stage recorder. Altitude of gage is 5,635 ft (1,718 m), from topographic map. Prior to June 10, 1964, water-stage recorder at site 1.7 mi (2.7 km) downstream at different datum; operated as crest-stage gage at that site and datum during water years 1959-64.

REMARKS.--Records poor. Diversions for irrigation of about 30,000 acres (120 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years (water years 1940-58, 1965-77), 84.1 ft³/s (2.382 m³/s), 60.930 acre-ft/yr (75.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 162,000 ft³/s (4,590 m³/s) June 18, 1965, gage height, 47.4 ft (14.448 m), from flood-marks, from rating curve extended above 7,000 ft³/s (200 m³/s) on basis of slope-area measurement of peak flow; no flow at times some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood prior to 1965 occurred Sept. 29, 1904, discharge published as 91,100 ft³/s (2,580 m³/s) in WSP 842,847.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,650 ft³/s (75.0 m³/s) Aug. 17, gage height 4.88 ft (1.487 m), no peak above base of 3,000 ft³/s (85 m³/s); no flow part of each day Dec. 21, July 19-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	1.9	2.8	2.8	4.0	6.4	2.8	7.0	4.8	22	12	11
2	3.5	2.2	2.8	2.7	3.8	6.2	2.8	7.3	3.7	13	73	7.6
3	2.9	2.0	2.9	2.8	3.9	5.8	2.4	4.9	3.0	124	186	5.4
4	2.6	2.0	3.2	2.8	4.2	5.6	3.5	3.7	2.6	14	24	4.7
5	2.8	2.2	2.8	2.6	4.5	5.6	3.4	2.9	2.9	11	10	5.4
6	2.4	2.0	2.3	2.5	4.2	6.6	3.2	2.6	2.9	15	6.6	2.9
7	3.5	1.9	3.0	2.5	4.4	7.0	2.9	2.3	34	4.7	4.7	2.3
8	2.8	2.0	3.0	2.4	4.5	6.6	2.8	2.2	21	3.2	3.4	1.9
9	2.3	2.0	2.7	2.3	4.6	5.9	2.4	1.9	8.0	3.4	13	1.5
10	2.3	2.0	2.7	2.6	4.5	5.4	2.4	1.7	5.4	3.5	3.7	2.4
11	2.0	2.0	2.5	2.8	4.7	5.4	2.8	1.6	3.5	1.6	2.8	1.9
12	1.8	1.9	2.7	2.9	4.9	5.7	3.5	1.9	2.8	1.5	18	6.9
13	2.0	1.5	3.0	3.0	5.4	5.9	3.7	7.6	2.2	.97	11	8.7
14	2.3	1.7	3.0	2.9	4.9	4.5	4.5	29	1.8	.83	5.9	6.2
15	2.0	1.6	2.8	3.0	4.3	3.5	9.0	12	2.0	.70	10	3.4
16	1.8	1.8	2.8	2.9	5.0	3.4	10	8.0	1.9	.52	12	2.3
17	1.8	2.3	2.8	2.8	5.8	3.5	9.0	5.2	1.7	.46	195	1.7
18	1.7	2.2	2.8	3.0	5.6	3.4	7.0	3.0	1.6	.29	846	1.6
19	1.9	2.0	2.5	3.3	5.4	2.8	11	2.3	1.6	.09	681	1.3
20	2.0	1.9	2.7	3.5	5.8	2.9	14	2.3	2.0	.01	875	1.1
21	2.4	1.8	2.7	3.7	6.2	2.6	14	3.0	1.8	.04	578	.70
22	2.6	2.0	2.7	3.9	6.0	2.9	11	3.2	1.6	605	451	.83
23	2.9	2.5	2.7	3.7	5.8	2.6	8.7	2.9	1.5	98	122	.80
24	2.4	2.3	2.7	3.5	5.6	2.4	7.6	2.6	23	20	95	.80
25	2.4	2.0	2.7	3.5	5.8	2.2	8.7	10	4.9	8.0	34	.70
26	2.4	1.9	2.7	4.0	5.6	2.0	7.0	4.9	3.0	581	21	.60
27	2.2	1.5	3.3	3.9	5.4	2.6	6.2	5.4	2.4	346	14	2.0
28	2.8	1.4	3.3	3.8	5.6	4.0	5.4	4.0	1.9	196	9.9	10
29	2.9	2.0	3.0	3.9	---	3.4	5.4	3.0	69	51	8.0	8.0
30	2.3	2.5	3.0	3.7	---	3.4	6.2	3.0	33	112	8.4	6.0
31	2.2	---	2.5	3.5	---	2.9	---	2.9	---	38	11	---
TOTAL	76.8	59.0	87.1	97.2	140.4	133.1	183.3	154.3	251.5	2275.81	4345.4	110.63
MEAN	2.48	1.97	2.81	3.14	5.01	4.29	6.11	4.98	8.38	73.4	140	3.69
MAX	4.9	2.5	3.3	4.0	6.2	7.0	14	29	69	605	875	11
MIN	1.7	1.4	2.3	2.3	3.8	2.0	2.4	1.6	1.5	.01	2.8	.60
AC-FT	152	117	173	193	278	264	364	306	499	4510	8620	219
CAL YR 1976 TOTAL	4078.61											
WTR YR 1977 TOTAL	7914.54											
MEAN 11.1												
MAX 941												
MIN .00												
AC-FT 8090												
MIN .01												
AC-FT 15700												

NOTE.--No gage-height record Dec. 14 to Jan. 26.

07215500 MORA RIVER AT LA CUEVA, NM

LOCATION.--Lat 35°56'27", long 105°14'59", Mora County, Hydrologic Unit 11080004, in Mora Grant, on left bank 45 ft (14 m) upstream from bridge on State Highway 3 at La Cueva, 0.3 mi (0.5 km) downstream from La Cueva damsite, and at mile 86.8 (139.7 km).

DRAINAGE AREA.--173 mi² (448 km²).

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

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

GAGE.--Water-stage recorder. Altitude of gage is 7,000 ft (2,134 m), from topographic map. Prior to Apr. 15, 1931, nonrecording gage, and Apr. 15, 1931 to Apr. 18, 1962, water-stage recorder near present site at different datums. Apr. 19, 1962 to Mar. 13, 1974, water-stage recorder at site 700 ft (210 m) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions above station for irrigation of about 7,000 acres (28 km²), 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.--50 years (water years 1907-10, 1932-77), 27.2 ft³/s (0.770 m³/s), 19,710 acre-ft/yr (24.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1930).--Maximum discharge, 1,530 ft³/s (43.3 m³/s) Sept. 23, 1941 gage height, 7.58 ft (2.310 m), site and datum then in use, from rating curve extended above 400 ft³/s (11 m³/s); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1904, may have exceeded 20,000 ft³/s (570 m³/s); another major flood occurred June 11, 1913, but is believed less than that of 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 121 ft³/s (3.43 m³/s) July 27, gage height, 2.93 ft (0.893 m), no peak above base of 300 ft³/s (8.5 m³/s); minimum, 0.23 ft³/s (0.007 m³/s) Mar. 2, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	5.4	2.3	2.8	2.8	.60	5.9	9.8	7.3	6.8	10	18
2	20	4.9	2.6	2.4	2.4	.53	5.7	9.6	7.0	7.3	10	21
3	20	4.6	3.0	2.2	2.4	.60	5.8	8.8	6.5	7.0	9.9	22
4	20	4.6	2.8	2.0	2.8	.55	5.5	8.3	6.7	8.7	9.5	18
5	21	4.0	2.8	2.0	3.0	.55	5.2	7.3	6.3	19	9.5	18
6	21	1.2	2.6	2.0	2.8	.53	4.4	6.0	6.2	19	10	19
7	27	1.9	2.4	2.2	3.0	1.0	3.8	4.0	18	18	10	18
8	26	1.3	3.6	2.2	3.2	.99	2.7	2.6	10	18	10	19
9	23	1.3	3.6	2.0	3.2	1.0	2.2	2.4	7.1	18	11	19
10	23	1.3	3.4	2.0	3.4	1.0	2.1	2.4	7.1	14	18	19
11	24	1.3	3.2	2.1	3.4	1.0	2.4	2.2	7.0	13	21	18
12	23	1.7	3.2	2.3	3.0	.92	2.3	2.5	6.5	13	27	18
13	23	1.6	3.6	2.5	3.1	1.4	2.4	7.1	6.4	13	19	19
14	23	1.3	4.1	2.8	3.0	1.2	2.7	9.5	6.0	13	19	19
15	20	1.3	4.4	3.0	4.1	4.5	2.7	8.6	5.8	16	23	16
16	18	1.3	4.1	2.8	4.6	7.8	2.9	8.6	6.7	15	35	15
17	14	1.9	4.1	2.8	4.9	8.2	2.7	8.1	6.8	14	22	15
18	9.8	1.6	3.8	3.0	4.8	6.9	2.7	8.2	6.7	9.0	23	15
19	4.7	1.8	3.8	3.2	4.6	6.6	2.6	8.1	5.9	6.9	24	15
20	4.5	1.6	3.2	3.4	4.5	7.9	2.5	7.9	6.3	6.4	25	14
21	4.6	1.7	3.2	3.2	3.0	7.4	2.9	7.6	6.4	6.7	22	14
22	4.0	1.6	3.4	3.1	.83	7.0	6.3	7.0	6.2	6.8	20	15
23	4.5	1.5	3.6	2.9	.75	7.5	8.4	6.1	6.5	7.4	18	14
24	6.3	2.0	3.6	2.7	.67	7.4	6.8	6.2	7.0	6.4	18	14
25	6.7	1.6	3.4	2.8	.53	7.0	9.0	6.2	7.5	6.6	18	14
26	2.3	1.3	3.6	2.8	.60	6.9	14	6.3	7.3	7.1	17	13
27	3.4	1.2	4.2	3.0	.67	6.9	13	6.3	7.2	24	16	12
28	5.4	1.0	3.6	3.1	.75	6.5	11	5.9	6.9	19	16	12
29	5.7	1.5	3.0	3.4	---	6.0	10	5.9	6.4	12	17	11
30	5.1	2.0	3.0	3.0	---	6.5	9.9	5.7	6.3	12	17	11
31	4.9	---	2.8	3.0	---	6.2	---	5.9	---	10	18	---
TOTAL	438.9	61.3	104.0	82.7	76.80	129.07	160.5	201.1	214.0	373.1	542.9	485
MEAN	14.2	2.04	3.35	2.67	2.74	4.16	5.35	6.49	7.13	12.0	17.5	16.2
MAX	27	5.4	4.4	3.4	4.9	8.2	14	9.8	18	24	35	22
MIN	2.3	1.0	2.3	2.0	.53	.53	2.1	2.2	5.8	6.4	9.5	11
AC-FT	871	122	206	164	152	256	318	399	424	740	1080	962
(†)	455	528	589	407	320	262	234	83	463	414	205	24
CAL YR 1976 TOTAL	4347.90			MEAN 11.9	MAX 65	MIN 1.0	AC-FT 8620	† 4350				
WTR YR 1977 TOTAL	2869.37			MEAN 7.86	MAX 35	MIN .53	AC-FT 5690	† 3980				

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

07218000 COYOTE CREEK NEAR GOLONDRINAS, NM

LOCATION.--Lat 35°55'00", long 105°09'49", Mora County, Hydrologic Unit 11080004, in Mora Grant, on left bank 0.5 mi (0.8 km) downstream from Coyote Creek damsite, 2.3 mi (3.7 km) northeast of Golondrinás, and at mile 2.7 (4.3 km).

DRAINAGE AREA.--215 mi² (557 km²).

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

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

GAGE.--Water-stage recorder. Altitude of gage is 6,785 ft (2,068 m), from topographic map. Prior to Apr. 26, 1938, at site 0.4 mi (0.6 km) downstream at different datum (nonrecording gage prior to Apr. 20, 1929). Apr. 26, 1938 to Sept. 25, 1946, at site 139 ft (42 m) downstream at same datum.

REMARKS.--Records fair except those for winter period, which are poor. Diversions (including off-channel storage) for irrigation of about 4,000 acres (16 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--49 years, 11.4 ft³/s (0.323 m³/s), 8,260 acre-ft/yr (10.2-hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,050 ft³/s (115 m³/s) Aug. 17, 1961, gage height, 9.60 ft (2.926 m), from rating curve extended above 250 ft³/s (7.1 m³/s) on basis of slope-area measurements at gage heights 5.54 ft (1.689 m), 7.74 ft (2.359 m), and 9.60 ft (2.926 m); maximum gage height, 10.1 ft (3.08 m) Aug. 30, 1936 (site and datum then in use); no flow Aug. 4, 1945, Apr. 10, May 9, 10, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft³/s (5.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 27	2000	*a784 22.2	5.30 1.615	Aug. 15	2230	380 10.8	4.08 1.244

a From rating curve extended above 27 ft³/s (0.76 m³/s) as explained above.

Minimum discharge, 0.12 ft³/s (0.003 m³/s) Mar. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	3.4	2.5	3.4	3.8	4.0	.50	4.4	.61	.32	1.9	5.3
2	3.6	3.2	2.8	3.2	3.5	3.4	.50	4.4	.63	2.8	2.2	5.8
3	3.4	3.2	3.0	3.0	3.0	3.0	.81	4.3	.51	2.0	1.7	6.8
4	3.2	3.2	3.0	2.8	3.5	3.4	.86	3.8	.31	2.8	.38	6.5
5	3.4	3.2	3.0	2.8	3.8	4.0	.85	3.6	.25	3.2	.38	4.7
6	3.2	3.0	2.9	2.8	3.5	5.2	.87	2.2	.25	2.0	.39	1.9
7	3.8	3.1	2.7	3.0	3.5	4.2	.96	1.1	.37	.38	3.7	1.5
8	3.8	3.2	3.0	3.0	3.6	3.4	.85	.59	.33	.38	.62	1.5
9	3.6	3.2	3.3	2.8	3.6	3.0	.79	.57	.39	.36	.56	1.3
10	3.2	3.1	3.0	3.0	3.8	3.2	.43	.51	.49	.38	.67	1.3
11	3.0	3.0	3.0	3.2	3.4	2.9	.52	.51	.41	.26	.86	1.1
12	3.0	2.9	3.0	3.5	3.8	2.9	.45	.53	.45	.40	1.8	1.1
13	3.3	3.3	3.1	4.0	3.4	2.9	.51	1.1	1.9	.47	1.4	1.1
14	3.4	3.4	3.5	4.5	3.4	2.9	1.2	.98	1.9	.38	1.0	1.3
15	3.6	3.2	3.8	4.5	3.4	2.7	3.6	.67	1.9	.37	2.9	1.4
16	3.4	2.7	3.7	4.3	3.4	2.7	3.4	.59	1.9	.29	3.0	1.1
17	3.6	2.9	3.7	4.5	3.8	2.8	2.1	.57	1.8	.34	1.9	1.1
18	3.6	3.0	3.6	4.5	3.8	2.5	.78	.58	1.9	.37	1.7	1.0
19	3.5	3.3	3.5	4.5	3.6	1.7	.96	.51	1.9	.38	2.6	.78
20	3.6	3.1	3.0	4.5	3.4	.68	.92	.52	1.9	.51	2.6	.87
21	3.7	3.1	3.0	4.2	3.2	.33	.95	.45	1.8	.62	1.5	.77
22	3.8	2.9	3.1	5.0	3.0	.35	.96	.49	1.7	7.2	1.1	.90
23	3.8	3.2	3.2	4.6	3.0	.19	.98	.48	1.4	4.9	8.2	.77
24	3.6	3.0	3.3	4.5	3.2	.17	1.1	.52	.36	3.6	6.9	.68
25	3.6	3.0	3.5	4.0	3.4	.17	1.2	.78	.34	2.8	6.8	.74
26	3.6	3.0	3.6	4.0	3.0	.17	1.6	.58	.35	1.8	5.8	.74
27	3.6	2.5	3.5	4.2	3.6	.24	1.3	.55	.34	63	4.7	.90
28	3.6	2.0	3.5	4.3	4.2	.24	1.2	.44	.26	11	4.5	.81
29	3.6	2.1	3.5	4.5	---	.25	1.5	.28	1.3	4.0	4.5	.68
30	3.6	2.3	3.5	4.0	---	.46	2.0	.34	2.7	3.6	4.3	.64
31	3.6	---	3.5	4.0	---	.52	---	.54	---	2.2	4.0	---
TOTAL	108.9	89.7	100.3	119.1	97.6	64.57	34.65	37.48	30.65	123.11	240.26	55.08
MEAN	3.51	2.99	3.24	3.84	3.49	2.08	1.16	1.21	1.02	3.97	7.75	1.84
MAX	3.8	3.4	3.8	5.0	4.2	5.2	3.6	4.4	2.7	63	30	6.8
MIN	3.0	2.0	2.5	2.8	3.0	.17	.43	.28	.25	.26	.38	.64
AC-FT	216	178	199	236	194	128	69	74	61	244	477	109

CAL YR 1976 TOTAL 1304.57 MEAN 3.56 MAX 15 MIN .24 AC-FT 2590
WTR YR 1977 TOTAL 1101.40 MEAN 3.02 MAX 63 MIN .17 AC-FT 2180

ARKANSAS RIVER BASIN

47

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

LOCATION.--Lat 35°39'08", long 104°22'39", in SW¼ sec. 34, T.17 N., R.24 E., San Miguel County, Hydrologic Unit 11080003 on right bank 1,000 ft (300 m) downstream from bridge on State Highway 65, 0.9 mi (1.4 km) upstream from Lagartija Creek, 3.2 mi (5.1 km) north-east of Sanchez, 10 mi (16 km) downstream from Mora River, 25 mi (40 km) southwest of Mosquero, and at mile 777.0 (1,250.2 km).

DRAINAGE AREA.--6,015 mi² (15,579 km²), of which 303 mi² (785 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge records good. Diversions for irrigation of about 56,000 acres (230 km²) above station.

AVERAGE DISCHARGE.--44 years (water years 1913-14, 1936-77), 195 ft³/s (5,522 m³/s), 141,300 acre-ft/yr (174 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 145,000 ft³/s (4,110 m³/s) June 18, 1965, gage height, about 38.1 ft (11.61 m), from floodmarks, present site and datum, from rating curve extended above 91,000 ft³/s (2,600 m³/s) on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Sept. 29, or 30, 1904, probably exceeded 100,000 ft³/s (2,800 m³/s), but is believed to have been less than the peak of June 18, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 27	2230	4,460 126	9.10 2.774	Aug. 31	0600	*5,130 145	9.67 2.947
Aug. 21	0600	4,040 114	8.70 2.652	Sept. 2	0730	4,980 141	9.55 2.911

No flow June 14-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	8.0	6.7	12	16	16	7.4	13	6.4	62	81	180
2	31	8.0	5.1	13	15	15	7.4	9.9	5.2	32	64	1010
3	25	8.0	5.2	12	17	15	8.0	9.4	4.3	20	40	308
4	21	8.0	6.7	12	15	15	8.3	8.3	3.1	79	138	233
5	19	8.7	5.7	12	12	14	8.7	8.0	2.6	111	158	140
6	17	9.0	5.5	12	9.9	15	8.0	6.4	1.7	87	127	150
7	22	8.7	5.2	12	9.0	15	6.7	5.7	.94	111	146	79
8	17	8.3	5.7	13	8.7	15	6.4	5.0	.63	173	47	50
9	16	7.0	6.4	13	8.3	15	5.7	4.7	.50	158	28	34
10	15	6.7	6.4	12	8.7	14	5.2	3.8	.38	42	23	27
11	15	6.4	4.3	16	8.3	14	5.0	149	.29	24	25	23
12	14	6.0	4.3	15	8.7	13	4.7	90	.16	16	65	20
13	13	6.4	6.4	16	8.7	13	7.4	525	.05	11	198	20
14	12	6.7	7.0	16	9.0	12	7.4	933	.00	7.4	47	18
15	11	6.7	10	15	11	11	8.3	283	.00	4.3	31	16
16	10	6.4	11	17	13	10	7.7	96	.00	2.4	21	13
17	10	6.4	11	16	15	10	6.7	47	.00	25	178	12
18	10	6.7	11	16	15	9.4	6.7	36	.00	13	800	11
19	10	6.7	11	16	16	9.0	18	27	.00	6.7	982	11
20	10	7.4	12	15	16	8.7	33	21	.00	4.0	942	10
21	10	6.4	11	16	16	8.3	14	17	.00	1.9	1820	9.9
22	11	6.0	11	16	18	8.0	16	15	.00	1.2	1470	9.0
23	11	6.0	11	16	19	7.7	15	13	.00	.79	740	8.7
24	12	5.7	11	16	19	7.4	16	11	.00	170	522	8.3
25	11	5.7	12	16	19	6.7	16	127	.00	85	214	7.4
26	9.4	5.5	11	15	19	6.4	16	141	3.1	49	173	5.5
27	8.3	5.2	13	16	19	6.7	15	42	1.2	735	94	7.4
28	9.4	5.0	13	16	19	7.7	13	23	.35	1070	61	7.4
29	9.4	5.1	15	15	---	8.0	11	15	259	252	471	7.0
30	9.0	6.0	12	14	---	8.0	15	11	218	176	56	5.5
31	8.3	---	13	15	---	7.7	---	8.0	---	83	980	---
TOTAL	447.8	202.8	279.6	452	388.3	341.7	323.7	2704.2	507.90	3612.69	10742	2441.1
MEAN	14.4	6.76	9.02	14.6	13.9	11.0	10.8	87.2	16.9	117	347	81.4
MAX	41	9.0	15	17	19	16	33	933	259	1070	1820	1010
MIN	8.3	5.0	4.3	12	8.3	6.4	4.7	3.8	.00	.79	21	5.5
AC-FT	888	402	555	897	770	678	642	5360	1010	7170	21310	4840

CAL YR 1976 TOTAL 8750.37 MEAN 23.9 MAX 600 MIN .00 AC-FT 17360
WTR YR 1977 TOTAL 22443.79 MEAN 61.5 MAX 1820 MIN .00 AC-FT 44520

ARKANSAS RIVER BASIN

07221500 CANADIAN RIVER NEAR SANCHEZ, NM -- Continued

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	TUR- BID- ITY (NTU) (00076)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)
OCT 21...	1200	10	700	8.0	17.5	10.0	25	--	10.3	83
NOV 18...	1200	6.7	666	8.2	20.0	6.0	8	--	10.6	15
DEC 16...	1100	3.3	900	8.3	11.5	1.0	15	--	12.4	23
JAN 20...	1230	8.3	760	8.1	12.0	2.0	8	--	12.3	41
FEB 28...	1140	19 --	1440	8.1	--	6.0	--	2.2	--	--
MAR 17...	1100	11	1450	8.2	15.5	9.0	15	--	9.6	32
APR 21...	1200	13	520	7.9	18.5	13.0	410	--	9.6	25
MAY 26...	1030	146	605	8.2	25.0	15.0	500	--	8.2	120
JUL 19...	1200	5.7	1000	7.8	34.0	26.0	25	--	7.6	7
AUG 16...	1330	20	318	8.9	37.5	29.0	460	--	7.2	59
SEP 27...	1200	7.4	1020	8.2	32.5	20.5	15	--	8.6	10

DATE	HARD- NESS (CA+MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
OCT 21...	270	110	61	29	50	1.3	3.4	195	0	200
NOV 18...	280	90	64	29	48	1.3	2.6	231	0	160
DEC 16...	330	150	76	35	68	1.6	2.9	228	0	260
JAN 20...	290	120	69	29	48	1.2	2.1	212	0	190
FEB 28...	570	410	120	65	120	2.2	3.6	190	0	570
MAR 17...	530	370	110	63	110	2.1	3.4	198	0	550
APR 21...	180	100	47	16	40	1.3	3.4	100	0	170
MAY 26...	210	120	53	20	46	1.4	3.7	120	0	210
JUL 19...	390	260	95	36	81	1.8	5.9	150	0	390
AUG 16...	120	33	36	8.2	17	.7	3.6	110	0	64
SEP 27...	410	250	100	40	80	1.7	4.4	200	0	370

ARKANSAS RIVER BASIN

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07221500 CANADIAN RIVER NEAR SANCHEZ, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTIT- UENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)
OCT 21...	16	.5	4.0	445	460	.01	.01	.01	.11
NOV 18...	15	.4	4.5	434	438	.02	.00	.00	.41
DEC 16...	20	.5	8.7	628	584	.07	.06	.00	.14
JAN 20...	16	.4	8.8	482	468	.04	.04	.01	.20
FEB 28...	32	.4	5.1	1090	1010	--	--	--	--
MAR 17...	31	.5	4.7	1070	970	.01	.00	.00	.61
APR 21...	11	.4	4.6	337	343	.35	.35	.01	.56
MAY 26...	12	.3	4.2	408	409	.23	.17	.12	2.5
JUL 19...	19	.6	7.2	741	709	.01	.01	.01	.37
AUG 16...	5.4	.2	6.8	197	197	.35	.35	.08	1.4
SEP 27...	24	.4	11	728	729	.02	.05	.02	.32

DATE	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDE D ORGANIC CARBON (C) (MG/L) (00689)
OCT 21...	.13	.03	.01	70	40	20	--	2.9	.3
NOV 18...	.43	.02	.02	70	80	--	--	1.8	--
DEC 16...	.21	.02	.01	80	0	30	--	2.2	.6
JAN 20...	.25	.02	.02	50	10	--	--	1.9	.2
FEB 28...	--	.01	--	80	20	--	--	--	--
MAR 17...	.62	.01	.02	90	30	20	2.4	2.3	.8
APR 21...	.92	.06	.04	60	20	--	--	6.0	2.2
MAY 26...	2.8	.61	.00	40	0	--	--	5.6	1.9
JUL 19...	.39	.06	.01	100	10	10	5.1	4.2	.7
AUG 16...	1.8	.34	.02	60	20	--	--	5.0	3.9
SEP 27...	.36	.03	.00	90	30	20	--	3.8	1.0

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)
OCT 21...	1200	1	1	70	<10	1	0	0	<50	0	<10	1
DEC 16...	1100	1	0	80	<10	0	0	0	<50	0	<10	0
MAR 17...	1100	1	0	90	<10	0	20	0	<50	0	<10	1
JUL 19...	1200	2	1	100	10	1	0	0	<50	0	10	1
SEP 27...	1200	2	1	90	<10	1	10	0	<50	1	<10	1

ARKANSAS RIVER BASIN

07221500 CANADIAN RIVER NEAR SANCHEZ, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL IRON (FE) (01045)	DIS- SOLVED IRON (FE) (01046)	TOTAL LEAD (PB) (01051)	DIS- SOLVED LEAD (PB) (01049)	TOTAL MANGANESE (MN) (01055)	DIS- SOLVED MANGANESE (MN) (01056)	TOTAL MERCURY (HG) (71900)	DIS- SOLVED MERCURY (HG) (71890)	TOTAL SILICUM (SE) (01147)	DIS- SOLVED SILICUM (SE) (01148)	TOTAL ZINC (ZN) (01092)	DIS- SOLVED ZINC (ZN) (01090)
OCT 21...	870	40	100	2	50	20	.0	.0	1	1	10	0
DEC 16...	520	0	<100	1	30	30	.0	.1	1	1	10	10
MAR 17...	480	30	<100	1	50	20	.1	.0	1	1	10	0
JUL 19...	560	10	<100	3	90	10	.1	.1	1	0	10	4
SEP 27...	230	30	<100	8	90	20	.0	.0	0	0	60	10

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM 7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCHI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCHI KF AGAR (COL. PER 100 ML) (31673)
OCT 21...	1200	4	9	--
NOV 18...	1200	0	7	--
DEC 16...	1100	4	70	--
JAN 20...	1230	2	8	--
MAR 17...	1100	8	--	50
APR 21...	1200	2200	--	8900
MAY 26...	1030	7000	--	4500
JUL 19...	1200	37	--	40
AUG 16...	1330	540	--	000
SEP 27...	1200	0	--	30

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT CHARGE (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 21...	1200	10	10.0	50	1.4	89
NOV 18...	1200	6.7	6.0	16	.29	77
DEC 16...	1100	3.3	1.0	46	.41	78
JAN 20...	1230	8.3	2.0	31	.69	83
FEB 28...	1140	19	6.0	19	.97	90
MAR 17...	1100	11	9.0	36	1.1	90
APR 21...	1200	13	13.0	321	11	99
MAY 26...	1030	146	15.0	869	343	98
JUL 19...	1200	5.7	26.0	29	.45	100
AUG 16...	1330	20	29.0	576	31	--
SEP 27...	1200	7.4	20.5	52	1.0	--

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LOCATION.--Lat 35°24'10", long 104°26'35", in NE 1/4 sec.36, T.14 N., R.23 E., San Miguel County, Hydrologic Unit 11080005, on left bank 1.5 mi (2.4 km) northeast of Variadero, 14 mi (23 km) west of Conchas Dam, and at mile 15.0 (24.1 km).

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

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

GAGE.--Water-stage recorder. Altitude of gage is 4,390 ft (1,340 m), from topographic map. Prior to Mar. 30, 1942, at site 1.5 mi (2.4 km) upstream at different datum. Mar. 30, 1942 to May 18, 1950, at present site at datum 0.5 ft (0.15 m) higher.

REMARKS.--Records fair. Diversions for irrigation of about 300 acres (1.2 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.—41 years, 15.9 ft³/s (0.450 m³/s), 11,520 acre-ft/yr (14.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 44,000 ft³/s (1,250 m³/s) Sept. 1, 1942, gage height, 19.96 ft (6.084 m), present datum, from rating curve extended above 760 ft³/s (22 m³/s) on basis of slope-area measurements at gage heights 10.5 ft (3.20 m) and 19.96 ft (6.084 m), present datum; no flow many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum.(*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
June 28	2400	5,770	163	8.63	2.630	Aug. 22	0200	3,110	88.1	6.25	1.905
July 9	0330	1,810	51.3	4.83	1.472	Aug. 29	1200	*8,720	247	10.75	3.277
Aug. 14	0230	2,000	56.6	5.05	1.539						

a From rating curve extended above 760 ft³/s (22 m³/s) as explained above.

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	.01	.02	.08	.06	.04	.01	5.7	.04	26	.16	12
2	.29	.01	.02	.10	.06	.06	.00	3.8	.04	42	.08	8.1
3	.16	.01	.04	.13	.06	.02	.00	1.1	.04	12	.04	16
4	.10	.01	.04	.13	.06	.04	.00	.41	.02	3.0	.04	22
5	.08	.01	.06	.16	.06	.04	.00	.19	.02	1.8	.04	8.7
6	.04	.01	.06	.16	.04	.06	.00	.13	.01	1.8	.02	4.0
7	.16	.01	.06	.19	.02	.06	.00	.06	.01	1.0	.02	2.0
8	.08	.01	.06	.19	.02	.06	.00	.04	.01	13	28	1.0
9	.06	.01	.06	.19	.02	.06	.00	.01	.00	379	7.7	.50
10	.04	.01	.04	.19	.02	.06	.00	.00	.00	32	3.4	.30
11	.04	.01	.04	.19	.02	.02	.00	.00	.00	5.7	44	.20
12	.04	.02	.04	.19	.02	.04	.00	.01	.00	1.4	16	.10
13	.04	.04	.04	.19	.02	.06	.00	3.2	.00	.33	5.9	20
14	.04	.04	.02	.19	.02	.02	.01	199	.00	.13	561	72
15	.02	.02	.02	.19	.04	.01	.04	45	.00	.08	31	15
16	.02	.02	.02	.19	.04	.01	.04	14	.00	.04	8.5	7.2
17	.02	.01	.02	.16	.04	.04	.08	5.0	.00	.02	23	5.0
18	.01	.01	.04	.16	.04	.01	.08	2.4	.00	.01	93	3.0
19	.01	.00	.04	.16	.04	.01	.08	1.2	.00	.00	42	2.0
20	.01	.00	.04	.16	.04	.01	.10	.77	.00	.00	22	1.0
21	.02	.00	.06	.13	.04	.01	.10	.50	.00	.00	82	.60
22	.02	.00	.04	.10	.04	.01	.08	.33	.00	.00	575	.50
23	.02	.00	.04	.10	.02	.00	.08	.25	.00	.00	33	.50
24	.02	.00	.04	.10	.02	.01	.06	.22	.00	.00	125	.45
25	.02	.00	.06	.08	.02	.01	2.4	.19	.00	.00	25	.45
26	.02	.01	.06	.08	.02	.00	.28	.16	.00	.00	11	.41
27	.02	.00	.08	.06	.02	.01	.13	.13	.00	95	5.2	.41
28	.02	.00	.06	.06	.04	.04	.08	.10	266	18	4.0	.37
29	.04	.00	.06	.06	---	.00	.06	.08	1170	3.9	2910	.22
30	.04	.01	.06	.06	---	.00	.02	.06	291	1.5	92	.19
31	.02	---	.06	.06	---	.00	---	.06	---	.55	23	---
TOTAL	2.07	.29	1.40	4.19	.96	.82	3.73	284.10	1727.19	638.26	4771.10	204.20
MEAN	.067	.010	.045	.14	.034	.026	.12	9.16	57.6	20.6	154	6.81
MAX	.55	.04	.08	.19	.06	.06	2.4	199	1170	379	2910	72
MIN	.01	.00	.02	.06	.02	.00	.00	.00	.00	.00	.02	.10
AC-FT	4.1	.6	2.8	8.3	1.9	1.6	7.4	564	3430	1270	9460	405

CAL YR 1976	TOTAL	2811.40	MEAN	7.68	MAX	822	MIN	.00	AC=FT	5580
WTR YR 1977	TOTAL	7638.31	MEAN	20.9	MAX	2910	MIN	.00	AC=FT	15150

ARKANSAS RIVER BASIN

07223000 BELL RANCH CANAL BELOW CONCHAS DAM, NM

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

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

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

REMARKS.--Records good. Canal diverts from Conchas Lake (station 07223500) for irrigation of about 700 acres (3 km²) on Bell Ranch. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 21 ft³/s (0.595 m³/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 1976 TO SEPTEMBER 1977

Month	Maximum	Minimum	Mean	Diversion in acre-feet
October.....	0	0	0	0
November.....	0	0	0	0
December.....	4.8	0	2.01	123
CAL YR 1976.....	8.1	0	2.35	1,700
January.....	2.2	0	1.19	73
February.....	3.9	0	2.53	141
March.....	5.3	0	2.79	172
April.....	4.0	0	1.72	103
May.....	8.6	1.9	5.76	354
June.....	10	8.3	9.50	565
July.....	9.2	0	5.41	333
August.....	4.3	0	2.05	126
September.....	9.6	5.8	9.20	548
WTR YR 1976.....	10	0	3.51	2,540

07223300 CONCHAS CANAL BELOW CONCHAS DAM, NM

LOCATION.--Lat 35°22'51", long 104°10'58", San Miguel County, Hydrologic Unit 11080006, in Pablo Montoya Grant, in Conchas Canal operations building below Conchas Dam, and 21.5 mi (34.6 km) north of Newkirk. Water-quality sampling site 1.0 mi (1.6 km) downstream.

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Water is diverted from Conchas Lake for irrigation of about 35,000 acres (140 km²) on Tucumcari Project (1966 conditions).

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 751 ft³/s (21.3 m³/s) Aug. 31, 1961; no flow many days each year.

MONTHLY DIVERSION, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Month	Mean	Diversion in acre-feet
October.....	0	0
November.....	0	0
December.....	0	0
CAL YR 1976.....	28.6	20,780
January.....	0	0
February.....	0	0
March.....	0	0
April.....	0	0
May.....	0	0
June.....	153	9,100
July.....	165	10,160
August.....	18.9	1,160
September.....	248	14,760
WTR YR 1976.....	48.6	35,180

07223300 CONCHAS CANAL BELOW CONCHAS DAM, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to June 1977 (discontinued).

REMARKS.--No flow during most of each winter. Sample taken from Conchas Lake when Conchas Canal not flowing.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)
OCT								
06...	1500	--	789	--	--	18.0	8	--
13...	1430	--	795	--	--	18.0	8	--
20...	1100	--	788	--	--	14.0	7	--
21...	0915	--	800	8.7	8.0	8.5	8	9.9
27...	1030	--	800	--	--	10.5	8	--
NOV								
03...	1100	.05	796	--	--	13.0	8	--
10...	1115	.05	799	--	--	12.0	7	--
16...	1430	.05	847	--	--	9.0	9	--
18...	0900	.05	810	8.5	12.0	8.5	7	10.2
24...	1200	.05	851	--	--	8.0	7	--
DEC								
01...	1400	.20	851	--	--	10.0	5	--
07...	1515	.26	853	--	--	10.0	8	--
15...	1300	.26	830	--	--	4.0	7	--
16...	0845	.26	950	8.5	3.0	2.5	7	13.2
21...	1200	.26	828	--	--	5.0	8	--
29...	1330	.26	832	--	--	3.0	5	--
JAN								
04...	1330	--	825	--	--	3.0	10	--
11...	1300	--	875	--	--	.0	10	--
19...	0940	--	710	--	--	.0	15	--
20...	0845	--	731	8.2	3.0	1.5	10	13.2
25...	1400	--	745	--	--	8.0	4	--
FEB								
01...	1330	--	832	--	--	7.0	7	--
08...	1400	--	783	--	--	9.0	8	--
16...	1445	--	819	--	--	13.0	5	--
23...	1500	--	845	--	--	8.0	30	--
MAR								
01...	1400	--	835	--	--	8.0	10	--
08...	1730	--	--	--	--	10.0	30	--
17...	0830	--	930	8.3	13.5	7.0	10	9.7
17...	1300	--	860	--	--	6.0	30	--
22...	1030	--	865	--	--	8.0	25	--
29...	1115	--	885	--	--	6.0	15	--
APR								
04...	0900	--	850	--	--	6.0	15	--
11...	1100	--	870	--	--	12.5	7	--
18...	0900	--	858	--	--	14.0	7	--
21...	0945	--	850	--	13.0	13.0	15	9.3
25...	1345	--	875	--	--	16.0	6	--
MAY								
02...	1545	--	842	--	--	16.5	8	--
10...	1045	--	850	--	--	17.0	10	--
17...	1200	--	--	--	--	17.0	10	--
MAY								
23...	1130	--	--	--	--	18.0	4	--
26...	0830	--	875	8.2	22.5	17.5	10	12.2
JUN								
01...	1200	--	890	--	--	18.5	4	--
06...	1030	--	875	--	--	19.5	6	--
14...	1500	183	845	--	--	22.5	7	--
21...	1545	223	860	--	--	22.0	8	--
23...	0830	217	863	8.5	23.5	22.0	8	7.9
30...	1700	200	840	--	--	23.5	10	--

ARKANSAS RIVER BASIN

07223300 CONCHAS CANAL BELOW CONCHAS DAM, -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)
OCT							
06...	.06	--	.01	.41	.48	.01	--
13...	.15	--	.06	.48	.69	.03	--
20...	.09	--	.00	.54	.63	.03	--
21...	.03	.01	.08	.30	.41	.01	.01
27...	.06	--	.05	.32	.43	.02	--
NOV							
03...	.01	--	.08	.24	.33	.02	--
10...	.02	--	.03	.44	.49	.04	--
16...	.01	--	.00	.27	.28	.02	--
18...	.13	.13	.01	.42	.56	.05	.02
24...	.02	--	.03	.40	.45	.05	--
DEC							
01...	.14	--	.00	.45	.59	.03	--
07...	.02	--	.00	.62	.64	.02	--
15...	.10	--	.00	.45	.55	.02	--
16...	.12	.07	.00	.36	.48	.02	.01
21...	.12	--	.00	.49	.61	.03	--
29...	.10	--	.03	.40	.53	.02	--
JAN							
04...	.08	--	.02	.46	.56	.03	--
11...	.06	--	.12	.72	.90	.07	--
19...	.08	--	.13	.55	.76	.03	--
20...	.08	.08	.00	.13	.21	.01	.01
25...	.04	--	.00	.17	.21	.00	--
FEB							
01...	.06	--	.07	6.1	6.3	.02	--
08...	.04	--	.04	.56	.64	.02	--
16...	.07	--	.02	.64	.73	.02	--
23...	.07	--	.00	.42	.49	.08	--
MAR							
01...	.06	--	.00	.45	.51	.01	--
08...	.13	--	.00	.69	.82	.05	--
17...	.01	.01	.01	.72	.74	.02	.01
17...	.06	--	.01	.38	.45	.06	--
22...	.02	--	.00	.61	.63	.04	--
29...	.06	--	.01	.29	.36	.01	--
APR							
04...	.02	--	.02	.44	.48	.01	--
11...	.08	--	.01	.45	.54	.03	--
18...	.06	--	.05	.42	.53	.00	--
21...	.08	.08	.00	.37	.45	.05	.05
25...	.11	--	.00	.29	.40	.04	--
MAY							
02...	.07	--	.01	.32	.40	.02	--
10...	.07	--	.00	.31	.38	.00	--
17...	.05	--	.00	.74	.79	.01	--
MAY							
23...	.08	--	.01	.40	.49	.00	--
26...	.07	.07	.02	.03	.12	.03	.01
JUN							
01...	.03	--	.11	.69	.83	.03	--
06...	.02	--	.02	.19	.23	.01	--
14...	.01	--	.02	.35	.38	.02	--
21...	.04	--	.01	.42	.47	.05	--
23...	.02	.02	.03	.14	.19	.01	.01
30...	.03	--	.04	.26	.33	.02	--

07223500 CONCHAS LAKE AT CONCHAS DAM, NM

LOCATION.--Lat 35°24'10", long 104°11'25", San Miguel County, Hydrologic Unit 11080003, in Pablo Montoya Grant, stilling well within concrete portion of Conchas Dam on Canadian River, 24 mi (39 km) north of Newkirk, and at mile 746.0 (1,200.3 km).

DRAINAGE AREA.--7,409 mi² (19,189 km²), of which 433 mi² (1,121 km²), 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 at mean sea level.

REMARKS.--Lake is formed by dam consisting of concrete main section and earthfill wings, completed Sept. 15, 1939; storage began Dec. 29, 1938. Capacity, 330,100 acre-ft (407 hm³) between elevations 4,060.0 ft (1,237.49 m) and 4,201.0 ft (1,280.46 m), crest of 300 ft (91.4 m) ungated service spillway. Inactive storage, 70,490 acre-ft (86.9 hm³) at elevation 4,155.0 ft (1,266.44 m). Lake usually not drawn below elevation, 4,157.35 ft (1,267.160 m), sill of irrigation outlet, capacity, 77,790 acre-ft (95.9 hm³), except for minor sluicing and operation of small powerplant; during 1954-55, 1964 and 1976 there was some pumping into Conchas Canal. Capacity of 198,800 acre-ft (245 hm³) between elevations 4,201.0 ft (1,280.46 m), crest of 300 ft (91.4 m) ungated service spillway, and 4,218.0 ft (1,285.65 m), crest of 3,000 ft (914 m) ungated emergency spillway, acts as detention storage in the control of floods. Figures given herein represent total contents. Lake is used for irrigation, flood control, and recreation. Diversions above station for irrigation of about 57,000 acres (230 km²). Direct diversions through Conchas Dam to Bell Ranch Canal and Conchas Canal (stations 07223000, 07223300) irrigate about 36,000 acres (150 km²) near Tucumcari, and on Bell Ranch.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 479,600 acre-ft (591 hm³) Apr. 24, 1942, elevation, 4,208.41 ft (1,282.723 m); minimum after initial filling, 78,080 acre-ft (96.3 hm³) Sept. 18, 1976, elevation, 4,157.44 ft (1,267.188 m); minimum elevation, 4,155.80 ft (1,266.688 m) Sept. 24, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 129,500 acre-ft (160 hm³) Sept. 4, elevation, 4,171.00 ft (1,271.321 m); minimum, 80,110 acre-ft (98.8 hm³) July 26, elevation, 4,158.07 ft (1,267.380 m).

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

4,155	70,490	4,170	125,100
4,160	86,520	4,175	148,000
4,165	104,600		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84330	83600	83030	82830	83530	83530	82570	83960	91750	85300	83130	127500
2	84430	83600	83030	82830	83530	83500	82500	83930	91680	85130	83000	128900
3	84400	83600	83030	82830	83630	83460	82470	83900	91570	84800	82760	129300
4	84400	83560	83030	82830	83660	83430	82440	83830	91500	84460	82700	129400
5	84360	83560	83000	82860	83700	83430	82400	83760	91360	84260	82930	129200
6	84360	83530	83000	82900	83700	83430	82400	83660	91220	84000	83130	128900
7	84360	83500	82960	82930	83700	83400	82370	83600	91190	83830	83260	128500
8	84360	83500	82960	82930	83700	83360	82340	83530	91040	84160	83730	128100
9	84360	83460	82960	82930	83700	83360	82270	83460	90940	86350	83800	127400
10	84360	83430	82930	82930	83700	83330	82240	83430	90550	86480	83900	126800
11	84330	83360	82930	82930	83660	83300	82240	83430	89990	86280	84020	126200
12	84300	83360	82930	82930	83660	83300	82200	83930	89440	86010	84160	125700
13	84260	83360	82900	82960	83660	83260	82240	85300	88810	85570	84400	125200
14	84260	83360	82900	83000	83660	83230	82270	90310	88300	85170	85710	124800
15	84160	83330	82900	83030	83630	83200	82300	91640	87780	84730	86080	124200
16	84130	83330	82900	83060	83630	83200	82340	91930	87270	84300	86210	123600
17	84060	83300	82900	83100	83630	83130	82340	92000	86720	83830	86380	123100
18	83960	83300	82900	83130	83630	83100	82340	91960	86210	83400	87610	122600
19	83930	83260	82900	83160	83630	83060	83430	91930	85640	82860	89680	122100
20	83900	83260	82900	83200	83630	83030	83700	91930	85130	82400	91940	121500
21	83900	83230	82860	83230	83630	83000	83830	91860	84630	81970	96790	121000
22	83860	83230	82860	83260	83630	82960	83830	91780	84130	81580	101900	120500
23	83830	83200	82860	83300	83600	82930	83830	91750	83630	81120	104500	119900
24	83800	83200	82830	83360	83530	82900	83930	91680	83100	80660	106500	119300
25	83800	83160	82830	83360	83530	82830	84000	91610	82630	80430	107100	118800
26	83700	83100	82830	83430	83530	82800	84000	91820	82100	80140	107300	118300
27	83630	83100	82830	83460	83530	82800	84000	91890	81640	80500	107400	117800
28	83630	83100	82830	83500	83560	82800	83960	91860	81180	82900	107500	117300
29	83630	83060	82830	83500	---	82730	83960	91860	84730	83400	124800	116800
30	83630	83060	82830	83530	---	82670	83960	91820	85370	83460	126000	116200
31	83630	---	82830	83530	---	82630	---	91780	---	83360	127300	---
MAX	84430	83600	83030	83530	83700	83530	84000	92000	91750	86480	127300	129400
MIN	83630	83060	82830	82830	83530	82630	82200	83430	81180	80140	82700	116200
(†)	4159.14	4158.97	4158.90	4159.11	4159.12	4158.84	4159.24	4161.52	4159.66	4159.06	4170.50	4167.90
(‡)	-570	-570	-230	+700	+30	-930	+1330	+7820	-6410	-2010	+43940	-11100

CAL YR 1976 MAX 95620 MIN 78080 † +990
WTR YR 1977 MAX 129400 MIN 80140 ‡ +32000

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07226500 UTE CREEK NEAR LOGAN, NM

LOCATION.--Lat 35°26'18", long 103°31'31", in NW¼SE¼ sec.15, T.14 N., R.32 E., Harding County, Hydrologic Unit 11080007, on right bank 1.9 mi (3.1 km) downstream from Alamosa Creek, 4.5 mi (7.2 km) upstream from State Road 155, 4.7 mi (7.6 km) upstream from high-water line of Ute Reservoir, 8.2 mi (13.2 km) northwest of Logan, and at mile 10.0 (16.1 km).

DRAINAGE AREA.--2,060 mi² (5,335 km²), of which 617 mi² (1,598 km²) 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). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Altitude of gage is 3,815 ft (1,163 m), from topographic map. See WSP 2121 for history of changes prior to Oct. 1, 1964.

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

AVERAGE DISCHARGE.--35 years, 24.8 ft³/s (0.702 m³/s), 17,970 acre-ft/yr (22.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s (694 m³/s) May 28, 1946, July 12, 1951, gage height, 8.4 ft (2.56 m), site and datum then in use, from rating curve extended above 7,700 ft³/s (220 m³/s) on basis of slope-area measurements at gage heights 5.2 ft (1.58 m) and 7.2 ft (2.19 m); maximum gage height, 8.76 ft (2.670 m) July 17, 1972; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1, 1914, reached a stage of 22.95 ft (6.995 m) site and datum then in use. Another major flood reached a stage of 16.0 ft (4.88 m), 1942 datum, sometime in 1941, from information furnished by Bureau of Reclamation, discharge, about 70,000 ft³/s (2,000 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,500 ft³/s (411 m³/s) at 1900 hours May 14, gage height, 7.40 ft (2.256 m), from rating curve extended above 2,800 ft³/s (70 m³/s), no other peak above base of 3,700 ft³/s (100 m³/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	8.5	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.15	.00	.00	.00	244
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	9.2	82
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	29	36
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	9.2	.50	13
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	28	.00	4.4
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.5	.00	.99
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	34	3.7	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	25	56	.00
11	.00	.00	.00	.00	.00	.00	.00	208	.00	1.0	112	.00
12	.00	.00	.00	.00	.00	.00	.00	387	.00	.00	194	20
13	.00	.00	.00	.00	.00	.00	.00	83	.00	.00	137	42
14	.00	.00	.00	.00	.00	.00	209	2700	.00	.00	529	20
15	.00	.00	.00	.00	.00	.00	.20	1090	.00	.00	121	2.9
16	.00	.00	.00	.00	.00	.00	.00	204	.00	.00	70	.10
17	.00	.00	.00	.00	.00	.00	.00	90	.00	.00	50	.00
18	.00	.00	.00	.00	.00	.00	.00	38	.00	.00	738	.00
19	.00	.00	.00	.00	.00	.00	70	17	.00	.00	375	.00
20	.00	.00	.00	.00	.00	.00	78	6.5	.00	.00	184	.00
21	.00	.00	.00	.00	.00	.00	101	13	.00	.00	106	.00
22	.00	.00	.00	.00	.00	.00	5.0	40	.00	.00	426	.00
23	.00	.00	.00	.00	.00	.00	.50	29	.00	.00	228	.00
24	.00	.00	.00	.00	.00	.00	.15	17	.00	.00	117	.00
25	.00	.00	.00	.00	.00	.00	.00	14	202	.00	35	.00
26	.00	.00	.00	.00	.00	.00	.31	12	203	60	7.0	.00
27	.00	.00	.00	.00	.00	.00	.13	13	53	121	.30	.00
28	.00	.00	.00	.00	.00	.00	.00	19	9.7	.10	.00	.00
29	.00	.00	.00	.00	---	.00	.00	7.0	.50	.00	75	.00
30	.00	.00	.00	.00	---	.00	14	1.5	.00	.00	50	.00
31	.00	---	.00	.00	---	.00	---	.10	---	.00	2.0	---
TOTAL	.00	.00	.00	.00	.00	.00	478.29	4997.75	468.20	280.80	3654.70	465.44
MEAN	.000	.000	.000	.000	.000	.000	15.9	161	15.6	9.06	118	15.5
MAX	.00	.00	.00	.00	.00	.00	209	2700	203	121	738	244
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	949	9910	929	557	7250	923
CAL YR 1976	TOTAL	1165.22	MEAN	3.18	MAX	455	MIN	.00	AC-FT	2310		
WTR YR 1977	TOTAL	10345.18	MEAN	28.3	MAX	2700	MIN	.00	AC-FT	20520		

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 (4.0 km) southwest of Logan, 3.5 mi (5.6 km) downstream from Ute Creek, and at mile 673.1 (1,083.0 km).

DRAINAGE AREA.--11,140 mi² (28,853 km²), of which 1,110 mi² (2,875 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Reservoir is formed by earthfill dam 121 ft (37 m) high above streambed, 2,050 ft (620 m) long; an earth-dike section on north (left) bank of Canadian River is 2,860 ft (870 m) long and has a maximum height of 27 ft (8 m); a concrete spillway section 840 ft (260 m) long is constructed between main embankment and the dike. Construction completed in May 1963; storage began Dec. 13, 1962. Capacity, 109,600 acre-ft (135 hm³) at elevation 3,760.0 ft (1,146.05 m), crest of 840 ft (260 m) ungated service spillway. Top of dam is at elevation 3,801.0 ft (1,158.54 m). Maximum design capacity of 307,000 acre-ft (379 hm³) at elevation 3,791.0 ft (1,155.50 m), 31.0 ft (9.4 m) above crest of spillway, allows 197,400 acre-ft (243 hm³) of capacity for protection of the structure. Dead storage, 20,710 acre-ft (25.5 hm³) at elevation 3,725.0 ft (1,135.38 m), sill of outlet gate; inactive pool of 49,870 acre-ft (61.5 hm³) below elevation 3,741.6 ft (1,140.44 m) is maintained for fish and wildlife. Figures given herein represent total contents. Reservoir is planned to furnish water for municipal and industrial uses and for recreational purposes; some incidental flood control. Diversions above station for irrigation of about 90,000 acres (360 km²).

COOPERATION.--Capacity table furnished by New Mexico Interstate Stream Commission.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 119,900 acre-ft (148 hm³) June 17, 1969, elevation, 3,762.4 ft (1,146.78 m); minimum observed, 22,230 acre-ft (27.4 hm³) Aug. 7, 1964, elevation, 3,726.2 ft (1,135.75 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 107,900 acre-ft (133 hm³) Aug. 25, elevation, 3,759.58 ft (1,145.920 m); minimum, 85,100 acre-ft (105 hm³) Apr. 12, elevation, 3,753.59 ft (1,144.094 m).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by New Mexico Interstate Stream Commission in 1963)

3,752	79,640	3,758	101,500
3,754	86,550	3,760	109,600
3,756	93,840		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91350	89490	88440	87720	87440	87260	85730	91570	101100	100100	99060	103500
2	91280	89450	88440	87720	87440	87260	85660	91570	101000	100400	99210	104300
3	91280	89420	88410	87900	87440	87190	85560	91610	101000	100400	100700	104100
4	91060	89380	88410	87620	87440	87150	85520	91430	100900	100300	100300	103700
5	90990	89340	88330	87650	87440	87150	85560	91390	100900	100200	99640	103300
6	90950	89270	88330	87690	87400	87120	85520	91320	100800	100100	99250	102600
7	90840	89270	88330	87690	87400	87080	85490	91240	100700	100100	99100	102000
8	90800	89240	88410	87620	87400	87040	85450	91130	100700	99950	98940	101200
9	90800	89200	88260	87620	87330	87010	85450	91100	100500	100700	98860	100300
10	90770	89160	88230	87620	87330	86970	85350	90990	100300	101700	99170	99600
11	90730	89020	88230	87620	87290	86900	85270	91350	100200	101700	100100	98980
12	90620	88980	88230	87720	87290	86870	85240	92460	100100	101200	100600	98790
13	90580	89020	88230	87620	87260	86830	85420	92830	99990	100400	100200	99060
14	90550	88980	88150	87620	87290	86790	86210	97900	99910	99680	100600	99140
15	90400	88950	88150	87580	87220	86720	86260	100900	99840	99370	100700	99100
16	90290	88950	88150	87580	87260	86690	86480	101800	99800	99290	100100	99020
17	90360	88870	88120	87620	87220	86650	86510	101800	99600	99140	99870	98940
18	90070	88870	88080	87620	87150	86620	87040	101900	99450	98980	100900	98790
19	90030	88870	88050	87580	87120	86580	86630	101800	99600	98860	101900	98790
20	90000	88800	88050	87580	87120	86510	90620	101800	99720	98710	102000	98630
21	89960	88800	87970	87620	87190	86480	91170	101800	99800	98560	103300	98320
22	89930	88770	87970	87620	87260	86440	91350	101800	99800	98480	106500	98280
23	89850	88770	88010	87580	87260	86400	91460	101800	100000	98400	107800	98080
24	89780	88840	87900	87510	87260	86370	91430	101700	100100	98280	107800	98050
25	89890	88690	87900	87540	87260	86300	91500	101600	100300	98210	107700	98050
26	89630	88440	87900	87580	87260	86260	91500	101500	100700	98400	107700	97860
27	89530	88510	87900	87540	87260	86090	91500	101500	100700	99720	106200	97780
28	89560	88510	87870	87470	87260	85980	91460	101400	100500	100800	105400	97750
29	89600	88510	87870	87440	---	85840	91500	101400	100400	100500	105200	97670
30	89530	88480	87760	87470	---	85800	91540	101300	100200	99760	104700	97480
31	89490	---	87720	87440	---	85770	---	101200	---	99170	104100	---
MAX	91350	89490	88440	87900	87440	87260	91540	101900	101100	101700	107800	104300
MIN	89490	88440	87720	87440	87120	85770	85240	90990	98450	98210	98860	97480
(†)	3754.82	3754.54	3754.33	3754.25	3754.20	3753.78	3755.38	---	3757.67	3757.40	3758.65	3756.96
(‡)	-1860	-1010	-760	-280	-180	-1490	+5770	+9660	-1000	-1030	+4930	-6620
CAL YR 1976	MAX	91350	MIN	83460	†	-610						
WTR YR 1977	MAX	107800	MIN	85240	†	+6130						

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07226800 UTE RESERVOIR NEAR LOGAN, NM -- Continued

WATER-QUALITY RECORDS

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

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

REMARKS.--Samples for chemical analyses are collected semi-annually at surface, and/or bottom levels of selected sites.

Site locations are as follows: Site A, 0.4 mi (0.6 km) upstream from Ute Dam, Site B, 0.6 mi (1.0 km) upstream from Ute Dam; Site C, 1.9 mi (3.1 km) upstream from Ute Dam; Site D, on the Ute Creek arm, 5.7 mi (9.2 km) upstream from Ute Dam; Site E, 3.8 mi (6.1 km) upstream from Ute Dam at confluence of Ute Creek and Canadian River arms; Site F, on the Canadian River arm, 9.1 mi (14.6 km) upstream from Ute Dam; Site G, on the Ute Creek arm, 6.9 mi (11.1 km) upstream from Ute Dam; Site H, on the Canadian River arm, 12.8 mi (20.6 km) upstream from Ute Dam, Site I, on the Canadian River arm, 5.0 mi (8.0 km) upstream from Ute Dam.

07226510 UTE RESERVOIR AT SITE F (LAT 35 20 21 LONG 103 33 07)

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SAMP- LING DEPTH (FT) (00003)	DEPTH OF RESER- VOIR (FT) (72025)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	HARD- NESS (CA,MG) (00900)
APR									
19...	1115	17	22	920	8.6	21.0	14.0	7.2	200
19...	1117	15	22	920	8.6	--	14.0	7.2	--
19...	1119	10	22	939	8.6	--	14.5	7.7	--
19...	1121	5.0	22	943	8.6	--	14.5	7.7	--
AUG									
17...	1015	25	25	893	8.5	21.0	22.5	2.4	160
17...	1017	20	25	--	--	--	--	3.2	--
17...	1019	15	25	--	--	--	--	4.5	--
17...	1021	10	25	--	--	--	--	7.1	--
17...	1023	5.0	25	--	--	--	--	7.4	--
17...	1025	.0	25	--	--	--	--	7.6	--

[illegible][illegible]

07226510 UTE RESERVOIR AT SITE F -- Continued

DATE	TIME	SAMP- LING DEPTH (FT) (00003)	DEPTH OF RESER- VOIR (FT) (72025)	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
APR 19...	1115	17	22	16	120
AUG 17...	1015	25	25	19	80

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SAMP- LING DEPTH (FT) (00003)	DEPTH OF RESER- VOIR (FT) (72025)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	HARD- NESS (CA+MG) (00900)
APR									
19...	1155	32	37	936	8.6	21.0	12.0	7.7	200
19...	1157	30	37	936	8.6	--	12.0	7.7	--
19...	1159	25	37	944	8.6	--	12.5	7.7	--
19...	1201	20	37	945	8.6	--	13.5	8.3	--
19...	1203	15	37	945	8.7	--	14.0	8.3	--
19...	1205	10	37	941	8.7	--	14.5	8.1	--
19...	1207	5.0	37	941	8.7	--	14.5	8.0	--
AUG									
17...	1100	35	37	849	8.3	24.5	23.5	7.1	170
17...	1102	30	37	--	--	--	--	4.7	--
17...	1104	25	37	--	--	--	--	5.9	--
17...	1106	20	37	--	--	--	--	6.5	--
17...	1108	15	37	--	--	--	--	6.8	--
17...	1112	5.0	37	--	--	--	--	7.2	--
17...	1114	.0	37	--	--	--	--	7.3	--

[illegible]

ARKANSAS RIVER BASIN

07226800 UTE RESERVOIR NEAR LOGAN, NM -- Continued

07226515 UTE RESERVOIR AT SITE I -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

[illegible]

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SAMP- LING DEPTH (FT) (000003)	DEPTH OF RESER- VOIR (FT) (72025)	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
APR 19...	1155	32	37	6	110
AUG 17...	1100	35	37	0	82

07226520 UTE RESERVOIR AT SITE G (LAT 35 23 35 LONG 103 30 00)

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

[illegible]

ARKANSAS RIVER BASIN

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07226800 UTE RESERVOIR NEAR LOGAN, NM -- Continued

07226520 UTE RESERVOIR AT SITE G -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SIO2) (MG/L) (00955)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS-SOLVED ORTHO-PHOS- PHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)
APR 19...	38	1.0	2.9	609	619	.16	.04	250	20
AUG 17...	--	--	--	--	--	--	--	--	--
17...	29	.8	6.4	427	445	.18	.01	180	30
17...	--	--	--	--	--	--	--	--	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SAMP-LING DEPTH (FT) (00003)	DEPTH OF RESER- VOIR (FT) (72025)	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
APR 19...	1230	5.0	6.0	130	190
AUG 17...	1130	5.0	7.0	89	110

07226560 UTE RESERVOIR AT SITE B (LAT 35 20 32 LONG 103 27 16)

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SAMP-LING DEPTH (FT) (00003)	DEPTH OF RESER- VOIR (FT) (72025)	SPE-CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS-SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)
APR 19...	0930	50	55	918	8.6	19.5	10.5	20	8.1	25
19...	0933	45	55	938	8.6	--	10.5	--	8.2	--
19...	0937	40	55	946	8.6	--	11.0	--	8.4	--
19...	0940	35	55	945	8.6	--	11.0	--	8.3	--
19...	0943	30	55	950	8.6	--	11.5	--	8.4	--
19...	0946	25	55	948	8.6	--	11.5	--	8.3	--
19...	0950	20	55	949	8.6	--	12.0	--	8.3	--
19...	0953	15	55	947	8.6	--	12.0	--	8.2	--
19...	0956	10	55	952	8.6	--	12.5	--	8.4	--
19...	1000	5.0	55	945	8.7	19.5	13.0	5	8.4	16
AUG 17...	0840	55	55	--	--	--	--	--	.2	--
17...	0845	50	55	923	8.3	24.5	19.5	2	.2	40
17...	0849	45	55	--	--	--	--	--	.2	--
17...	0853	40	55	--	--	--	--	--	.2	--
17...	0857	35	55	--	--	--	--	--	1.8	--
17...	0901	30	55	--	--	--	--	--	4.0	--
17...	0905	25	55	--	--	--	--	--	5.1	--
17...	0909	20	55	--	--	--	--	--	5.4	--
17...	0914	15	55	--	--	--	--	--	5.5	--
17...	0919	10	55	--	--	--	--	--	6.0	--
17...	0925	5.0	55	--	--	--	--	--	7.0	--
17...	0930	.0	55	954	8.5	24.5	25.5	2	7.5	28

ARKANSAS RIVER BASIN

07226800 UTE RESERVOIR NEAR LOGAN, NM -- Continued

07226560 UTE RESERVOIR AT SITE B -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	HARD- NESS (CA,MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
APR										
19...	190	0	35	25	160	5.0	6.7	280	5	250
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	200	0	35	27	170	5.3	6.5	280	0	250
AUG										
17...	--	--	--	--	--	--	--	--	--	--
17...	190	0	38	23	160	5.1	6.3	280	0	230
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	180	0	33	23	160	5.2	6.7	260	5	230

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)
APR									
19...	42	1.1	2.5	660	666	.10	.10	.04	.33
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	42	.9	2.3	662	673	.09	.09	.01	.48
AUG									
17...	--	--	--	--	--	--	--	--	--
17...	46	1.0	4.6	625	647	.01	.00	.13	.60
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	46	1.0	3.9	623	637	.02	.01	.01	.48

ARKANSAS RIVER BASIN

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07226800 UTE RESERVOIR NEAR LOGAN, NM -- Continued

07226560 UTE RESERVOIR AT SITE B -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDE D ORGANIC CARBON (C) (MG/L) (00689)
APR									
19...	.47	.04	.04	270	30	0	4.8	4.8	.4
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	.58	.04	.04	270	20	0	5.4	4.2	.6
AUG									
17...	--	--	--	--	--	--	--	--	--
17...	.74	.03	.01	270	30	170	4.4	4.5	.9
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	.51	.03	.01	260	10	4	4.6	4.8	.6

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)
APR												
19...	0930	3	1	270	10	0	<10	0	<50	0	<10	1
19...	1000	3	2	270	<10	2	<10	0	<50	0	<10	1
AUG												
17...	0845	3	3	270	10	1	0	0	<50	1	20	0
17...	0930	3	2	260	<10	0	0	0	<50	1	20	0

DATE	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
APR												
19...	400	30	<100	0	10	0	.0	.0	1	1	30	0
19...	140	20	<100	7	0	0	.0	.0	1	1	0	0
AUG												
17...	110	30	<100	8	170	170	.1	.0	2	0	20	4
17...	50	10	<100	3	30	4	.1	.0	0	0	40	0

ARKANSAS RIVER BASIN

07226800 UTE RESERVOIR NEAR LOGAN, NM -- Continued

07226560 UTE RESERVOIR AT SITE B -- Continued

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDE GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDE GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80050)	SUS- PENDE GROSS BETA AS SR90 /Y90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
APR 19...	0930	14	55	.9	14	3.2	12	2.8	.09	10
AUG 17...	0845	<1	25	<.4	12	1.0	9.9	.9	.08	.1

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL PCB (UG/L) (39516)	TOTAL ALDRIN (UG/L) (39330)	TOTAL CHLOR- DANE (UG/L) (39350)	TOTAL DDD (UG/L) (39360)	TOTAL DDE (UG/L) (39365)	TOTAL DDT (UG/L) (39370)	TOTAL DI- AZINON (UG/L) (39570)	TOTAL DI- ELDRIN (UG/L) (39380)	TOTAL ENDO- SULFAN (UG/L) (39388)	TOTAL ENDRIN (UG/L) (39390)
AUG 17...	0845	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00

DATE	TOTAL ETHION (UG/L) (39398)	TOTAL HEPTA- CHLOR (UG/L) (39410)	TOTAL HEPTA- CHLOR- EPOXIDE (UG/L) (39420)	TOTAL LINDANE (UG/L) (39340)	TOTAL MALA- THION (UG/L) (39530)	TOTAL METHYL PARA- THION (UG/L) (39600)	TOTAL METHYL TRI- THION (UG/L) (39790)	TOTAL PARA- THION (UG/L) (39540)	TOTAL TOX- APHENE (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)
AUG 17...	.00	.00	.00	.00	.00	.00	.00	.00	0	.00

DATE	TIME	TOTAL 2,4-D (UG/L) (39730)	TOTAL 2,4,5-T (UG/L) (39740)	TOTAL SILVEX (UG/L) (39760)
AUG 17...	0845	.01	.01	.00

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SAMP- LING DEPTH (FT) (00003)	DEPTH OF RESER- VOIR (FT) (72025)	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
APR 19...	0930	50	55	0	33
APR 19...	1000	5.0	55	6	100
AUG 17...	0845	50	55	1	43
AUG 17...	0930	.0	55	0	80

ARKANSAS RIVER BASIN

07226800 UTE RESERVOIR NEAR LOGAN, NM -- Continued

07226560 UTE RESERVOIR AT SITE B -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

IDENTIFICATION OF PHYTOPLANKTON

DATE TIME	APR 19,77 1000	AUG 17,77 0930		
TOTAL CELLS/ML	210	1000		
DIVERSITY: DIVISION	1.2	1.3		
..CLASS	1.2	1.3		
...ORDER	1.2	1.8		
...FAMILY	1.5	2.5		
...GENUS	1.8	2.7		
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
...CHLOROCOCCALES				
...COELASTRACEAE				
....COELASTRUM	--	-	54	5
...OOCYSTACEAE				
....ANKISTRODESMUS	3	1	7	1
...OOCYSTIS	120#	60	160#	16
...SELENASTRUM	8	4	--	-
...SCENEDESMACEAE				
....CRUCIGENIA	--	-	40	4
...SCENEDESMUS	5	2	260#	26
..ZYGNEMATALES				
...DESMIDIACEAE				
....COSMARIUM	--	-	57	6
CHRYSOPHYTA				
..BACILLARIOPHYCEAE				
...CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	3	1	--	-
..PENNALES				
...ACHNANTHACEAE				
....ACHNANTHES	5	2	--	-
...CYMBELLACEAE				
....CYMBELLA	3	1	--	-
...NAVICULACEAE				
....GYROSIGMA	--	-	*	0
...NAVICULA	8	4	*	0
..CHRYSOPHYCEAE				
...CHRYSOMONADALES				
...OCHROMONADACEAE				
....DINOBRYON	--	-	7	1
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
...CHROCCOCCALES				
...CHROCCOCCACEAE				
....ANACYSTIS	51#	24	320#	32
...HORMOGONALES				
...NOSTOCACEAE				
....APHANIZOMENON	--	-	51	5
EUGLENOPHYTA (EUGLENOIDS)				
..CRYPTOPHYCEAE				
...CRYPTOMONIDALES				
...CRYPTOCHRYSIDACEAE				
....CHROOMONAS	--	-	10	1
...CRYPTOMONODACEAE				
....CRYPTOMONAS	--	-	13	1
PYRRHOPHYTA (FIRE ALGAE)				
..DINOPHYCEAE				
...PERIDINIALES				
...CERATIACEAE				
....CERATIUM	--	-	10	1
...GLENODINIACEAE				
....GLENODINIUM	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

LOCATION.--Lat 35°21'25", long 103°25'03", in NE 1/4 sec.15, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080006, on left bank 1,100 ft (340 m) upstream from bridge on U.S. Highway 54, 0.7 mi (1.1 km) south of Logan, 1.4 mi (2.3 km) upstream from Chicago, Rock Island & Pacific Railroad Co. bridge, 2.0 mi (3.2 km) downstream from Ute Dam, 4.3 mi (6.9 km) upstream from Revuelto Creek, and at mile 672.0 (1,081.2 km).

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.

GAGE.--Water-stage recorder. Datum of gage is 3,668.1 ft (1,118.04 m) above mean sea level. See WSP 1311 or 1731 for history of changes prior to Oct. 1, 1934.

AVERAGE DISCHARGE.--15 years (water years 1909, 1912-13, 1927-38), 392 ft³/s (11.10 m³/s), 284,000 acre-ft/yr (350 hm³/yr), prior to completion of Conchas Dam; 24 years (water years 1939-62), 257 ft³/s (7.278 m³/s), 186,200 acre-ft/yr (230 hm³/yr), prior to completion of Ute Dam; 15 years (water years 1963-77), 32.4 ft³/s (0.918 m³/s), 23,470 acre-ft/yr (28.9 hm³/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 278,000 ft³/s (7,870 m³/s) Sept. 30, 1904, gage height, about 36.5 ft (11.13 m), site and datum used in 1909, from rating curve extended above 14,000 ft³/s (400 m³/s), from Ninth Biennial Report of State Engineer.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 315 ft³/s (8.92 m³/s) July 30, Aug. 4, 5, 22-24; maximum gage height, 3.72 ft (1.134 m) July 30, Aug. 4, 5; minimum, 1.3 ft³/s (0.037 m³/s) Nov. 14, 24, Jan. 16.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.2	2.4	2.0	2.0	1.8	2.4	2.4	2.0	2.0	8.4	275
2	2.5	2.2	2.4	1.8	2.0	1.8	2.0	2.4	2.0	2.0	7.2	272
3	2.5	2.2	2.4	2.0	2.0	1.8	2.2	2.4	2.0	2.0	29	269
4	2.5	2.2	2.2	2.0	2.2	2.2	2.2	2.4	1.8	2.0	315	269
5	2.5	2.2	2.2	2.0	2.0	2.2	2.2	2.2	1.8	2.2	315	269
6	2.4	2.0	2.2	2.2	2.0	2.2	2.2	2.2	1.8	2.2	187	269
7	2.4	2.0	2.4	2.2	2.0	2.0	2.2	2.2	1.8	2.2	11	269
8	2.4	2.0	2.2	2.0	2.0	2.0	2.2	2.2	1.8	2.2	9.0	269
9	2.4	2.0	2.2	1.6	2.2	2.0	2.2	2.2	1.8	2.2	8.5	269
10	2.4	2.0	2.2	1.6	2.2	2.0	2.2	2.2	2.0	2.2	8.5	269
11	2.3	1.8	2.6	1.8	2.4	1.8	2.2	2.4	2.0	2.2	8.5	266
12	2.3	1.8	2.6	2.0	2.4	1.8	2.2	2.6	2.0	152	95	130
13	2.3	1.8	2.6	1.8	2.4	1.8	4.1	2.6	2.0	299	270	7.8
14	2.3	1.8	2.6	1.6	2.4	1.8	5.1	2.0	2.0	299	270	6.1
15	2.3	1.8	2.6	1.6	2.2	1.8	2.9	1.8	1.8	107	270	5.1
16	2.2	1.8	2.6	1.6	2.2	2.0	2.9	2.0	1.8	3.2	280	5.1
17	2.2	1.8	2.4	1.6	2.4	2.0	3.5	2.0	1.8	2.9	300	4.6
18	2.2	1.8	2.0	1.8	2.4	1.8	3.2	2.0	2.0	2.6	305	4.2
19	2.2	1.8	1.6	1.8	2.4	1.8	3.9	2.0	2.0	2.6	310	4.2
20	2.2	1.8	1.6	1.8	2.4	1.8	2.9	2.2	2.0	2.6	310	4.2
21	2.2	2.0	1.6	1.8	2.4	1.8	2.9	2.4	2.0	2.6	310	4.1
22	2.2	2.0	1.8	1.8	2.4	2.0	2.6	2.2	2.0	2.6	315	3.2
23	2.2	2.0	1.8	1.8	2.0	2.0	2.6	2.2	5.5	2.6	315	2.6
24	2.4	2.0	1.8	1.8	1.8	2.0	2.6	2.2	2.0	2.6	315	2.4
25	2.4	2.0	1.8	1.8	1.8	2.0	2.6	2.0	1.8	2.6	310	2.4
26	2.4	1.8	1.8	1.8	1.8	2.0	2.6	2.0	1.8	2.9	305	2.4
27	2.4	1.6	1.8	1.8	1.8	2.6	2.6	2.0	1.8	6.7	300	2.4
28	2.4	1.6	1.6	1.8	1.8	2.6	2.6	2.0	1.8	3.7	295	2.2
29	2.4	1.8	1.8	2.0	---	2.4	2.6	2.0	2.0	168	290	2.2
30	2.2	2.2	1.8	2.0	---	2.4	2.6	2.0	2.0	315	285	2.2
31	2.2	---	2.0	2.0	---	2.4	---	2.0	---	223	280	---
TOTAL	72.4	58.0	65.6	57.2	60.0	62.6	81.2	67.4	60.9	1626.6	6637.1	3199.3
MEAN	2.34	1.93	2.12	1.85	2.14	2.02	2.71	2.17	2.03	52.5	214	107
MAX	2.5	2.2	2.6	2.2	2.4	2.6	5.1	2.6	5.5	315	315	275
MIN	2.2	1.6	1.6	1.6	1.8	1.8	2.0	1.8	1.8	2.0	7.2	2.2
AC=FT	144	115	130	113	119	124	161	134	121	3230	13160	6350
CAL YR 1976	TOTAL	856.8	MEAN	2.34	MAX	23	MIN	1.4	AC=FT	1700		
WTR YR 1977	TOTAL	12048.3	MEAN	33.0	MAX	315	MIN	1.6	AC=FT	23900		

07227100 REVUELTO CREEK NEAR LOGAN, NM

LOCATION.--Lat 35°20'28", long 103°23'40", in SW¼NW¼ sec.24, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080008, on right bank 0.3 mi (0.5 km) upstream from bridge on State Highway 39, 1.9 mi (3.1 km) southeast of Logan, and at mile 2.3 (3.7 km).

DRAINAGE AREA.--786 mi² (2,036 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 3,665 ft (1,117 m), from topographic map.

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

AVERAGE DISCHARGE.--18 years, 48.2 ft³/s (1.365 m³/s), 34,920 acre-ft/yr (43.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft³/s (756 m³/s) July 9, 1960, gage height, 14.3 ft (4.36 m); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD (1941-47).--Maximum discharge determined, about 13,400 ft³/s (379 m³/s) Sept. 18, 1946, gage height, 9.04 ft (2.755 m), at site 500 ft (150 m) downstream at different datum, from unpublished records collected by Bureau of Reclamation. A peak of 26,100 ft³/s (739 m³/s), date unknown, gage height, 12.9 ft (3.93 m), was measured by slope-area method in May 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,740 ft³/s (163 m³/s) Aug. 11 gage height, 7.02 ft (2.140 m), no other peak above base of 3,500 ft³/s (99 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	.08	.06	.35	.25	.12	.00	12	.00	.00	.00	.00
2	2.9	.08	.08	.30	.25	.03	.00	8.2	.91	323	.00	.00
3	1.4	.08	.10	.35	.33	.06	.00	.34	.03	166	228	108
4	.90	.08	.08	.38	.29	.08	.00	.00	.00	26	27	15
5	.69	.08	.12	.33	.33	.08	.00	.00	.00	20	6.6	2.6
6	1.2	.08	.16	.30	.23	.08	.00	.00	.00	3.0	.67	1.0
7	55	.08	.20	.30	.20	.08	.00	.00	.00	104	.00	.74
8	14	.08	.20	.25	.20	.08	.00	191	.00	11	.00	.16
9	1.6	.08	.20	.20	.20	.08	.00	30	.00	13	.00	.00
10	.49	.08	.17	.10	.20	.08	.00	2.1	.00	213	.00	.00
11	.21	.08	.08	.20	.20	.08	.00	.45	.00	26	2950	.00
12	.08	.03	.14	.30	.15	.08	.00	56	.00	3.3	623	.00
13	.08	.12	.20	.35	.08	.05	.25	34	.00	.19	41	.00
14	.08	.13	.26	.35	.08	.00	15	15	.00	.00	93	.00
15	.14	.08	.33	.36	.08	.00	67	.88	.00	.00	88	.00
16	.08	.08	.33	.36	.08	.00	7.6	.00	.00	.00	16	.00
17	.06	.08	.39	.33	.08	.00	13	.00	.00	.00	99	.00
18	.00	.08	.46	.35	.08	.00	24	.00	.00	.00	1770	.00
19	.00	.08	.46	.40	.20	.00	669	.00	.00	.00	470	.00
20	.00	.08	.46	.33	.20	.00	261	.00	.00	.00	42	.00
21	.00	.08	.46	.33	.20	.00	119	.00	2.0	.00	10	.00
22	.00	.08	.54	.43	.09	.00	28	.00	.23	12	202	.00
23	.00	.08	.62	.33	.02	.00	8.5	.00	25	3.9	164	.00
24	.00	.08	.54	.22	.00	.00	1.0	.00	55	.00	383	.00
25	.00	.08	.60	.20	.17	.00	.13	.00	23	.00	39	.00
26	.03	.08	.63	.20	.22	.00	.00	.00	15	.00	2.5	.00
27	.10	.06	.72	.20	.20	.41	.00	.00	1.4	.47	.01	.00
28	.22	.04	.50	.20	.20	.08	.00	.00	.12	371	.00	.00
29	.20	.02	.46	.20	---	.04	.00	.00	.00	42	.15	.00
30	.16	.04	.46	.20	---	.00	.12	.00	.00	1.4	.00	.00
31	.08	---	.40	.25	---	.06	---	.00	---	.00	.00	---
TOTAL	85.20	2.28	10.41	8.95	4.81	1.57	1213.60	349.97	122.69	1385.79	7254.93	127.50
MEAN	2.75	.076	.34	.29	.17	.051	40.5	11.3	4.09	44.7	234	4.25
MAX	55	.13	.72	.43	.33	.41	669	191	55	371	2950	108
MIN	.00	.02	.06	.10	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	169	4.5	21	18	9.5	3.1	2410	694	243	2750	14390	253

CAL YR 1976 TOTAL 5921.72 MEAN 16.2 MAX 885 MIN .00 AC-FT 11750
WTR YR 1977 TOTAL 10567.70 MEAN 29.0 MAX 2950 MIN .00 AC-FT 20960

ARKANSAS RIVER BASIN

07227100 REVUELTO CREEK NEAR LOGAN, NM -- Continued

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPECIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)
NOV									
10...	1630	.06	4760	--	--	15.0	--	--	--
17...	1430	.08	5160	--	--	12.5	--	330	0
DEC									
15...	1315	.34	5100	8.3	6.0	6.0	--	320	0
JAN									
12...	1525	.44	4740	8.1	--	.0	--	260	0
FEB									
16...	1330	.08	5470	8.2	--	17.0	--	350	0
MAR									
01...	0900	.12	5810	8.0	--	4.0	--	--	--
16...	1415	.08	6710	8.3	12.0	10.5	--	460	46
31...	1030	.06	9660	7.8	--	5.0	--	--	--
APR									
20...	1515	250	390	8.1	11.0	13.5	--	32	0
25...	1050	.13	1430	8.2	--	17.0	--	--	--
JUN									
22...	1215	.30	790	8.9	27.0	25.5	--	18	0
JUL									
11...	1405	21	472	7.9	--	32.0	--	--	--
AUG									
04...	1710	46	708	7.7	--	30.0	--	--	--
17...	1345	2.6	530	7.4	30.5	28.0	10.9	62	0

DATE	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
NOV									
10...	--	--	--	--	--	--	--	--	--
17...	58	44	910	22	4.9	429	--	290	1300
DEC									
15...	58	42	940	23	4.3	436	0	280	1200
JAN									
12...	49	34	870	23	3.8	404	0	250	1200
FEB									
16...	58	49	1000	23	5.2	429	0	300	1500
MAR									
01...	--	--	--	--	--	--	--	--	--
16...	74	67	1300	26	6.4	505	0	340	1900
31...	--	--	--	--	--	--	--	--	--
APR									
20...	7.7	3.2	83	6.3	2.2	150	0	74	16
25...	--	--	--	--	--	--	--	--	--
JUN									
22...	4.7	1.4	200	21	2.2	250	11	130	67
JUL									
11...	--	--	--	--	--	--	--	--	--
AUG									
04...	--	--	--	--	--	--	--	--	--
17...	18	4.1	110	6.1	2.4	180	0	110	37

ARKANSAS RIVER BASIN

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07227100 REVUELTO CREEK NEAR LOGAN, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
NOV								
10...	--	--	--	--	--	--	--	--
17...	.8	8.4	2790	2830	.03	.00	520	10
DEC								
15...	.9	8.8	--	2750	.04	--	--	--
JAN								
12...	.9	8.2	--	2620	.12	--	--	--
FEB								
16...	.9	8.1	--	3130	.01	--	--	--
MAR								
01...	--	--	--	--	--	--	--	--
16...	1.0	9.0	--	3950	.01	--	--	--
31...	--	--	--	--	--	--	--	--
APR								
20...	.5	6.6	247	272	.88	.10	140	50
25...	--	--	--	--	--	--	--	--
JUN								
22...	.7	9.6	--	555	1.2	--	--	--
JUL								
11...	--	--	--	--	--	--	--	--
AUG								
04...	--	--	--	--	--	--	--	--
17...	.6	10	--	383	.41	--	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (80010)	SUS- PENDE SED- MENT (MG/L) (80154)	SUS- PENDE SED- MENT CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)
NOV								
10...	1630	.06	15.0	4	.00	--	--	--
DEC								
15...	1315	.34	6.0	6	.01	--	--	--
JAN								
12...	1525	.44	.0	12	.01	--	--	--
FEB								
16...	1330	.08	17.0	13	.00	--	--	--
MAR								
01...	0900	.12	4.0	49	.02	--	--	--
16...	1415	.08	10.5	18	.00	--	--	--
31...	1030	.06	5.0	202	.03	--	--	--
APR								
20...	1515	250	13.5	9710	6550	55	66	75
25...	1050	.13	17.0	292	.10	87	94	98
JUN								
22...	1215	.30	25.5	5250	4.3	98	99	100
JUL								
11...	1405	21	32.0	11500	652	--	--	--
AUG								
04...	1710	46	30.0	9930	1230	--	--	--
17...	1345	2.6	28.0	637	4.5	--	--	--

ARKANSAS RIVER BASIN

07227100 REVUELTO CREEK NEAR LOGAN, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. FALL DIAM. % FINER THAN (70343)	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. FALL DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70332)	SUS. SED. FALL DIAM. % FINER THAN (70333)
NOV							
10...	--	--	--	--	--	--	--
DEC							
15...	--	--	--	--	--	--	--
JAN							
12...	--	--	--	--	--	--	--
FEB							
16...	--	--	--	--	--	--	--
MAR							
01...	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--
APR							
20...	85	88	94	100	--	--	--
25...	--	--	--	--	99	99	100
JUN							
22...	--	--	--	--	--	--	--
JUL							
11...	--	--	--	--	--	--	--
AUG							
04...	--	--	--	--	100	--	--
17...	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

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

LOCATION.--Lat 35°23'35", long 103°02'30", in SW¼ sec.32, T.14 N., R.37 E., Quay County, Hydrologic Unit 11080006, 0.1 mi (0.2 km) upstream from New Mexico-Texas State line, 5.5 mi (8.8 km) downstream from Rana Canyon, and 14.7 mi (23.7 km) north of Glenrio.

DRAINAGE AREA.--12,616 mi² (32,675 km²).

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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPERATURE (DEG C) (00020)	TEMPERATURE (DEG C) (00010)	TURBIDITY (JTU) (00070)	DISSOLVED OXYGEN (MG/L) (00300)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARDNESS (CA+MG) (MG/L) (00900)
OCT 20...	1100	6.3	8400	8.7	12.0	10.0	35	11.0	260	600
NOV 17...	1030	9.7	9000	8.5	15.0	6.0	35	11.8	46	730
DEC 15...	1015	5.9	10000	8.4	13.5	1.0	20	13.0	13	700
JAN 19...	1030	11	10000	8.8	12.5	2.0	55	12.8	56	700
FEB 16...	1030	7.6	10000	8.4	12.5	6.0	6	11.8	87	650
MAR 16...	1030	5.9	9800	8.5	15.0	10.5	4	11.6	50	620
APR 20...	1045	227	1300	7.4	14.0	13.5	13000	8.7	220	61
MAY 25...	0945	9.8	4400	8.5	23.5	21.0	550	12.1	84	340
JUL 20...	1000	3.4	3000	8.2	33.5	26.5	40	7.4	25	280
AUG 18...	1030	3000	655	7.8	26.5	23.0	10000	5.9	360	54
SEP 28...	1000	7.7	5800	8.1	29.0	23.0	8	8.7	63	500

DATE	NON-CARBONATE HARDNESS (MG/L) (00902)	DISSOLVED CALCIUM (CA) (MG/L) (00915)	DISSOLVED MAGNESIUM (MG) (MG/L) (00925)	DISSOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DISSOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DISSOLVED SULFATE (SO4) (MG/L) (00945)
OCT 20...	370	120	72	1600	29	8.8	271	0	400
NOV 17...	470	160	81	1900	31	10	316	0	520
DEC 15...	440	140	85	1800	30	9.0	318	0	440
JAN 19...	430	150	78	1800	30	9.0	325	0	500
FEB 16...	430	130	79	1800	31	9.5	273	0	440
MAR 16...	390	110	84	1800	31	11	278	0	450
APR 20...	0	15	5.8	240	13	3.1	200	0	130
MAY 25...	200	78	36	800	19	6.8	180	0	330
JUL 20...	61	47	40	580	15	8.8	270	0	340
AUG 18...	0	14	4.7	130	7.7	3.1	180	0	100
SEP 28...	280	99	61	960	19	8.6	270	0	340

ARKANSAS RIVER BASIN

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)
OCT 20...	2500	.5	9.4	4840	4850	.34	.33	.01	.00
NOV 17...	2900	.5	9.5	5860	5740	.44	.40	.01	.35
DEC 15...	2700	.6	12	5540	5350	.46	.46	.02	.18
JAN 19...	2900	.5	10	5680	5610	.40	.40	.03	.20
FEB 16...	2800	.5	5.9	5440	5400	.23	.23	.03	.03
MAR 16...	2700	.6	3.5	5440	5300	.06	.03	.00	.26
APR 20...	230	.5	5.6	705	732	.76	.76	.01	10
MAY 25...	1100	.5	7.1	2430	2450	.44	.44	.03	1.2
JUL 20...	680	1.0	7.8	1790	1840	.03	.01	.01	.88
AUG 18...	66	.6	6.4	381	416	.44	.42	.07	9.8
SEP 28...	1500	.7	10	3210	3110	.09	--	.03	--

DATE	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOLVED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDED ORGANIC CARBON (C) (MG/L) (00689)
OCT 20...	.34	.02	.02	340	20	--	--	1.1	.7
NOV 17...	.80	.08	.07	370	10	--	--	1.5	.4
DEC 15...	.66	.02	.02	340	20	170	--	1.8	.4
JAN 19...	.63	.06	.03	340	10	--	--	1.5	.3
FEB 16...	.29	.01	.01	340	30	--	5.0	--	--
MAR 16...	.32	.01	.01	350	30	290	2.3	2.0	.7
APR 20...	11	.08	.04	170	30	--	--	5.2	3.1
MAY 25...	1.6	.55	.00	270	10	--	--	3.5	.4
JUL 20...	.92	.07	.02	360	10	4	4.8	4.2	.6
AUG 18...	10	11	.03	180	20	--	--	4.9	49
SEP 28...	--	.02	--	--	50	20	1.9	2.1	.6

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
DEC 15...	1015	2	1	--	--	340	<10	0	0	0
MAR 16...	1030	1	0	--	--	350	10	1	10	10
JUL 20...	1000	5	3	--	--	360	<10	1	0	0
SEP 28...	1000	3	3	500	300	--	30	1	10	0

ARKANSAS RIVER BASIN

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

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)
DEC 15...	<50	0	<10	0	400	20	<100	1	190
MAR 16...	50	0	<10	2	220	30	<100	2	350
JUL 20...	<50	0	20	1	560	10	<100	4	20
SEP 28...	<50	1	20	2	460	50	<100	8	60

DATE	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL SILVER (AG) (UG/L) (01077)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
DEC 15...	170	.0	.0	1	1	--	--	10	10
MAR 16...	290	.3	.0	1	1	--	--	40	20
JUL 20...	4	.0	.0	0	0	--	--	20	4
SEP 28...	20	.0	.0	0	0	<10	0	20	10

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
OCT 20...	1100	5	20	--
NOV 17...	1030	7	17	--
DEC 15...	1015	1	5	--
JAN 19...	1030	0	15	--
FEB 16...	1030	0	1	--
MAR 16...	1030	3	--	5
APR 20...	1045	22000	--	21000
MAY 25...	0945	4200	--	2200
JUL 20...	1000	10	--	44
AUG 18...	1030	80000	--	17000
SEP 28...	1000	24	--	33

ARKANSAS RIVER BASIN

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	OCT 20,76 1100	NOV 17,76 1030	DEC 15,76 1015	JAN 19,77 1030	FEB 16,77 1030
TOTAL CELLS/ML	100	590	120	200	110
DIVERSITY: DIVISION	0.9	0.0	1.3	0.7	1.4
..CLASS	0.9	0.0	1.3	0.7	1.4
...ORDER	0.9	0.0	1.3	1.0	1.4
...FAMILY	1.8	1.4	2.4	2.6	1.5
....GENUS	1.8	1.4	2.7	2.8	1.6
ORGANISM	CELLS /ML PER- CENT	CELLS /ML PER- CENT	CELLS /ML PER- CENT	CELLS /ML PER- CENT	CELLS /ML PER- CENT
CHLOROPHYTA (GREEN ALGAE)					
..CHLOROPHYCEAE					
...CHLOROCOCCALES					
...CHARACIACEAE					
...SCHROEDERIA	--	--	--	--	--
...COELASTRACEAE					
...COELASTRUM	--	--	--	--	--
...MICRACTINIACEAE					
...GOLENKINIA	--	--	--	--	--
...MICRACTINIUM	--	--	--	--	--
...OOCYSTACEAE					
...ANKISTRODESMUS	--	--	8 7	--	--
...DICTYOSPHAERIUM	--	--	--	--	--
...OOCYSTIS	--	--	--	--	--
...SCENEDESMACEAE					
...ACTINASTRUM	--	--	--	--	--
...CRUCIGENIA	--	--	--	--	--
...SCENEDESMUS	30# 29	--	--	--	--
...VOLVOCALES					
...CHLAMYDOMONADACEAE					
...CHLAMYDOMONAS	--	--	--	37# 19	--
CHRYSTOPHYTA					
..BACILLARIOPHYCEAE					
...CENTRALES					
...COSCINODISCACEAE					
...CYCLOTELLA	--	--	--	15 7	--
...PENNALES					
...ACHNANTHACEAE					
...COCCONEIS	--	--	--	22 11	--
...RHOICOSPHEA	--	--	--	15 7	--
...FRAGILARIACEAE					
...FRAGILARIA	--	--	4 3	--	--
...SYNEDRA	15 14	--	--	--	--
...GOMPHONEMATACEAE					
...GOMPHONEMA	--	--	--	7 4	--
...NAVICULACEAE					
...CALONEIS	--	--	4 3	--	9 9
...NAVICULA	15 14	130# 23	35# 30	44# 22	2 2
...NITZSCHIA					
...HANTZSCHIA	--	--	4 3	--	--
...NITZSCHIA	45# 43	120# 20	12 10	22 11	2 2
...SURTIRELLACEAE					
...SURTIRELLA	--	340# 57	19# 17	37# 19	--
...XANTHOPHYCEAE					
...HETEROCOCCALES					
...CHLOROTHECIACEAE					
...OPHIOCYTUM	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)					
..CYANOPHYCEAE					
...CHROCOCCALES					
...CHROCOCCACEAE					
...AGMENELLUM	--	--	--	--	--
...ANACYSTIS	--	--	--	--	--
...HORMOGONALES					
...NOSTOCACEAE					
...ANABAENA	--	--	--	--	--
...OSCILLATORIACEAE					
...OSCILLATORIA	--	--	27# 23	--	55# 52
EUGLENOPHYTA (EUGLENOIDS)					
..EUGLENOPHYCEAE					
...EUGLENALES					
...EUGLENACEAE					
...EUGLENA	--	--	4 3	--	--
...TRACHELOMONAS	--	--	--	--	37# 35

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	MAY 25,77 0945	JUL 20,77 1000	AUG 18,77 1030	SEP 28,77 1000
TOTAL CELLS/ML	440	9300	0	1100
DIVERSITY: DIVISION	1.5	1.1	0.0	0.9
..CLASS	1.5	1.1	0.0	0.9
..ORDER	1.9	1.4	0.0	0.9
...FAMILY	2.0	2.5	0.0	0.9
....GENUS	2.0	3.1	0.0	0.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHARACIACEAE								
....SCHROEDERIA	--	-	370	4	--	-	--	-
....COELASTRACEAE								
....COELASTRUM	--	-	790	9	--	-	--	-
....MICRACTINIACEAE								
....GOLENKINIA	--	-	570	6	--	-	--	-
....MICRACTINIUM	--	-	490	5	--	-	--	-
....OOCYSTACEAE								
....ANKISTRODESMUS	--	-	150	2	--	-	--	-
....DICTYOSPHAERIUM	82#	19	200	2	--	-	--	-
....OOCYSTIS	--	-	99	1	--	-	--	-
....SCENEDESMACEAE								
....ACTINASTRUM	--	-	810	9	--	-	--	-
....CRUCIGENIA	--	-	390	4	--	-	--	-
....SCENEDESMUS	--	-	1300	14	--	-	110	10
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	82#	19	--	-	--	-	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....COCCONEIS	--	-	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	--	-	--	-
....FRAGILARIACEAE								
....FRAGILARIA	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	--	-	--	-
....GOMPHONEMACEAE								
....GOMPHONEMA	--	-	--	-	--	-	--	-
....NAVICULACEAE								
....CALONEIS	--	-	--	-	--	-	--	-
....NAVICULA	27	6	--	-	--	-	110	10
....NITZSCHACEAE								
....HANTZSCHIA	--	-	--	-	--	-	--	-
....NITZSCHIA	14	3	*	0	--	-	--	-
...SURIPELLACEAE								
....SURIPELLA	--	-	--	-	--	-	--	-
..XANTHOPHYCEAE								
...HETEROCOCCALES								
...CHLOROTHECIACEAE								
....OPHIOCIYTIUM	--	-	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROCCOCCALES								
....CHROCCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	890#	80
....ANACYSTIS	--	-	3400#	36	--	-	--	-
...HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	120	1	--	-	--	-
...OSCILLATORIACEAE								
....OSCILLATORIA	220#	50	440	5	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
....EUGLENA	--	-	99	1	--	-	--	-
....TRACHELOMONAS	14	3	*	0	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

DATE	TIME	LENGTH OF EXPO- SURE (DAYS) (00022)	CHLOR-A PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) (70955)	CHLOR-B PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) (70956)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS) (70950)	SAMPLING METHOD
OCT 20...	1100	21	.052	.016	2962	Polyethylene strip
NOV 17...	1030	28	.029	.013	10620	"

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 20...	1100	6.3	10.0	81	1.4	82
NOV 17...	1030	9.7	6.0	91	2.4	63
DEC 15...	1015	5.9	1.0	49	.7	64
JAN 19...	1030	11	2.0	432	13	42
FEB 16...	1030	7.6	6.0	31	.6	43
MAR 16...	1030	5.9	10.5	24	.3	66
APR 20...	1045	227	13.5	15800	9680	95
MAY 25...	0945	9.8	21.0	806	21	100
JUL 20...	1000	3.4	26.5	29	.2	93
AUG 18...	1030	3000	23.0	24400	198000	91
SEP 28...	1000	7.7	23.0	82	1.7	--

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO

LOCATION.--Lat 37°04'42", long 105°45'22", in sec.22,T.33 N., R.11 E., Conejos County, Hydrologic Unit 13010002, on right bank at highway bridge, 6 mi (10 km) north of Colorado-New Mexico State line, 7 mi (11 km) downstream from Culebra Creek, 10 mi (16 km) east of Lobatos, 14 mi (23 km) east of Antonito and at mile 1,722.1 (2,770.9 km).

DRAINAGE AREA.--7,700 mi² (19,900 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in northern part of San Luis Valley, CO.

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 7,427.63 ft (2,263.942 m) above mean sea level. 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 ft³/s (23.96 m³/s), 612,900 acre-ft/yr (756 hm³/yr), includes period of extensive development for irrigation; 47 years (water years 1931-77), 406 ft³/s (11.50 m³/s), 294,100 acre-ft/yr (363 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 13,200 ft³/s (374 m³/s) June 8, 1905, gage height, 9.1 ft (2.77 m), from rating curve extended above 8,000 ft³/s (230 m³/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 daily discharge, 405 ft³/s (11.5 m³/s), Mar. 22; maximum gage height, 2.91 ft (0.887 m) Mar. 12 (backwater from ice); minimum daily, 4.1 ft³/s (0.12 m³/s) Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	178	115	115	135	235	256	85	25	16	33	5.4
2	59	173	119	120	140	230	242	78	23	16	33	5.0
3	58	167	110	120	145	215	226	78	24	15	34	6.6
4	58	154	115	125	145	220	192	95	25	17	31	12
5	47	145	129	125	150	239	170	90	25	20	27	6.2
6	71	139	125	125	150	225	151	80	28	19	22	5.8
7	71	130	135	125	150	230	136	73	26	18	13	4.7
8	85	130	140	125	155	240	122	65	25	16	9.3	4.7
9	100	120	150	120	155	245	112	55	26	14	9.3	4.1
10	100	115	150	115	155	250	102	51	26	12	9.1	4.4
11	100	115	155	110	160	240	105	48	22	12	10	6.2
12	105	119	160	110	165	245	115	56	19	14	13	8.7
13	92	118	160	105	165	265	112	58	21	12	10	13
14	98	130	155	105	170	270	115	58	20	14	9.3	15
15	102	129	155	105	175	275	102	56	16	17	8.7	22
16	105	125	150	105	180	300	95	53	16	21	11	16
17	102	139	145	105	185	315	92	48	14	16	32	16
18	92	151	145	105	190	320	92	44	14	19	26	14
19	76	154	140	110	195	325	90	40	13	16	19	13
20	85	160	135	110	205	330	110	41	13	16	26	13
21	102	164	139	110	215	345	128	41	14	16	20	12
22	100	157	125	110	225	405	120	40	13	20	18	20
23	98	148	120	105	220	395	98	37	12	31	12	28
24	90	135	115	105	225	340	85	37	16	32	10	20
25	99	125	115	110	225	335	90	40	18	53	7.6	19
26	95	115	110	110	190	335	98	38	20	65	5.6	20
27	98	99	105	115	240	330	98	36	22	55	5.8	23
28	102	70	105	120	245	325	105	32	20	55	5.0	28
29	145	90	105	125	---	315	98	28	19	53	5.0	28
30	174	105	110	130	---	298	95	26	19	51	5.0	25
31	174	---	115	130	---	270	---	26	---	43	5.4	---
TOTAL	2993	3993	4025	3555	5055	8898	3762	1633	594	794	485.1	418.8
MEAN	96.5	133	130	115	181	287	125	52.7	19.8	25.6	15.6	14.0
MAX	174	178	160	130	245	405	266	95	28	65	34	28
MIN	55	70	105	105	135	215	85	26	12	12	5.0	4.1
AC-FT	5940	7920	7980	7050	10030	17650	7460	3240	1180	1570	962	831
CAL YR 1976 TOTAL	125535.0	MEAN	343	MAX	1340	MIN	31	AC-FT	249000			
WTR YR 1977 TOTAL	36205.9	MEAN	99.2	MAX	405	MIN	4.1	AC-FT	71810			

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 current year.

WATER TEMPERATURES: October 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1975.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,140 micromhos Sept. 18, 1977; minimum daily, 170 micromhos Nov. 20, 1975.

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,140 micromhos Sept. 18; minimum daily, 203 micromhos March 20.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)
NOV										
16...	1300	122	432	8.7	1.5	6	--	160	36	48
DEC										
02...	1300	110	418	7.9	.0	5	11.7	170	22	51
28...	1400	105	310	7.8	.0	4	10.0	110	9	35
FEB										
01...	1300	135	245	7.4	.0	5	9.0	86	0	27
MAR										
18...	1200	320	233	8.1	.5	8	12.1	90	16	28
APR										
05...	1200	164	285	8.0	10.5	8	12.4	110	12	33
MAY										
12...	1200	58	560	8.6	12.5	6	12.5	190	30	58
JUN										
21...	1200	13	775	8.8	16.0	1	10.6	220	58	64
JUL										
27...	1300	55	580	--	27.0	25	15.0	130	0	40
AUG										
23...	1300	12	455	8.3	24.0	70	10.2	110	0	35
SEP										
14...	1130	15	480	8.4	15.0	30	10.6	140	0	41

DATE	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)
NOV									
16...	9.4	36	1.2	5.1	150	0	97	14	.5
DEC									
02...	10	35	1.2	5.6	179	0	89	9.1	.6
28...	6.0	21	.9	4.4	126	0	46	5.5	.4
FEB									
01...	4.5	16	.8	3.5	110	0	30	3.7	.3
MAR									
18...	4.9	16	.7	3.2	90	0	44	5.1	.3
APR									
05...	6.3	22	.9	3.8	118	0	50	6.8	.4
MAY									
12...	12	62	1.9	7.0	>200	0	140	16	.9
JUN									
21...	14	100	3.0	11	170	12	250	28	1.2
JUL									
27...	7.9	69	2.6	8.6	190	--	100	14	.8
AUG									
23...	6.6	48	2.0	7.8	160	0	88	14	.8
SEP									
14...	7.9	56	2.1	8.0	170	1	110	15	1.0

RIO GRANDE BASIN

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08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
NOV 16...	26	325	310	.22	.91	.06	30	10	3.4
DEC 02...	36	338	325	1.0	1.4	.10	--	--	--
28...	38	224	218	.53	1.1	.15	--	--	--
FEB 01...	34	173	173	.41	1.3	.17	120	20	1.7
MAR 18...	26	180	172	.21	.70	.11	--	--	--
APR 05...	30	215	210	.33	.61	.13	--	--	--
MAY 12...	28	442	423	.01	.59	.13	40	60	6.3
JUN 21...	17	592	581	.01	.55	.17	--	--	--
JUL 27...	29	369	363	.01	1.0	.32	--	--	--
AUG 23...	23	312	302	.01	.76	.46	20	40	6.9
SEP 14...	25	312	349	.04	.60	.17	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)
NOV 16...	1300	5	5	<10	0	0	0	<50	0	<10	0	440
FEB 01...	1300	3	3	<10	0	0	0	<50	0	<10	1	380
MAY 12...	1200	4	1	<10	0	0	0	<50	0	<10	1	800
AUG 23...	1300	6	4	<10	0	10	0	<50	1	30	1	3600

DATE	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
NOV 16...	30	100	0	50	10	.1	.0	1	1	10	0
FEB 01...	120	<100	0	70	20	.0	.5	0	0	20	10
MAY 12...	40	<100	0	170	60	.0	.0	0	0	20	10
AUG 23...	20	<100	3	360	40	.1	.0	0	0	50	4

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ALDRIN (UG/L) (39330)	ALDRIN IN BOTTOM MA- TERIAL (UG/KG) (39333)	TOTAL CHLOR- DANE (UG/L) (39350)	CHLOR- DANE IN BOTTOM MA- TERIAL (UG/KG) (39351)	TOTAL DDD (UG/L) (39360)	DDD IN BOTTOM MA- TERIAL (UG/KG) (39363)	TOTAL DDE (UG/L) (39365)	TOTAL DDT (UG/L) (39370)	DDT IN BOTTOM MA- TERIAL (UG/KG) (39373)	TOTAL DI- AZINON (UG/L) (39570)	TOTAL DI- ELDRIN (UG/L) (39380)
NOV 16...	1300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 01...	1300	ND	--	ND	--	ND	--	ND	ND	--	ND	ND
AUG 23...	1315	ND	--	ND	--	ND	--	ND	ND	--	ND	ND

DATE	TIME	DI- ELDRIN IN BOTTOM MA- TERIAL (UG/KG) (39383)	TOTAL ENDRIN (UG/L) (39390)	ENDRIN IN BOTTOM MA- TERIAL (UG/KG) (39393)	TOTAL ETHION (UG/L) (39398)	HEPTA- CHLOR IN BOTTOM MA- TERIAL (UG/KG) (39410)	TOTAL HEPTA- CHLOR EPOXIDE (UG/L) (39413)	HEPTA- CHLOR EPOXIDE IN BOT- TOM MA- TERIAL (UG/KG) (39420)	TOTAL LINDANE (UG/L) (39423)	LINDANE IN BOTTOM MA- TERIAL (UG/KG) (39430)	TOTAL MALA- THION (UG/L) (39530)	TOTAL METH- OXY- CHLOR (UG/L) (39480)
NOV 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 01...	--	ND	--	ND	ND	--	ND	--	ND	--	ND	ND
AUG 23...	--	ND	--	ND	ND	--	ND	--	ND	--	ND	ND

DATE	TIME	TOTAL METHYL PARA- THION (UG/L) (39600)	TOTAL METHYL TRI- THION (UG/L) (39790)	TOTAL PARA- THION (UG/L) (39540)	TOTAL TOX- APHENE (UG/L) (39400)	TOX- APHENE IN BOTTOM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THION (UG/L) (39786)	TOTAL 2,4-D (UG/L) (39730)	2,4-D IN BOTTOM MA- TERIAL (UG/KG) (39731)	TOTAL 2,4,5-T (UG/L) (39740)	2,4,5-T IN BOTTOM MA- TERIAL (UG/KG) (39741)	TOTAL SILVEX (UG/L) (39760)	SILVEX IN BOTTOM MA- TERIAL (UG/KG) (39761)
NOV 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 01...	ND	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
AUG 23...	ND	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. TUM-MF (COL./ 100 ML) (31625)	STREP- TOCOCOCI (COL- ONIES PER 100 ML) (31679)
NOV 16...	1300	<1	<1	--
DEC 02...	1300	--	2	31
DEC 28...	1400	B3	86	100
FEB 01...	1300	B39	B11	B142
MAR 18...	1200	B3	<5	50
APR 05...	1200	2	B2	B10
MAY 12...	1200	B12	<1	B32
JUL 27...	1300	--	B80	116
AUG 23...	1300	--	124	112
SEP 14...	1130	B20	B72	120

ND Material specifically tested for but not detected.

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	346	312	323	413	381	402	496	468	476			
2	373	340	358	393	355	369	470	437	455			
3	422	376	398	360	355	358	442	405	425			
4	436	395	416	365	360	363	417	393	405			
5	468	426	443	374	364	370	393	366	379			
6	501	453	478	390	374	381	372	355	364			
7	518	486	506	404	395	398	356	335	345			
8	484	443	465	405	399	402	334	327	330			
9	448	395	416	405	398	402	326	311	318			
10	398	361	376	413	404	408	317	310	314			
11	386	364	372	419	410	415	312	307	310			
12	410	384	397	427	416	422	311	305	308			
13	408	383	398	446	422	433	311	299	305			
14	427	401	411	448	420	431	314	269	290			
15	427	407	418	432	407	424	254	227	236			
16	424	405	417	432	408	422	234	---	---			
17	413	383	396	446	375	418	---	---	---			
18	390	376	384	391	346	373	---	---	---			
19	401	377	390	411	349	381	---	---	---			
20	439	381	416	405	371	384	---	---	---			
21	448	434	441	405	360	378	---	---	---			
22	434	390	406	399	354	370	---	---	---			
23	405	396	401	393	347	364	---	---	---			
24	413	398	405	384	352	364	---	---	---			
25	420	404	413	387	323	369	---	---	---			
26	427	416	421	413	360	379	---	---	---			
27	420	393	408	403	368	389	---	---	---			
28	429	405	420	445	401	423	---	---	---			
29	470	417	439	489	410	446	---	---	---			
30	402	377	388	496	458	479	---	---	---			
31	383	365	374	---	---	---	---	---	---			
MONTH	518	312	409	496	323	397	496	227	351			

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1				---	---	---	310	293	302	678	656	668
2				---	---	---	310	296	304	691	659	676
3				---	---	---	304	293	297	684	668	679
4				---	---	---	313	291	304	697	668	681
5				---	---	---	334	309	319	671	597	627
6				---	---	---	386	344	369	616	597	606
7				---	---	---	397	363	383	619	594	609
8				---	---	---	412	377	397	639	613	627
9				---	---	---	425	397	408	636	621	628
10				---	---	---	441	425	434	651	635	644
11				---	---	---	484	437	461	654	641	648
12				---	---	---	508	433	472	647	629	637
13				---	---	---	471	430	452	790	639	742
14				---	---	---	489	462	478	779	651	700
15				---	---	---	492	452	476	683	655	666
16				---	---	---	504	463	486	720	678	691
17				---	---	---	515	444	486	766	725	744
18				732	238	260	617	451	535	775	748	761
19				254	223	244	617	588	604	792	776	785
20				249	203	221	614	552	581	789	728	759
21				253	209	221	575	517	546	748	692	709
22				238	214	228	560	512	541	720	697	707
23				275	238	256	595	551	564	724	704	718
24				288	266	277	627	599	609	725	699	712
25				284	271	277	636	630	632	748	716	731
26				280	266	272	636	602	617	731	685	706
27				284	256	270	624	601	609	693	680	688
28				287	278	282	621	593	605	726	681	704
29				285	271	278	609	578	585	749	727	741
30				284	268	277	669	614	646	739	715	725
31				309	282	292	---	---	---	754	723	736
MONTH				732	203	261	669	291	483	792	594	692

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	774	756	764	865	833	851	467	448	456	674	640	655
2	833	783	808	910	774	853	472	455	461	661	630	653
3	898	829	870	797	781	788	490	467	476	654	547	621
4	890	826	861	849	788	811	483	446	464	724	539	581
5	840	798	820	877	831	857	458	443	450	548	485	516
6	807	750	781	839	744	787	463	453	459	545	454	493
7	773	730	748	763	729	745	475	463	468	481	448	462
8	826	767	792	747	714	732	488	473	478	517	481	497
9	768	681	728	724	691	710	490	467	477	529	496	515
10	710	692	703	697	678	689	496	472	480	528	495	515
11	728	705	718	690	668	680	516	492	507	525	490	509
12	760	729	743	680	649	666	529	504	517	552	484	502
13	736	713	725	663	643	654	542	518	531	544	479	511
14	773	721	755	654	630	643	542	527	535	504	460	487
15	817	774	800	707	650	670	558	537	551	524	481	497
16	852	822	834	716	662	690	570	504	550	788	521	601
17	827	791	811	706	680	693	643	494	548	1130	811	1040
18	804	777	794	715	686	702	614	370	420	1140	956	1040
19	809	782	794	698	679	691	437	358	401	957	872	918
20	810	787	801	725	694	704	551	440	475	884	806	834
21	857	799	833	747	717	731	542	378	444	803	745	769
22	866	834	849	746	703	726	479	431	460	791	746	768
23	842	807	825	706	612	656	512	461	479	747	702	720
24	828	806	818	730	614	645	631	517	581	718	687	707
25	845	790	816	837	726	774	648	624	639	685	576	611
26	797	743	767	810	545	665	666	641	653	592	561	577
27	765	718	743	584	551	568	708	671	690	617	581	598
28	867	731	767	577	556	569	718	703	709	633	618	625
29	881	812	857	570	518	543	714	673	702	622	550	582
30	852	807	825	512	486	496	706	682	696	559	534	546
31	---	---	---	498	456	474	695	662	676	---	---	---
MONTH	898	681	792	910	456	692	718	358	530	1140	448	632
YEAR	1140	203	550									

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

RIO GRANDE BASIN

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08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued

WATER TEMPERATURE (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	18.5	9.0	13.5	11.0	2.0	6.0						
2	16.5	11.0	13.0	11.5	2.5	6.5						
3	17.5	9.5	13.0	9.5	3.5	6.0						
4	16.0	9.0	12.0	11.5	2.5	6.5						
5	17.5	8.5	12.5	11.5	2.0	6.0						
6	15.5	6.5	10.5	12.0	1.5	5.5						
7	13.0	1.5	7.0	10.5	2.0	5.5						
8	14.0	2.0	8.5	11.5	1.0	5.5						
9	16.5	3.0	10.0	11.5	.5	5.0						
10	17.0	5.0	10.5	9.5	.0	4.0						
11	16.0	5.0	10.5	10.5	1.0	5.0						
12	16.5	5.0	10.5	5.0	-0.5	1.5						
13	16.5	5.0	10.5	2.5	-0.5	.5						
14	17.0	6.0	11.0	4.0	-0.5	1.0						
15	15.0	5.0	10.0	5.0	-0.5	1.0						
16	14.0	4.0	9.0	2.5	-0.5	.0						
17	9.5	4.5	7.0	2.0	-0.5	.0						
18	10.5	3.5	6.5	3.5	-0.5	.0						
19	11.0	1.0	5.5	5.5	-0.5	1.0						
20	11.0	1.0	5.5	5.5	-0.5	1.0						
21	11.0	.5	5.5	5.0	-0.5	1.0						
22	9.5	3.5	6.5	3.5	-0.5	.0						
23	11.5	2.5	6.5	3.5	-0.5	.0						
24	11.0	4.5	7.5	1.0	-0.5	1.0						
25	10.5	2.0	6.0									
26	8.0	2.0	4.5									
27	8.0	.0	3.0									
28	9.5	.0	4.0									
29	10.0	1.5	5.0									
30	9.5	1.0	4.5									
31	10.5	1.5	5.5									
MONTH	18.5	.0	8.0									

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1				---	---	---	5.5	1.0	3.0	19.0	12.0	14.5
2				---	---	---	6.5	.0	3.0	21.0	9.0	14.5
3				---	---	---	3.5	.0	2.0	17.0	9.0	12.5
4				---	---	---	10.0	-0.5	3.5	17.0	6.5	11.5
5				---	---	---	13.0	.0	6.5	18.5	7.0	12.0
6				---	---	---	17.5	3.5	10.0	20.5	8.0	14.0
7				---	---	---	19.0	5.5	11.0	20.0	9.0	14.5
8				---	---	---	20.0	5.0	12.0	21.0	9.0	15.0
9				---	---	---	18.0	5.5	11.5	21.5	10.0	15.5
10				---	---	---	17.0	7.5	11.5	18.0	9.5	13.5
11				---	---	---	15.5	8.0	11.0	17.5	6.5	11.5
12				---	---	---	19.5	5.0	12.0	16.0	8.5	12.0
13				---	---	---	13.0	7.5	10.0	19.0	9.0	13.0
14				---	---	---	18.0	6.5	10.5	11.5	7.0	10.0
15				---	---	---	15.0	7.5	10.5	16.0	4.5	10.0
16				---	---	---	19.5	6.0	12.5	16.5	8.0	11.5
17				---	---	---	22.0	7.0	14.0	15.5	5.5	10.0
18				1.0	.0	.5	20.5	9.0	13.5	15.5	6.0	10.5
19				1.0	.0	.0	12.5	7.5	10.0	17.0	5.5	10.5
20				1.0	.0	.0	11.0	1.0	7.0	13.0	7.5	10.0
21				1.0	.0	.5	18.5	5.0	11.0	20.5	5.5	13.0
22				4.0	.0	2.0	22.0	7.0	14.0	21.0	8.5	14.5
23				8.0	2.0	5.0	23.0	9.0	15.0	19.0	8.5	13.5
24				10.0	3.0	6.5	21.0	10.0	13.5	13.0	9.0	11.0
25				10.0	4.0	7.0	23.0	8.0	14.0	15.0	7.5	11.0
26				11.5	4.5	8.0	22.0	8.5	14.5	16.0	8.0	11.5
27				13.0	5.0	9.0	21.5	9.5	14.5	19.0	7.0	13.0
28				9.0	2.0	5.5	18.5	10.5	13.5	19.5	8.5	14.0
29				4.5	.0	2.0	20.5	9.0	14.5	20.5	10.0	15.0
30				6.5	.0	2.5	23.0	9.5	15.5	22.0	11.0	16.0
31				7.5	1.5	4.0	---	---	---	25.5	12.0	18.5
MONTH				13.0	.0	4.0	23.0	-0.5	11.0	25.5	4.5	13.0

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued

WATER TEMPERATURE (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.5	12.5	18.0	25.0	13.0	18.5	28.0	17.5	22.5	22.5	11.0	15.5
2	22.5	13.0	17.5	26.0	15.0	21.0	28.0	17.5	22.5	21.5	12.0	15.5
3	21.0	12.5	16.5	27.5	16.5	21.0	26.0	15.5	20.5	25.5	12.5	17.5
4	25.0	13.0	19.0	22.5	16.0	19.0	23.0	16.0	19.5	26.0	12.5	18.0
5	25.0	14.5	19.5	23.5	14.5	19.0	24.5	16.5	20.0	27.0	12.0	19.0
6	24.0	14.0	18.5	27.0	15.5	21.0	23.5	16.0	19.5	27.5	12.5	19.0
7	23.5	14.0	18.5	28.0	15.5	22.0	24.0	14.0	19.0	28.0	12.0	19.0
8	26.0	15.0	20.5	24.5	15.5	19.0	25.0	15.0	19.5	23.0	11.5	17.0
9	21.0	15.5	18.5	23.5	13.5	18.0	25.5	15.0	20.0	19.5	10.5	14.5
10	23.0	14.0	18.5	22.5	15.0	18.5	24.5	16.5	19.5	21.0	10.5	14.0
11	20.5	14.0	16.5	20.5	13.5	16.0	23.0	15.0	18.0	19.5	11.0	14.0
12	23.0	12.0	17.0	25.0	12.5	18.0	25.0	15.0	18.5	17.5	11.0	13.0
13	24.0	12.5	18.0	21.0	14.0	17.5	26.5	16.5	20.0	22.5	9.0	15.0
14	22.5	13.5	18.0	25.0	14.5	19.0	25.5	14.0	19.0	22.5	8.5	15.5
15	23.5	12.5	18.0	22.5	16.5	19.0	22.5	15.0	18.5	20.0	11.0	15.0
16	23.0	12.0	17.5	28.0	16.0	21.5	22.0	16.0	19.0	14.0	9.0	11.5
17	22.0	12.5	17.5	30.0	17.5	22.5	26.5	17.0	20.5	17.5	8.0	11.5
18	21.0	12.5	16.5	28.0	17.5	22.5	24.0	17.0	20.0	18.0	6.5	11.0
19	21.0	13.0	16.0	28.0	16.5	21.5	25.0	15.5	20.0	19.0	6.5	11.5
20	20.0	12.5	15.5	24.5	17.5	20.0	25.0	16.5	20.0	18.5	8.5	12.0
21	19.5	11.0	15.5	24.5	16.5	20.0	26.0	15.5	19.5	18.0	7.0	11.0
22	23.0	12.0	16.5	26.0	16.5	21.0	26.0	15.0	19.5	16.5	3.0	10.0
23	21.0	13.5	16.0	28.5	18.0	23.0	25.0	14.5	19.0	17.0	7.5	11.0
24	18.5	13.5	15.5	28.0	18.0	22.0	23.5	14.5	18.5	17.0	6.0	11.0
25	25.5	12.5	18.5	28.0	17.5	21.5	24.5	13.5	18.5	18.5	8.0	12.0
26	27.0	14.5	19.5	27.0	17.5	21.5	22.5	13.0	16.5	15.0	7.0	11.0
27	26.5	13.5	20.0	29.5	17.5	23.0	21.5	11.5	15.0	18.0	9.0	13.5
28	26.5	15.5	20.0	26.5	18.0	21.5	23.0	9.5	15.0	20.5	11.5	15.0
29	22.5	15.0	18.5	28.5	16.5	22.0	23.0	10.0	16.0	19.0	9.5	13.5
30	27.0	13.5	19.5	26.5	16.5	21.5	22.5	12.5	15.5	16.5	9.0	11.5
31	---	---	---	28.5	16.5	22.5	22.0	11.5	15.5	---	---	---
MONTH	27.0	11.0	18.0	30.0	12.5	20.5	28.0	9.5	19.0	28.0	3.0	14.0
YEAR	30.0	-0.5	11.5									

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

08252000 RIO GRANDE AT COLORADO-NEW MEXICO STATE LINE

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

DRAINAGE AREA.--7,890 mi² (20,440 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in northern part of San Luis Valley, CO.

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

REVISED RECORDS.--WSP 1732: 1954(M).

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

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--24 years, 325 ft³/s (9.204 m³/s), 235,500 acre-ft/yr (290 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 4,150 ft³/s (118 m³/s) May 29, 1958, gage height, 7.07 ft (2.155 m); no flow at times in 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 8, 1905, which reached a daily discharge of 13,100 ft³/s (371 m³/s) at station near Lobatos, 5.8 mi (9.3 km) upstream, was probably the greatest since at least 1828, based on information from area residents.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 415 ft³/s (11.8 m³/s) Mar. 22; maximum gage height, 3.71 ft (1.131 m) Mar. 13 (backwater from ice); minimum daily discharge, 4.2 ft³/s (0.12 m³/s), Sept. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	183	110	115	130	245	286	86	23	18	34	5.6
2	74	186	115	115	135	240	264	78	22	19	29	5.6
3	61	180	110	120	140	225	264	72	22	16	29	6.5
4	57	163	110	125	145	230	213	80	23	17	30	12
5	61	152	115	125	145	240	189	88	23	18	27	10
6	68	143	120	125	150	235	166	84	24	19	23	6.0
7	70	130	130	125	150	240	146	76	25	18	15	5.6
8	76	132	135	125	150	250	128	72	24	17	10	5.2
9	90	125	145	125	155	255	112	59	23	14	9.9	4.2
10	95	112	150	120	155	260	99	54	24	12	8.4	4.2
11	88	112	150	115	155	250	97	50	22	11	9.1	5.2
12	99	110	155	110	160	255	108	52	18	12	12	8.4
13	86	110	160	110	165	275	108	63	16	13	12	11
14	84	112	160	105	165	280	110	57	17	13	12	12
15	95	132	155	105	175	290	99	54	15	16	12	14
16	92	135	155	105	180	310	86	50	13	20	13	16
17	97	138	150	105	185	325	82	44	13	18	19	11
18	86	155	145	105	190	330	80	42	12	16	63	10
19	80	157	145	105	195	340	80	40	12	16	27	10
20	76	160	140	110	205	340	97	38	12	15	17	11
21	90	166	135	110	215	355	112	40	12	16	27	11
22	90	163	130	110	230	415	122	38	13	17	21	14
23	92	152	125	110	225	400	97	33	13	27	13	27
24	90	146	120	105	230	375	80	31	14	29	10	24
25	86	130	115	105	230	356	80	31	18	58	7.8	20
26	92	120	115	110	200	356	86	33	18	61	5.6	20
27	95	95	110	110	245	352	90	31	20	56	5.2	21
28	99	75	105	115	250	336	99	30	21	47	5.2	25
29	130	85	105	120	---	333	97	25	21	47	5.2	28
30	180	100	105	125	---	314	95	24	19	44	5.2	24
31	180	---	110	130	---	277	---	23	---	42	5.2	---
TOTAL	2851	4059	4030	3545	5055	9284	3772	1578	552	762	521.8	397.5
MEAN	92.0	135	130	114	181	299	126	50.9	18.4	24.6	16.8	12.9
MAX	180	186	160	130	250	415	286	88	25	61	63	28
MIN	57	75	105	105	130	225	80	23	12	11	5.2	4.2
AC-FT	5650	8050	7990	7030	10030	18410	7480	3130	1090	1510	1030	769

CAL YR 1976 TOTAL 123396.0 MEAN 337 MAX 1350 MIN 29 AC-FT 244800
WTR YR 1977 TOTAL 36397.3 MEAN 99.7 MAX 415 MIN 4.2 AC-FT 72190

RIO GRANDE BASIN

08252500 COSTILLA CREEK ABOVE COSTILLA DAM, NM

LOCATION.--Lat 36°53'52", long 105°15'16", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on left bank 1,900 ft (580 m) upstream from normal high-water line of Costilla Reservoir, 2.1 mi (3.4 km) northeast of Costilla Dam, 16 mi (26 km) southeast of Costilla, and at mile 36.9 (59.4 km).

DRAINAGE AREA.--25.1 mi² (65.0 km²).

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

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

GAGE.--Water-stage recorder. Concrete control since Sept. 17, 1965. Altitude of gage is 9,429 ft (2,874 m), from topographic map. See WSP 1923 for history of changes prior to Sept. 17, 1965.

REMARKS.--Records good. Natural flow may be augmented by transbasin diversions or irrigation returns from about 1,300 acres (5.3 km²) irrigated from Casias Creek (station 08253000). Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,870 ft³/s (110 m³/s) July 22, 1954, gage height, 6.3 ft (1.92 m), from floodmarks, present site and datum, on basis of slope-area measurement of peak flow; minimum not determined.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31 ft³/s (0.88 m³/s) July 25, gage height, 2.50 ft (0.762 m), no peak above base of 40 ft³/s (1.1 m³/s); minimum not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2							7.0	6.0	1.7	2.6	2.0
2	2.3							8.0	6.5	1.7	2.8	4.7
3	2.2							8.5	7.4	1.6	2.8	3.5
4	2.6							8.5	7.9	2.3	2.8	2.6
5	2.9							8.5	6.5	4.6	3.1	2.5
6	---							9.0	7.2	2.3	2.8	2.2
7	---							10	7.0	1.9	2.6	2.0
8	---							10	6.3	3.1	2.8	1.9
9	---							11	5.8	2.3	3.4	1.8
10	---							11	5.2	1.7	3.4	2.0
11	---							9.9	5.1	1.6	3.7	2.5
12	---							9.6	4.7	1.9	4.0	2.5
13	---							10	3.7	1.8	3.2	3.5
14	---							11	3.1	1.9	4.6	2.4
15	---							9.0	2.8	2.3	3.8	2.1
16	---							7.6	2.2	2.0	3.3	2.0
17	---							7.0	2.1	1.8	9.3	1.8
18	---							6.5	2.0	1.6	7.4	1.8
19	---							6.0	1.9	1.4	4.5	1.8
20	---							6.3	2.0	3.6	3.8	1.7
21	---							7.4	1.9	4.2	3.1	1.7
22	---							7.0	2.1	4.1	2.5	1.8
23	---							6.0	2.9	3.2	2.4	8.0
24	---							6.0	5.6	4.5	2.4	2.8
25	---							6.0	3.8	11	2.4	2.2
26	---							5.8	2.9	11	2.1	2.0
27	---							5.6	2.5	7.1	1.9	2.1
28	---							5.1	2.0	5.1	2.0	2.5
29	---							5.1	2.1	4.1	2.0	2.2
30	---							5.2	1.9	4.1	2.0	1.9
31	---							5.8	---	4.1	2.0	---
TOTAL	---	---	---	---	---	---	---	239.4	123.1	105.6	101.5	74.5
MEAN	---	---	---	---	---	---	---	7.72	4.10	3.41	3.27	2.48
MAX	---	---	---	---	---	---	---	11	7.9	11	9.3	8.0
MIN	---	---	---	---	---	---	---	5.1	1.9	1.4	1.9	1.7
AC=FT	---	---	---	---	---	---	---	475	244	209	201	148

08253000 CASIAS CREEK NEAR COSTILLA, NM

LOCATION.--Lat 36°53'48", long 105°15'35", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on left bank 200 ft (61 m) downstream from road crossing, 900 ft (270 m) upstream from normal high-water line of Costilla Reservoir, 1.8 mi (2.9 km) northeast of Costilla Dam, and 16 mi (26 km) southeast of Costilla.

DRAINAGE AREA.--16.6 mi² (43.0 km²).

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

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 9,404 ft (2,866 m), from topographic map. Prior to July 18, 1940, water-stage recorder and wooden control 100 ft (30 m) downstream at datum 1.56 ft (0.475 m) lower.

REMARKS.--Records good. Diversion 3.5 mi (5.6 km) upstream for irrigation of about 1,300 acres (5.3 km²), part of which is in Costilla Creek basin. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181 ft³/s (5.13 m³/s) July 20, 1971, gage height, 2.07 ft (0.631 m), from rating curve extended above 85 ft³/s (2.4 m³/s); minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24 ft³/s (0.68 m³/s) Sept. 23, gage height, 0.95 ft (0.290 m), no peak above base of 35 ft³/s (1.0 m³/s); minimum not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7						---	8.8	12	4.0	5.7	4.5
2	4.7						---	9.3	12	3.7	3.7	6.1
3	4.5						---	9.3	13	3.7	3.7	5.4
4	4.7						---	9.8	14	4.7	3.4	5.0
5	5.0						---	9.3	13	6.1	3.7	5.0
6	---						---	9.8	14	4.7	3.2	4.5
7	---						---	10	14	4.2	3.2	4.2
8	---						---	11	14	4.5	3.2	4.0
9	---						---	12	13	4.0	3.4	4.0
10	---						---	12	13	3.2	3.7	4.0
11	---						---	12	13	3.2	3.7	4.7
12	---						---	12	12	3.4	4.2	4.7
13	---						4.0	12	10	3.4	4.0	5.0
14	---						3.4	12	9.8	3.4	4.2	4.7
15	---						4.2	11	8.8	4.0	4.0	4.2
16	---						4.2	9.3	8.4	3.7	3.4	4.0
17	---						4.2	8.8	8.0	2.9	6.5	4.0
18	---						4.5	8.4	7.7	2.9	5.4	3.7
19	---						5.8	7.7	7.7	2.9	4.2	3.7
20	---						4.7	8.0	7.3	3.7	5.0	3.4
21	---						4.7	8.0	6.9	4.2	6.1	3.2
22	---						4.5	7.7	6.9	4.0	5.8	3.7
23	---						4.7	7.3	8.0	3.4	5.4	10
24	---						5.8	7.7	12	4.6	5.4	4.7
25	---						6.1	7.7	9.3	6.5	5.4	4.2
26	---						6.1	7.7	8.0	6.7	4.7	4.0
27	---						6.1	7.7	7.7	5.4	4.7	4.2
28	---						6.9	7.7	6.9	4.2	4.7	4.7
29	---						7.3	8.4	5.8	3.7	4.5	4.5
30	---						7.7	8.8	4.0	3.7	4.5	4.5
31	---						---	9.8	---	4.4	4.5	---
TOTAL	---	---	---	---	---	---	---	291.0	300.2	127.1	137.2	136.5
MEAN	---	---	---	---	---	---	---	9.39	10.0	4.10	4.43	4.55
MAX	---	---	---	---	---	---	---	12	14	6.7	6.5	10
MIN	---	---	---	---	---	---	---	7.3	4.0	2.9	3.2	3.2
AC-FT	---	---	---	---	---	---	---	577	595	252	272	271

RIO GRANDE BASIN

08253500 SANTISTEVAN CREEK NEAR COSTILLA, NM

LOCATION.--Lat 36°53'03", long 105°16'50", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on left bank 200 ft (61 m) upstream from road crossing, 1,300 ft (400 m) upstream from normal high-water line of Costilla Reservoir, 0.6 mi (1.0 km) north of Costilla Dam, and 16 mi (26 km) southeast of Costilla.

DRAINAGE AREA.--2.15 mi² (5.57 km²).

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

REVISED RECORDS.--WSP 1923: Drainage area.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 9,487 ft (2,892 m), from topographic map. Prior to June 27, 1940, water-stage recorder and wooden control at datum 0.99 ft (0.302 m) lower.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18 ft³/s (0.51 m³/s) Aug. 11, 1941, July 12, 1957; maximum gage height, 1.73 ft (0.527 m) Aug. 11, 1941; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3.2 ft³/s (0.091 m³/s) July 15, gage height, 0.49 ft (0.149 m), no peak above base of 6 ft³/s (0.2 m³/s); maximum gage height, 0.49 ft (0.149 m) July 15, Sept. 22; minimum discharge not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2						---	1.4	1.7	1.5	1.2	.88
2	1.2						---	1.3	1.8	1.5	1.2	1.1
3	1.2						---	1.3	1.9	1.5	1.1	.99
4	1.2						---	1.4	1.9	1.7	1.1	1.2
5	1.2						---	1.3	1.9	1.7	1.1	1.3
6	---						---	1.4	1.9	1.5	1.0	.99
7	---						---	1.4	1.9	1.6	1.0	.93
8	---						---	1.5	2.0	1.6	1.1	.88
9	---						---	1.7	2.1	1.5	1.0	.82
10	---						---	1.7	2.1	1.4	1.2	.88
11	---						---	1.7	2.1	1.4	1.2	.88
12	---						---	1.7	2.1	1.3	1.2	.93
13	---						.71	1.8	2.1	1.3	1.1	.99
14	---						.71	1.8	2.1	1.4	1.2	.88
15	---						.77	1.7	2.1	1.7	1.0	.82
16	---						.82	1.7	2.1	1.4	1.0	.82
17	---						.88	1.6	2.2	1.2	1.2	.82
18	---						.93	1.6	2.2	1.2	1.2	.77
19	---						.99	1.6	2.1	1.2	1.0	.77
20	---						.88	1.6	2.0	1.5	1.0	.77
21	---						.82	1.6	2.0	1.3	.99	.77
22	---						.88	1.6	2.0	1.2	.99	.84
23	---						.99	1.6	2.0	1.2	.93	1.4
24	---						1.1	1.7	2.2	1.2	.93	.82
25	---						1.1	1.6	1.9	1.2	.93	.77
26	---						1.2	1.6	1.8	1.4	.88	.77
27	---						1.2	1.6	1.7	1.4	.88	.77
28	---						1.2	1.6	1.6	1.3	.88	.77
29	---						1.2	1.6	1.7	1.2	.88	.77
30	---						1.4	1.6	1.6	1.2	.88	.71
31	---						---	1.6	---	1.2	.88	---
TOTAL	---	---	---	---	---	---	---	48.9	58.8	42.9	32.15	26.81
MEAN	---	---	---	---	---	---	---	1.58	1.96	1.38	1.04	.89
MAX	---	---	---	---	---	---	---	1.8	2.2	1.7	1.2	1.4
MIN	---	---	---	---	---	---	---	1.3	1.6	1.2	.88	.71
AC-FT	---	---	---	---	---	---	---	97	117	85	64	53

RIO GRANDE BASIN

89

08253900 COSTILLA RESERVOIR NEAR COSTILLA, NM

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

DRAINAGE AREA.--54.6 mi² (141.4 km²).

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

REVISED RECORDS.--WSP 1923: Drainage area.

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

REMARKS.--Reservoir is formed by earthfill dam faced with rock. Storage began in 1920. Capacity 15,740 acre-ft (19.4 hm³) between gage heights 9,405.0 ft (2,866.64 m), sill of outlet, and 9,513.0 ft (2,899.56 m), crest of ungated spillway cut in natural rock. No dead storage. By order of New Mexico State Engineer storage is limited to 14,540 acre-ft (17.9 hm³) maximum, and 10,880 acre-ft (13.4 hm³) for not to exceed 60 days. Diversions for irrigation of about 1,300 acres (5.26 km²) above Reservoir. Reservoir is used for irrigation.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 15,130 acre-ft (18.7 hm³), June 13, 1938, June 20-23, 1941, gage height, 9,511.5 ft (2,899.11 m); no storage October 1925 to February 1926, September 1956, Aug. 22 to Sept. 24, 1972, July 29 to Sept. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,870 acre-ft (4.77 hm³), May 15, gage height, 9,473.3 ft (2,877.46 m); no storage July 29 to Sept. 7.

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

9,406	0	9,425	165	9,460	1,760
9,410	6	9,430	270	9,470	3,260
9,415	34	9,440	556	9,480	5,270
9,420	86	9,450	959		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	2680	636	---	---
2	---	---	---	---	---	---	---	---	2590	---	.00	---
3	---	---	---	---	---	---	---	---	2480	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	758	---	---	---	---	---	---	---	2530	661	---	---
6	---	---	---	---	---	---	---	---	2430	661	---	---
7	---	---	---	---	---	---	---	---	2340	646	---	---
8	---	1290	---	---	---	---	---	3630	2170	628	---	---
9	---	---	---	---	---	---	---	3640	2090	---	---	---
10	---	---	---	---	---	---	---	3670	1960	632	---	---
11	---	---	---	---	---	---	---	3700	---	607	---	---
12	---	---	---	---	---	---	---	3720	1960	556	---	---
13	---	---	---	---	---	---	2820	3740	1880	490	---	---
14	---	---	---	---	---	---	---	---	1770	412	---	---
15	---	---	---	---	---	---	---	3870	1680	359	---	---
16	---	---	---	---	---	---	---	3830	1530	---	---	---
17	---	---	---	---	---	---	---	3800	1450	367	---	---
18	---	---	---	---	---	---	---	3740	---	335	---	---
19	---	---	---	---	---	---	---	3700	1440	282	---	---
20	---	---	---	---	---	---	---	3610	1380	215	---	---
21	---	---	---	---	---	---	---	---	1230	175	---	---
22	---	---	---	---	---	---	---	3550	1120	129	---	---
23	---	---	---	---	---	---	---	3500	989	---	---	---
24	---	---	---	---	---	---	---	3370	901	155	---	---
25	---	---	---	---	---	---	---	3260	---	132	---	---
26	---	---	---	---	---	---	---	3140	949	116	---	---
27	---	---	---	---	---	---	---	3000	915	82	---	---
28	---	---	---	---	2300	---	---	---	851	40	---	---
29	---	---	---	---	---	---	---	2980	770	.00	---	---
30	---	1600	---	---	---	---	3300	2920	702	---	---	456
31	1150	---	1900	2100	---	2600	---	2800	---	.00	.00	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
(†)	---	---	---	---	---	---	---	9467.3	9444.1	---	---	9436.9
(‡)	+496	+450	+300	+200	+200	+300	+700	-500	-2098	-702	0	+456

CAL YR 1976..... ‡ 0

WTR YR 1977..... ‡ -198

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

‡ Change in contents, in acre-feet.

NOTE.--Contents interpolated at end of month except May 31, June 30 and Sept. 30.

RIO GRANDE BASTIN

08254000 COSTILLA CREEK BELOW COSTILLA DAM. NM

LOCATION.--Lat 36°52'26", long 105°16'47", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on left bank 125 ft (38 m) downstream from Costilla Dam, 16 mi (26 km) southeast of Costilla, and at mile 34.7 (55.8 km).

DRAINAGE AREA.--54.6 mi² (141.4 km²).

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

REVISED RECORDS.--WSP 1923: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 9,290 ft (2,832 m), from topographic map.

REMARKS.—Records good except those below 1.0 ft³/s (0.03 m³/s), which are poor. Flow regulated by Costilla Reservoir (station 08253900). Diversions for irrigation of about 1,300 acres (5.3 km²) above Reservoir. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years (water years 1945-47, 1950-77), 16.2 ft³/s (0.459 m³/s), 11,740 acre-ft/yr (14.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 286 ft³/s (8.10 m³/s) May 9, 10, 1942, gage height, 2.65 ft (0.808 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 80 ft³/s (2.27 m³/s) June 6, gage height, 1.74 ft (0.530 m); minimum not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01	.01	.01	.01	.02	.03	.05	69	17	12	8.7
2	.01	.01	.01	.01	.01	.02	.03	.05	69	6.6	9.8	12
3	.01	.01	.01	.01	.01	.02	.03	.06	40	6.6	9.4	12
4	.01	.01	.01	.01	.01	.02	.03	.06	20	6.6	9.0	13
5	.01	.01	.01	.01	.01	.02	.03	.07	33	8.0	9.8	10
6	.01	.01	.01	.01	.01	.02	.03	.07	72	14	8.7	9.4
7	.01	.01	.01	.01	.01	.02	.03	.07	78	16	8.4	6.0
8	.01	.01	.01	.01	.01	.02	.03	3.1	78	11	9.0	.18
9	.01	.01	.01	.01	.01	.02	.03	9.9	78	7.7	9.0	.05
10	.01	.01	.01	.01	.01	.02	.03	12	44	12	10	.03
11	.01	.01	.01	.01	.01	.02	.03	12	22	26	11	.03
12	.01	.01	.01	.01	.01	.02	.03	12	32	31	11	.02
13	.05	.01	.01	.01	.01	.02	.03	8.3	69	34	9.4	.02
14	.07	.01	.01	.01	.01	.02	.03	.10	68	34	10	.02
15	.05	.01	.01	.01	.01	.02	.03	6.7	67	17	10	.02
16	.03	.01	.01	.01	.01	.02	.03	35	62	6.4	9.4	.02
17	.03	.01	.01	.01	.01	.02	.03	38	31	12	17	.01
18	.03	.01	.01	.01	.01	.02	.03	46	15	30	18	.01
19	.03	.01	.01	.01	.01	.02	.03	46	28	32	13	.01
20	.01	.01	.01	.01	.01	.02	.03	34	68	31	12	.01
21	.01	.01	.01	.01	.01	.02	.03	22	67	30	12	.01
22	.01	.01	.01	.01	.01	.02	.02	32	65	15	11	.01
23	.01	.01	.01	.01	.01	.02	.02	70	64	5.6	10	.03
24	.01	.01	.01	.01	.01	.02	.04	77	31	13	10	.01
25	.01	.01	.01	.01	.01	.02	.05	73	10	31	10	.01
26	.01	.01	.01	.01	.01	.02	.05	68	17	32	9.8	.01
27	.01	.01	.01	.01	.01	.02	.05	41	37	31	9.0	.01
28	.01	.01	.01	.01	.01	.02	.05	17	37	22	9.0	.01
29	.01	.01	.01	.01	---	.02	.04	30	37	12	9.4	.01
30	.01	.01	.01	.01	---	.02	.04	70	36	12	9.0	.01
31	.01	---	.01	.01	---	.02	---	69	---	12	9.0	---
TOTAL	.53	.30	.31	.31	.28	.62	.99	832.53	1444	574.5	324.1	71.65
MEAN	.017	.010	.010	.010	.010	.020	.033	26.9	48.1	18.5	10.5	2.39
MAX	.07	.01	.01	.01	.01	.02	.05	77	78	34	18	13
MIN	.01	.01	.01	.01	.01	.02	.02	.05	10	5.6	8.4	.01
AC-FT	1.1	.6	.6	.6	.6	1.2	2.0	1650	2860	1140	643	142
CAL YR 1976	TOTAL	4177.39	MEAN	11.4	MAX	84	MIN	.01	AC-FT	8290		
WTR YR 1977	TOTAL	3250.12	MEAN	8.90	MAX	78	MIN	.01	AC-FT	6450		

08254500 COSTILLA CREEK NEAR AMALIA, NM

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

DRAINAGE AREA.--152 mi² (394 km²).

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

REVISED RECORDS.--WSP 1732: 1956(M). WSP 1923: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Sept. 27, 1965. Altitude of gage is 8,521 ft (2,597 m), from topographic map. May 1949 to May 2, 1956, at site 40 ft (12 m) upstream at datum 0.81 ft (0.247 m) lower. May 3, 1956 to Sept. 27, 1965, at site 10 ft (3 m) downstream at datum 1.81 ft (0.552 m) lower.

REMARKS.--Records good. Flow regulated by Costilla Reservoir (station 08253900) about 10 mi (16 km) upstream. Diversions for irrigation of about 1,300 acres (5.3 km²) above Costilla Reservoir. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 689 ft³/s (19.5 m³/s) Apr. 25, 1958, gage height, 3.70 ft (1.128 m), site and datum then in use; maximum gage height, 3.11 ft (0.948 m) July 27, 1966; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 95 ft³/s (2.69 m³/s) May 25, gage height, 2.27 ft (0.692 m); minimum not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2						---	23	77	33	17	13
2	6.0						---	21	77	15	14	16
3	5.7						---	21	61	13	14	24
4	6.4						---	20	32	17	13	25
5	7.3						---	19	33	22	14	20
6	---						---	19	74	22	13	15
7	---						---	18	84	23	12	12
8	---						---	18	83	22	12	6.7
9	---						---	26	83	17	13	5.1
10	---						---	30	62	14	14	4.9
11	---						---	30	30	30	15	6.2
12	---						20	30	30	36	17	6.7
13	---						19	32	68	38	15	10
14	---						16	22	68	40	15	7.6
15	---						16	20	68	31	18	6.4
16	---						17	48	64	14	14	6.0
17	---						16	50	43	12	26	5.3
18	---						17	58	18	37	33	4.9
19	---						21	58	19	36	18	4.6
20	---						21	53	69	44	18	4.4
21	---						17	39	71	45	17	4.0
22	---						16	39	69	36	16	4.0
23	---						16	77	73	15	14	15
24	---						17	87	57	16	14	7.8
25	---						20	84	24	39	13	6.2
26	---						20	75	20	40	12	5.5
27	---						22	59	46	38	11	5.1
28	---						22	28	47	34	11	5.5
29	---						23	29	50	19	11	5.5
30	---						22	74	48	15	15	5.1
31	---						---	75	---	17	16	---
TOTAL	---	---	---	---	---	---	---	1282	1648	830	475	267.5
MEAN	---	---	---	---	---	---	---	41.4	54.9	26.8	15.3	8.92
MAX	---	---	---	---	---	---	---	87	84	45	33	25
MIN	---	---	---	---	---	---	---	18	18	12	11	4.0
AC-FT	---	---	---	---	---	---	---	2540	3270	1650	942	531

08255500 COSTILLA CREEK NEAR COSTILLA, NM

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

DRAINAGE AREA.--195 mi² (505 km²).

PERIOD OF RECORD.--March 1936 to current year (no winter records 1936-43). Monthly discharge for March 1943 and water-year estimate for 1943, published in WSP 1312.

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

GAGE.--Water-stage recorder. Concrete control since Oct. 13, 1952. Altitude of gage is 7,900 ft (2,408 m), from topographic map. Prior to June 18, 1944, at site 200 ft (61 m) downstream at different datum. June 18, 1944 to Sept. 30, 1964, at site 0.4 mi (0.6 km) upstream at different datum.

REMARKS.--Records fair except those for winter period, which are poor. Flow regulated by Costilla Reservoir (station 08253900) 19 mi (31 km) upstream. Diversions for irrigation of about 2,000 acres (8.1 km²) above station.

AVERAGE DISCHARGE.--36 years (1942-77), 40.6 ft³/s (1.150 m³/s), 29,410 acre-ft/yr (36.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,150 ft³/s (32.6 m³/s) May 11, 1942, gage height, 5.37 ft (1.637 m), site and datum then in use; minimum, 0.34 ft³/s (0.010 m³/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, 139 ft³/s (3.94 m³/s) June 10, gage height, 3.00 ft (0.914 m), no peak above base of 175 ft³/s (5.0 m³/s); minimum recorded, 1.2 ft³/s (0.034 m³/s) Mar. 30, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	8.2	6.0	6.5	4.0	5.0	21	27	70	44	19	13
2	7.0	8.7	6.0	6.0	4.0	6.0	17	26	72	25	18	13
3	6.7	9.1	6.0	5.5	4.0	6.0	19	26	69	21	16	25
4	7.0	9.1	6.0	6.0	4.0	6.0	15	25	39	23	15	28
5	8.4	7.8	6.0	6.0	4.0	6.0	18	24	32	30	15	24
6	7.9	7.8	6.5	6.0	4.0	6.5	22	24	61	27	15	18
7	7.8	8.2	5.5	4.5	4.0	9.0	28	24	77	27	13	17
8	7.3	7.8	6.0	4.0	4.0	11	36	23	81	28	13	12
9	7.0	7.6	6.0	4.5	4.0	11	43	27	82	23	13	7.8
10	6.8	6.7	6.0	3.5	4.0	10	34	36	75	19	14	7.4
11	6.8	8.6	6.0	3.5	4.0	8.5	35	37	39	25	16	9.2
12	6.5	7.4	6.0	3.5	4.5	9.0	24	36	36	33	18	13
13	6.5	6.7	6.0	3.5	4.5	10	26	38	60	37	18	15
14	6.4	6.9	6.0	3.5	4.5	12	24	34	67	39	16	11
15	6.5	7.6	6.0	3.5	4.5	12	21	30	68	38	19	9.9
16	6.5	6.9	6.0	3.5	4.5	11	21	40	65	22	16	9.3
17	6.7	6.7	6.0	3.5	5.0	8.9	20	45	54	18	25	8.6
18	6.6	6.8	6.0	4.0	5.0	9.0	18	51	28	28	35	7.6
19	5.7	7.0	6.0	4.0	5.0	9.0	20	53	24	35	24	7.1
20	4.8	6.4	6.0	4.0	5.0	9.1	22	55	50	49	22	6.4
21	5.1	6.2	5.5	4.0	6.0	9.4	18	43	60	52	21	5.3
22	6.6	6.2	5.5	5.0	7.0	8.6	17	40	60	52	19	5.2
23	6.9	6.5	5.5	5.0	6.0	10	18	58	63	26	18	20
24	7.0	6.2	6.0	5.0	6.0	12	18	77	67	24	17	11
25	6.7	5.6	6.0	4.0	5.5	13	22	82	36	44	17	8.2
26	7.6	6.3	6.0	4.0	4.0	15	23	75	28	51	15	7.1
27	6.4	5.0	6.5	4.0	4.5	16	24	71	41	45	14	6.8
28	6.3	4.0	6.5	4.0	4.0	14	25	37	47	41	13	6.8
29	9.9	4.0	6.0	4.0	---	6.1	27	32	50	29	13	6.8
30	7.6	5.0	6.0	4.0	---	11	26	59	50	23	12	6.7
31	8.9	---	7.0	4.0	---	17	---	66	---	20	17	---
TOTAL	216.0	207.0	186.5	136.0	129.5	307.1	702	1321	1651	998	536	346.2
MEAN	6.97	6.90	6.02	4.39	4.63	9.91	23.4	42.6	55.0	32.2	17.3	11.5
MAX	9.9	9.1	7.0	6.5	7.0	17	43	82	82	52	35	28
MIN	4.8	4.0	5.5	3.5	4.0	5.0	15	23	24	18	12	5.2
AC-FT	428	411	370	270	257	609	1390	2620	3270	1980	1060	687
CAL YR 1976	TOTAL	10145.2	MEAN	27.7	MAX	104	MIN	4.0	AC-FT	20120		
WTR YR 1977	TOTAL	6736.3	MEAN	18.5	MAX	82	MIN	3.5	AC-FT	13360		

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 650 ft (200 m) downstream from diversion dam, 1.1 mi (1.8 km) southeast of Costilla, and at mile 15.3 (24.6 km).

DRAINAGE AREA.--197 mi² (510 km²).

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

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

REMARKS.--Records poor. Flow partly regulated by Costilla Reservoir (station 08253900) 20 mi (32 km) upstream, and by canal headgates or sluice gates at diversion dam. Diversions above station for irrigation of about 5,000 acres (20 km²), 3,000 acres (12 km²) of which are below station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 525 ft³/s (14.9 m³/s) July 22, 1954, gage height, 4.03 ft (1.228 m); maximum gage height, 5.05 ft (1.539 m) July 24, 1957 (backwater from debris); no flow Oct. 14, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in 1886, from information by local residents. Flood of May 11, 1942, probably exceeded 1,000 ft³/s (28 m³/s), based on records for upstream station (station 08255500).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 130 ft³/s (3.7 m³/s) June 13, gage height, 3.30 ft (1.006 m); maximum gage height, 3.34 ft (1.018 m) May 27; minimum discharge not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80						---	1.7	1.2	5.5	.80	.56
2	.80						---	1.8	1.1	4.9	.80	.46
3	.73						---	2.0	1.1	4.5	.70	.80
4	1.0						---	2.2	1.1	2.4	.61	1.7
5	---						---	2.3	1.3	1.6	.67	.67
6	---						---	2.5	4.1	1.5	.67	.38
7	---						---	2.6	1.7	1.5	.67	.34
8	---						---	3.1	1.6	1.5	.73	.27
9	---						---	5.3	1.7	1.5	.73	.24
10	---						---	5.4	4.6	1.5	2.2	.27
11	---						---	4.3	5.6	1.5	6.5	.34
12	---						---	4.0	2.9	31	1.1	2.6
13	---						---	3.9	2.9	7.5	.94	1.3
14	---						---	3.8	3.2	1.1	.87	.61
15	---						---	3.6	3.2	1.1	.87	1.3
16	---						---	3.6	3.3	1.1	.87	2.8
17	---						---	3.4	3.6	1.0	.87	2.5
18	---						---	3.2	3.6	1.1	1.6	2.8
19	---						---	2.7	3.6	4.4	1.5	2.8
20	---						---	1.5	6.1	3.6	1.0	2.6
21	---						---	1.4	5.2	1.3	.94	2.5
22	---						---	1.3	7.2	1.3	.82	3.4
23	---						---	1.4	11	1.2	.80	16
24	---						---	1.3	9.5	1.8	.67	7.2
25	---						---	1.3	6.6	1.0	.67	5.5
26	---						---	1.2	5.4	.94	2.0	4.3
27	---						---	1.4	22	.98	1.5	4.9
28	---						---	1.3	19	1.0	.56	5.6
29	---						---	1.4	2.0	5.6	.61	5.9
30	---						---	1.5	4.9	6.0	.56	3.8
31	---						---	---	3.8	---	.87	---
TOTAL	---	---	---	---	---	---	---	162.2	98.12	71.57	32.06	84.44
MEAN	---	---	---	---	---	---	---	5.23	3.27	2.31	1.03	2.81
MAX	---	---	---	---	---	---	---	22	31	5.5	6.5	16
MIN	---	---	---	---	---	---	---	1.7	.94	.87	.56	.24
AC=FT	---	---	---	---	---	---	---	322	195	142	64	167

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

DRAINAGE AREA.--200 mi² (520 km²), approximately.

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

GAGE.--Water-stage recorder. Concrete control since Oct. 9, 1956. Altitude of gage is 7,758 ft (2,365 m), from topographic map. Prior to Apr. 20, 1950, at site 0.4 mi (0.6 km) downstream at different datum.

REMARKS.--Records fair. Flow partly regulated by Costilla Reservoir (station 08253900) 22 mi (35 km) upstream. Diversions above station for irrigation of about 5,500 acres (22 km²), 2,000 acres (8.1 km²) of which are below station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 460 ft³/s (13.0 m³/s) July 24, 1957, gage height, 4.76 ft (1.451 m); no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in 1886, from information by local residents. Flood of May 11, 1942, probably reached a discharge of 1,000 ft³/s (28 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36 ft³/s (1.02 m³/s) May 27, gage height, 3.02 ft (0.920 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00						---	.00	.00	.10	.00	.00
2	.00						---	.00	.00	.00	.00	.00
3	.00						---	.00	.00	.00	.00	.00
4	.00						---	.00	.00	.00	.00	.09
5	.00						---	.00	.00	.00	.00	.00
6	.00						---	.00	.79	.00	.00	.00
7	---						---	.00	.00	.00	.00	.00
8	---						---	.00	.00	.00	.00	.00
9	---						---	.00	.00	.00	.00	.00
10	---						---	.00	.49	.00	.00	.00
11	---						---	.00	.36	.00	.69	.00
12	---						---	.00	17	.00	.00	.32
13	---						---	.00	5.2	.00	.00	.34
14	---						---	.00	.00	.00	.00	.00
15	---						.19	.00	.00	.00	.00	.00
16	---						.11	.00	.00	.00	.00	.74
17	---						.00	.00	.00	.00	.00	.82
18	---						.00	.00	.00	.00	.00	.82
19	---						.00	.00	.00	.00	.00	.82
20	---						.00	.00	.00	.00	.00	.66
21	---						.00	.00	.00	.17	.00	.41
22	---						.00	.00	.00	.00	.00	.56
23	---						.00	.00	.00	.00	.00	9.7
24	---						.00	.00	.00	.00	.00	6.3
25	---						.00	.00	.00	.12	.00	3.9
26	---						.00	.00	.00	.00	.00	2.7
27	---						.00	4.9	.00	.00	.00	2.8
28	---						.00	12	.00	.00	.00	2.8
29	---						.00	.00	.00	.00	.00	2.7
30	---						.00	.00	.00	.00	.00	1.4
31	---						---	.00	---	.00	.00	---
TOTAL	---	---	---	---	---	---	---	16.90	23.84	.39	.69	37.88
MEAN	---	---	---	---	---	---	---	.55	.79	.013	.022	1.26
MAX	---	---	---	---	---	---	---	12	17	.17	.69	9.7
MIN	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
AC-FT	---	---	---	---	---	---	---	34	47	.8	1.4	75

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, 275 ft (84 m) downstream from diversion dam, and 1.2 mi (1.9 km) southeast of the intersection of State Highways 3 and 196 at Costilla. PERIOD OF RECORD, May 1944 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,870 ft (2,399 m), from topographic map. Acequia diverts from right bank of Costilla Creek.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 50 ft³/s (1.42 m³/s) June 25, 1944, July 31, 1945; no flow at times.
EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 17 ft³/s (0.48 m³/s) Aug. 18; minimum daily, 0.15 ft³/s (0.004 m³/s) Sept. 29.
- 08256500 MESA DITCH NEAR GARCIA, CO.--Lat 36°59'50", long 105°30'49", Costilla County, Hydrologic Unit 13020101, 429 ft (130 m) north of milepost No. 136 + 54 on New Mexico-Colorado State line, and 1.4 mi (2.3 km) east of Garcia. PERIOD OF RECORD, June 1944 to September 1965, May 1969 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,780 ft (2,371 m), from topographic map. Prior to June 1971, recording gage and June 1971 to April 1977, nonrecording gage near present site at different datums. Ditch diverts from right bank of Acequia Madre for irrigation in Colorado.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 21 ft³/s (0.59 m³/s) June 25, 1944, Aug. 3, 7, 1945; no flow at times.
EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1.2 ft³/s (0.034 m³/s) June 29; no flow most of time.
- 08257500 CORDILLERA DITCH AT GARCIA, CO.--Lat 36°59'41", long 105°31'39", Taos County, Hydrologic Unit 13020101, 570 ft (170 m) south of New Mexico-Colorado State line, and 0.9 mi (1.4 km) southeast of Garcia. PERIOD OF RECORD, June 1944 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,750 ft (2,362 m), from topographic map. Ditch diverts from left bank of Acequia Madre for irrigation in Colorado.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 10 ft³/s (0.28 m³/s) June 13, 15, July 11, 1961; no flow at times.
EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1.4 ft³/s (0.040 m³/s) July 15, 28, 29, Aug. 13; no flow many days.
- 08258000 CERRO CANAL AT COSTILLA, NM.--Lat 36°57'56", long 105°31'07", Taos County, Hydrologic Unit 13020101, 1,400 ft (430 m) downstream from diversion dam, and 1.2 mi (1.9 km) southeast of the intersection of State Highways 3 and 196 at Costilla. PERIOD OF RECORD, April 1944 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,870 ft (2,399 m), from topographic map. Canal diverts from left bank of Costilla Creek.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 135 ft³/s (3.82 m³/s) Aug. 5, 6, 1970; no flow at times.
EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 65 ft³/s (1.84 m³/s) June 9; minimum, 0.65 ft³/s (0.018 m³/s) Sept. 30.
- 08258600 CERRO CANAL BELOW ASSOCIATION DITCH AT COSTILLA, NM.--Lat 36°57'41", long 105°32'05", Taos County, Hydrologic Unit 13020101, 220 ft (67 m) downstream from Association ditch, and 1.2 mi (1.9 km) south of the intersection of State Highways 3 and 196 at Costilla. PERIOD OF RECORD, May 1972 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,820 ft (2,384 m), from topographic map.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 81 ft³/s (2.29 m³/s) July 18, 19, 1973; no flow at times.
EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 32 ft³/s (0.91 m³/s) May 13; minimum, 0.25 ft³/s (0.007 m³/s) Sept. 30.
- 08259500 NEW MEXICO BRANCH CERRO CANAL NEAR JAROSO, CO.--Lat 36°59'37", long 105°34'28", Taos County, Hydrologic Unit 13020101, 45 ft (14 m) downstream from headgate, and 2.7 mi (4.3 km) east of Jaroso. PERIOD OF RECORD, June 1944 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,680 ft (2,341 m), from topographic map. Canal diverts from left bank of Cerro Canal for irrigation in New Mexico.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 29 ft³/s (0.82 m³/s) July 21, 1948; no flow at times.
EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 6.6 ft³/s (0.19 m³/s) June 3; no flow many days.
- 08259600 CERRO CANAL AT STATE LINE NEAR JAROSO, CO.--Lat 36°59'41", long 105°34'36", Taos County, Hydrologic Unit 13020101, 780 ft (240 m) downstream from head of N. Mex. branch Cerro Canal, and 2.7 mi (4.3 km) east of Jaroso. PERIOD OF RECORD, April 1973 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,680 ft (2,341 m), from topographic map. Flow measured is delivered to Colorado.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 68 ft³/s (1.93 m³/s) July 18, 19, 1973; no flow at times.
EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 25 ft³/s (0.71 m³/s) May 13, July 26; minimum, 0.04 ft³/s (0.001 m³/s) Sept. 30.
- 08262000 EASTDALE NO. 1 INTAKE CANAL NEAR JAROSO, CO.--Lat 37°02'25", long 105°36'18" (corrected), Costilla County, Hydrologic Unit 13020101, 750 ft (230 m) downstream from headgate, and 2.8 mi (4.5 km) north of Jaroso. PERIOD OF RECORD, June 1944 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,585 ft (2,312 m), from topographic map. Canal diverts from right bank of Costilla Creek to Eastdale Reservoir No. 1 for irrigation in Colorado.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 112 ft³/s (3.17 m³/s) May 16, 1958; no flow for long periods.
EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 22 ft³/s (0.62 m³/s) May 14; no flow for long periods.

MONTHLY DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

	08256000 Acequia Madre	08256500 Mesa ditch	08257500 Cordillera ditch	08258000 Cerro Canal at Costilla	08258600 Cerro Canal below Association ditch	08259500 New Mexico branch Cerro Canal	08259600 Cerro Canal at State line nr Jaroso	08262000 Eastdale No. 1 intake canal
October	-	-	-	-	-	-	-	0
November	-	-	-	-	-	-	-	0
December	-	-	-	-	-	-	-	-
January	-	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-	10
April	-	-	-	-	-	-	-	502
May	395	0	8.5	1,850	1,050	65	756	465
June	758	6.6	19	2,320	779	114	539	.4
July	599	.3	29	1,180	778	32	604	0
August	502	.5	14	501	213	0	177	0
September	226	.6	8.3	292	170	.04	151	18

RIO GRANDE BASIN

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 (6 km) southwest of Cerro, 5.5 mi (8.8 km) northwest of Questa, 7.4 mi (11.9 km) upstream from Red River, and at mile 1,693.1 (2,724.2 km).

DRAINAGE AREA.--8,440 mi² (21,860 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

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

GAGE.--Water-stage recorder. Altitude of gage is 7,110 ft (2,167 m), from topographic map.

REMARKS.--Records good except those for September, which are fair. Diversions above station for irrigation of about 620,000 acres (2,500 km²) in Colorado and 7,000 acres (28 km²) in New Mexico. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.—29 years, 374 ft³/s (10.59 m³/s), 271,000 acre-ft/yr (334 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,740 ft³/s (276 m³/s) June 22, 1949, gage height, 15.78 ft (4.810 m); minimum, about 40 ft³/s (1.13 m³/s) Sept. 10, 11, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 722 ft³/s (20.4 m³/s) July 26, gage height, 5.23 ft (1.594 m), no peak above base of 1,000 ft³/s (28 m³/s); minimum, about 40 ft³/s (1.13 m³/s) Sept. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	206	150	148	172	280	309	135	63	60	81	41
2	130	211	140	150	178	275	306	126	62	56	73	44
3	110	214	142	152	179	270	292	122	62	55	66	96
4	102	208	142	156	185	251	279	120	62	56	65	51
5	98	198	146	159	188	277	234	124	62	56	67	46
6	99	190	153	160	191	270	214	125	62	56	65	44
7	104	180	159	159	188	272	198	116	63	56	61	43
8	105	170	169	159	194	279	182	108	70	56	58	42
9	112	170	176	157	194	290	164	100	65	56	53	41
10	126	163	182	153	194	294	152	96	65	54	50	40
11	129	157	179	151	196	294	147	92	66	52	48	40
12	128	156	190	147	203	281	142	91	64	50	48	55
13	135	156	192	146	203	315	151	94	60	48	48	50
14	125	146	190	144	210	330	151	102	56	49	51	48
15	125	160	186	143	210	337	157	97	56	51	50	47
16	134	164	182	143	211	344	144	93	56	52	50	46
17	131	162	179	143	219	364	131	89	53	55	66	55
18	133	186	176	143	226	380	128	82	52	56	55	55
19	124	192	172	146	232	382	128	80	52	53	86	53
20	112	194	169	148	234	383	128	80	50	53	71	53
21	112	198	164	152	250	371	146	79	50	52	71	52
22	131	198	159	152	260	416	159	79	50	52	63	52
23	131	194	151	150	270	482	156	78	52	53	57	56
24	133	180	148	147	251	452	138	72	55	56	55	57
25	128	169	144	151	280	402	125	71	55	64	49	63
26	126	148	142	151	246	393	122	72	55	262	47	58
27	131	133	139	151	208	383	130	75	56	115	45	57
28	130	80	136	157	292	369	135	73	56	103	44	57
29	135	100	135	164	---	356	140	72	57	87	43	60
30	172	119	136	169	---	342	135	68	57	85	42	63
31	205	---	142	169	---	328	---	65	---	83	41	---
TOTAL	3946	5102	4970	4720	6064	10462	5123	2876	1744	2092	1769	1565
MEAN	127	170	160	152	217	337	171	92.8	58.1	67.5	57.1	52.2
MAX	205	214	192	169	292	482	309	135	70	262	86	96
MIN	98	80	135	143	172	251	122	65	50	48	41	40
AC-FT	7830	10120	9860	9360	12030	20750	10160	5700	3460	4150	3510	3100
CAL YR 1976	TOTAL	135767	MEAN	371	MAX	1330	MIN	64	AC-FT	269300		
WTR YR 1977	TOTAL	50433	MEAN	138	MAX	482	MIN	40	AC-FT	100000		

RIO GRANDE BASIN

08263500 RIO GRANDE NEAR CERRO, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1976.

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	HARD- NESS (CA,MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)
NOV 19...	1230	192	390	8.1	3.0	7	140	18

DATE	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
NOV 19...	41	8.8	30	1.1	4.6	147	0	70	8.3

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
NOV 19...	.4	25	279	262	.25	.01	70	40

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL MOLYB- DENUM (MO) (UG/L) (01062)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)
NOV 19...	1230	70	40	3	0

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 (2.1 km) upstream from Cabresto Creek, 1.5 mi (2.4 km) east of Questa, and at mile 9.0 (14.5 km).

DRAINAGE AREA.--113 mi² (293 km²).

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

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

GAGE.--Water-stage recorder. Wood or concrete control since Mar. 20, 1936. Datum of gage is 7,451.92 ft (2,271.345 m) above mean sea level. See WSP 1923 for history of changes prior to Oct. 4, 1938.

REMARKS.--Records good except those for winter period, 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 (460 m) upstream and bypasses gage for irrigation and stock water below. Several observations of water temperature were made during the year.

Since January 1966 surface and ground water diversions by Molybdenum Corp. of America (Molycorp) refinery 5.5 mi (8.8 km) upstream bypass gage in tailings pipelines on left bank and discharge into settling pond 3 mi (5 km) downstream. Effluent from this pond enters Red River as surface water and is included in discharge at Red River at mouth near Questa (station 08267000). See tabulation below for bypass flow of water.

AVERAGE DISCHARGE.--52 years (water years 1913-25, 1927-65), 55.9 ft³/s (1.583 m³/s), 40,500 acre-ft/yr (49.9 hm³/yr), prior to extensive upstream diversions by Molycorp; 12 years (water years 1966-77), 29.7 ft³/s (0.841 m³/s), 21,520 acre-ft/yr (26.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1929).--Maximum discharge, 886 ft³/s (25.1 m³/s) May 25, 1942, from rating curve extended above 450 ft³/s (13 m³/s); maximum gage height, 4.47 ft (1.362 m) June 14, 1973; minimum discharge, 1.5 ft³/s (0.042 m³/s) Nov. 23, 1957. The maximum discharge of May 25, 1942, may have been equalled or exceeded by the peak of June 15, 1921.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 118 ft³/s (3.34 m³/s) June 28, gage height, 3.18 ft (0.969 m), no peak above base of 160 ft³/s (4.5 m³/s); minimum, 1.8 ft³/s (0.051 m³/s) Dec. 16, but may have been less during periods of ice effect.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	9.3	6.1	4.5	6.0	5.0	5.8	20	23	29	17	17
2	14	9.4	7.0	4.4	6.5	5.8	5.2	21	25	28	16	17
3	14	9.8	6.5	4.0	5.7	5.0	5.0	23	26	27	15	24
4	14	9.4	6.0	4.5	5.6	5.5	4.0	21	28	33	14	28
5	15	9.3	5.5	4.5	5.7	4.8	4.8	21	28	37	14	22
6	14	9.2	5.0	4.5	5.5	4.7	4.8	22	28	33	14	22
7	15	9.2	5.0	4.0	4.9	5.0	5.3	22	29	31	13	19
8	13	9.2	4.5	3.5	4.8	5.5	5.7	23	28	31	13	17
9	12	9.4	5.0	3.5	5.6	5.2	7.7	25	26	31	13	16
10	12	9.2	4.5	3.0	5.7	5.2	9.8	29	25	27	16	16
11	13	8.9	4.6	3.5	5.3	4.8	11	29	24	26	17	16
12	14	8.9	5.0	3.5	5.3	4.5	9.8	26	22	25	19	21
13	13	8.9	4.5	3.5	4.9	5.0	10	26	21	24	16	21
14	13	9.0	4.5	4.0	4.4	5.4	10	28	20	25	15	18
15	12	8.9	4.5	4.0	4.8	5.0	10	25	19	27	14	16
16	12	8.6	4.5	4.0	5.1	5.6	9.2	26	17	25	14	16
17	13	8.8	4.5	4.5	4.3	5.5	8.3	23	17	24	49	15
18	12	8.1	4.5	5.0	3.6	5.0	9.1	23	16	24	47	15
19	11	7.8	4.5	5.5	3.6	4.5	12	22	15	23	39	14
20	10	7.8	4.5	5.3	3.6	4.7	12	22	16	26	35	14
21	10	7.8	4.5	5.4	3.9	4.5	11	20	15	26	32	13
22	10	8.1	4.5	5.4	4.7	5.0	10	18	14	24	32	13
23	11	8.1	4.5	5.2	4.2	5.7	11	17	15	23	29	35
24	11	7.5	4.5	3.9	5.0	5.7	11	18	23	27	26	19
25	11	6.8	4.5	4.0	4.6	5.8	12	19	24	29	23	17
26	12	7.9	4.5	4.0	4.0	5.2	15	18	21	28	20	15
27	11	5.8	4.5	4.9	4.0	5.0	16	17	22	29	20	15
28	9.6	3.0	4.5	5.1	3.5	5.3	18	18	29	26	19	14
29	10	3.5	4.5	5.1	---	4.0	19	18	34	25	19	14
30	9.3	5.0	4.5	5.1	---	4.5	18	19	30	21	17	14
31	9.3	---	4.5	5.3	---	6.0	---	21	---	18	17	---
TOTAL	376.2	242.6	150.2	136.6	134.8	158.4	300.5	680	680	832	664	533
MEAN	12.1	8.09	4.85	4.41	4.81	5.11	10.0	21.9	22.7	26.8	21.4	17.8
MAX	16	9.8	7.0	5.5	6.5	6.0	19	29	34	37	49	35
MIN	9.3	3.0	4.5	3.0	3.5	4.0	4.0	17	14	18	13	13
AC-FT	746	481	298	271	267	314	596	1350	1350	1650	1320	1060
(†)	664	658	637	618	545	606	616	656	546	184	617	627

CAL YR 1976 TOTAL 11501.1 MEAN 31.4 MAX 157 MIN 3.0 AC-FT 22810 † 7450
WTR YR 1977 TOTAL 4888.3 MEAN 13.4 MAX 49 MIN 3.0 AC-FT 9700 † 6970

† Bypass flow of water, in acre-feet, through tailings pipelines; records furnished by Molycorp.

RIO GRANDE BASIN

99

08266000 CABRESTO CREEK NEAR QUESTA, NM

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

DRAINAGE AREA.--36.7 mi² (95.1 km²).

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

REVISED RECORDS.--WSP 1712: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 7,845 ft (2,391 m) above mean sea level (river-profile survey).

REMARKS.--Records good except those for January and those for period of no gage-height record, which are poor. Llano ditch (station 08265500), the only diversion above station, diverts from right bank 900 ft (270 m) above gage for irrigation of about 800 acres (3.2 km²) below. See tabulation below for monthly diversion of Llano ditch (records of daily discharge available in District files). Flow regulated by Cabresto Reservoir (capacity, 732 acre-feet or 903,000 m³, after reconstruction in 1928) on Lake Fork 1 mi (2 km) above mouth. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--34 years, 9.30 ft³/s (0.263 m³/s), 6,740 acre-ft/yr (8.31 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176 ft³/s (4.98 m³/s) June 8, 1957, gage height, 4.44 ft (1.353 m); minimum, 0.44 ft³/s (0.012 m³/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, 16 ft³/s (0.45 m³/s) Apr. 27, gage height, 1.25 ft (0.381 m); maximum gage height, 2.23 ft (0.680 m) Feb. 28 (backwater from ice); minimum discharge, 0.48 ft³/s (0.014 m³/s) Mar. 30, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	5.2	4.1	3.6	3.6	3.5	3.3	11	7.2	7.0	7.5	4.0
2	4.9	5.3	4.4	3.5	3.4	4.1	3.2	11	7.2	6.5	7.5	4.0
3	4.6	5.2	4.2	3.0	3.4	3.6	3.4	10	7.3	6.0	7.0	5.0
4	3.8	5.2	4.0	3.5	3.4	4.3	2.8	9.8	8.0	7.0	7.0	6.0
5	3.9	5.1	3.8	3.5	3.7	4.2	3.2	9.4	7.6	8.0	7.0	5.5
6	3.8	5.1	3.7	3.5	3.5	4.2	3.2	9.1	7.2	7.0	6.5	5.0
7	3.8	5.0	3.7	3.0	3.4	4.2	3.6	9.0	7.3	6.7	6.0	4.5
8	3.9	4.9	3.6	2.5	3.3	4.3	3.9	8.8	6.9	6.6	6.0	4.5
9	3.8	4.9	3.7	2.0	3.5	4.2	4.4	8.6	6.7	6.9	6.0	4.0
10	3.8	4.8	3.6	1.5	4.0	4.2	7.1	8.8	6.7	6.0	6.5	4.0
11	3.8	5.2	3.6	2.0	3.8	4.0	9.8	8.6	6.6	5.9	7.0	4.0
12	3.8	4.8	3.7	2.0	3.8	3.9	8.0	8.8	6.5	5.6	7.5	5.0
13	3.8	4.8	3.6	2.0	3.5	4.4	8.4	10	6.2	5.4	7.0	4.5
14	3.9	4.6	3.7	2.2	3.0	4.4	7.9	10	5.9	5.5	6.5	4.0
15	4.0	4.9	3.7	2.5	3.5	4.0	7.5	10	5.6	9.1	6.0	4.0
16	4.0	4.1	3.7	2.5	4.0	4.4	6.9	11	5.6	9.6	6.0	4.0
17	4.0	4.2	3.7	2.7	3.5	4.3	6.5	9.6	5.5	9.0	10	4.0
18	4.0	4.4	3.7	3.0	3.4	3.7	8.0	9.0	5.4	8.5	9.0	3.5
19	4.1	4.6	3.7	3.1	3.6	3.6	9.1	8.8	5.2	8.0	8.0	3.5
20	4.0	4.4	3.7	3.5	3.7	4.2	7.3	9.0	5.2	8.5	7.5	3.5
21	4.0	4.3	3.7	3.5	3.8	4.1	6.5	8.8	5.1	9.0	7.0	3.5
22	4.4	4.3	3.7	4.0	3.8	4.0	6.2	8.9	4.9	8.5	6.5	3.5
23	4.4	4.3	3.8	4.5	3.3	4.2	6.6	8.7	5.5	8.0	6.0	6.0
24	4.4	3.8	3.7	3.5	3.9	4.2	7.0	8.5	6.2	8.5	5.5	5.5
25	4.6	3.7	3.7	3.5	3.5	4.2	7.4	8.5	6.0	9.0	5.0	5.0
26	4.9	4.0	3.7	3.0	3.0	4.1	9.3	8.4	5.5	9.0	4.5	5.0
27	4.7	2.1	3.7	2.8	3.0	3.9	11	8.1	6.0	8.5	4.5	4.8
28	4.7	1.4	3.7	3.1	2.5	3.7	12	7.8	7.0	8.5	4.5	5.3
29	5.3	1.6	3.7	3.2	---	2.4	10	7.6	8.0	8.0	4.3	8.1
30	4.8	2.4	3.7	3.4	---	2.6	10	7.2	7.5	8.0	4.0	8.0
31	5.3	---	3.7	3.5	---	3.6	---	7.2	---	7.5	4.0	---
TOTAL	132.2	128.6	116.4	93.1	97.8	122.7	203.5	280.1	191.5	235.3	197.3	141.2
MEAN	4.26	4.29	3.75	3.00	3.49	3.96	6.78	9.04	6.38	7.59	6.36	4.71
MAX	5.3	5.3	4.4	4.5	4.0	4.4	12	11	8.0	9.6	10	8.1
MIN	3.8	1.4	3.6	1.5	2.5	2.4	2.8	7.2	4.9	5.4	4.0	3.5
AC-FT	262	255	231	185	194	243	404	556	380	467	391	280
(†)	0	-	-	-	-	-	-	0	0	0	0	41

CAL YR 1976 TOTAL 2670.2 MEAN 7.30 MAX 24 MIN 1.4 AC-FT 5300
WTR YR 1977 TOTAL 1939.7 MEAN 5.31 MAX 12 MIN 1.4 AC-FT 3850

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

NOTE.--No gage-height record July 17 to Sept. 27.

RIO GRANDE BASIN

08266800 RED RIVER AT FISH HATCHERY, NEAR QUESTA, NM

LOCATION.--Lat 36°41'07", long 105°39'05", SE½SE¼SW¼ sec.3, T.28 N., R.12 E., Taos County, Hydrologic Unit 13020101, at Fish Hatchery bridge, 3.5 mi (5.6 km) upstream from mouth, and 4 mi (6.4 km) southwest of Questa.

DRAINAGE AREA.--185 mi² (479 km²), approximately.

PERIOD OF RECORD.--Water years 1966 to current year.

REMARKS.--Water-discharge measurements were made at the time water-quality samples were collected. Samples collected 0.3 mi (0.5 km) downstream from bridge since July 1974.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPERATURE (DEG C) (00020)	TEMPERATURE (DEG C) (00010)	TURBIDITY (JTU) (00070)	TURBIDITY (NTU) (00076)	HARDNESS (CA:MG) (MG/L) (00900)
OCT 28...	1545	37	336	8.3	4.0	11.0	4	--	100
NOV 18...	1430	30	299	7.5	14.0	11.0	3	--	110
DEC 15...	0935	29	482	7.3	--	--	2	--	190
JAN 19...	1330	36	440	7.2	1.0	8.5	3	--	170
FEB 22...	0935	34	467	7.1	5.0	9.0	7	--	180
MAR 15...	1515	33	561	7.3	13.5	12.0	4	--	240
APR 12...	1550	33	316	7.7	--	6.0	4	--	100
MAY 10...	1505	54	356	8.4	20.0	17.0	0	--	150
JUN 07...	1415	52	325	8.7	24.0	18.0	15	--	130
JUL 06...	1555	57	279	7.2	20.0	--	25	--	110
AUG 03...	1210	31	330	7.5	28.5	--	3	--	120
31...	1630	41	321	8.7	20.0	16.0	--	3.4	120

DATE	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED PHOSPHATE (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)
OCT 28...	29	31	6.5	18	.8	2.0	92	0	58
NOV 18...	26	32	7.3	20	.8	2.1	102	0	56
DEC 15...	110	60	8.6	23	.7	4.0	92	0	140
JAN 19...	94	55	8.2	21	.7	3.6	94	0	130
FEB 22...	110	59	8.3	48	1.6	5.1	89	0	130
MAR 15...	170	81	9.1	21	.6	5.0	88	0	210
APR 12...	29	31	6.5	19	.8	2.1	92	0	60
MAY 10...	100	46	7.6	17	.6	3.2	51	1	120
JUN 07...	89	39	7.6	17	.7	2.9	28	10	110
JUL 06...	33	33	6.2	14	.6	5.8	91	0	59
AUG 03...	25	36	6.1	24	1.0	2.0	110	0	62
31...	21	36	7.7	17	.7	1.9	98	12	61

08266800 RED RIVER AT FISH HATCHERY, NEAR QUESTA, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT 28...	6.2	1.0	13	188	181	.03	.00	30	0
NOV 18...	6.8	.9	23	212	200	.28	.03	30	20
DEC 15...	7.7	1.2	25	330	317	.54	.05	--	--
JAN 19...	8.3	1.5	23	326	299	.50	.02	--	--
FEB 22...	45	1.1	22	379	364	.23	.04	--	--
MAR 15...	7.5	1.1	20	411	399	.23	.01	--	--
APR 12...	6.5	1.1	22	205	195	.25	.03	30	0
MAY 10...	5.7	.9	7.0	216	234	.03	.00	--	--
JUN 07...	5.8	.9	7.1	236	263	11	.05	--	--
JUL 06...	8.7	.8	18	184	191	.18	.01	--	--
AUG 03...	7.2	1.0	25	284	219	.37	.04	--	--
31...	6.2	.9	15	192	206	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL MOLYB- DENUM (MO) (UG/L) (01062)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)
OCT 28...	1545	30	0	79	--
NOV 18...	1430	30	20	110	110
DEC 15...	0935	--	--	0	--
JAN 19...	1330	--	--	230	--
FEB 22...	0935	--	--	320	--
MAR 15...	1515	--	--	300	--
APR 12...	1550	30	0	140	--
MAY 10...	1505	--	--	160	--
JUN 07...	1415	--	--	150	--
JUL 06...	1555	--	--	51	--
AUG 31...	1630	--	--	100	--

RIO GRANDE BASIN

08266800 RED RIVER AT FISH HATCHERY, NEAR QUESTA, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)
OCT 28...	1545	37	11.0	9	.90
JAN 19...	1330	36	8.5	8	.78
FEB 22...	0935	34	9.0	6	.55
MAR 15...	1515	33	12.0	21	1.9
APR 12...	1550	33	6.0	15	1.3
MAY 10...	1505	54	17.0	47	6.9
JUN 07...	1415	52	18.0	81	11
JUL 06...	1555	57	19.0	61	9.4
AUG 03...	1210	31	18.5	31	2.6
31...	1430	41	16.0	16	1.8

LOCATION.--Lat 36°38'53", long 105°41'34", in SW 1/4 sec.20, T.28 N., R.12 E., Taos County, Hydrologic Unit 13020101, in Carson National Forest, on left bank 250 ft (76 m) upstream from Rio Grande, and 6.5 mi (10.5 km) southwest of Questa.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for October and November 1950, published in WSP 1732.

REMARKS.--Records good prior to March 15 and fair thereafter. Diversions for irrigation of about 3,000 acres (12 km²) above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 730 ft³/s (20.7 m³/s) Aug. 12, 1964, gage height, 6.05 ft (1.844 m); minimum 29 ft³/s (0.82 m³/s) Feb. 13, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 114 ft³/s (3.23 m³/s) June 28, gage height, 2.79 ft (0.850 m), no peak above base of 175 ft³/s (5.0 m³/s); minimum, 33 ft³/s (0.93 m³/s) Dec. 29.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	45	35	37	46	48	45	49	46	62	50	53
2	56	45	35	37	47	48	44	49	48	66	48	53
3	56	46	35	37	46	45	44	50	49	64	45	56
4	55	45	35	37	46	46	43	52	49	67	46	66
5	56	44	37	39	44	46	42	49	50	78	46	61
6	56	44	37	39	46	46	42	49	52	70	46	60
7	54	44	38	39	46	46	42	50	55	66	46	58
8	54	44	39	41	45	47	43	50	54	66	46	53
9	52	44	40	41	46	47	43	52	52	66	46	52
10	52	44	40	38	46	47	44	57	51	62	48	53
11	52	44	41	38	46	46	44	57	48	59	50	55
12	53	44	40	39	46	45	43	56	47	58	51	58
13	52	43	40	41	46	46	43	58	46	56	51	56
14	51	41	40	41	46	46	43	62	46	57	50	50
15	52	42	39	42	46	46	42	60	45	60	50	49
16	50	40	40	42	46	46	42	60	44	61	49	48
17	51	41	40	43	46	46	40	60	44	59	74	46
18	50	41	40	43	45	45	39	56	43	59	83	46
19	49	41	40	44	45	44	41	52	42	56	74	46
20	46	41	41	43	46	45	44	52	43	62	67	45
21	46	41	39	44	46	45	41	53	44	74	66	44
22	46	41	37	44	46	45	41	50	44	69	69	44
23	46	41	37	45	43	46	44	48	45	69	66	67
24	46	39	37	43	44	46	46	48	49	71	63	52
25	46	38	37	42	45	47	49	47	52	81	56	49
26	47	39	36	43	41	46	51	46	49	80	54	48
27	46	37	37	44	42	46	52	46	51	72	54	46
28	45	35	37	44	44	46	50	46	56	62	54	46
29	46	35	35	44	---	46	50	46	71	60	54	45
30	45	35	37	44	---	43	48	46	65	60	53	44
31	45	---	37	45	---	44	---	46	---	56	53	---
TOTAL	1557	1244	1178	1283	1267	1421	1325	1602	1480	2008	1708	1549
MEAN	50.2	41.5	38.0	41.4	45.3	45.8	44.2	51.7	49.3	64.8	55.1	51.6
MAX	56	46	41	45	47	48	52	62	71	81	83	67
MIN	45	35	35	37	41	43	39	46	42	56	45	44
AC-FT	3090	2470	2340	2540	2510	2820	2630	3180	2940	3980	3390	3070
CAL YR 1976	TOTAL	24750	MEAN 67.6	MAX 185	MIN 35	AC-FT	49090					
WTR YR 1977	TOTAL	17622	MEAN 48.3	MAX 83	MIN 35	AC-FT	34950					

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

DRAINAGE AREA.--36.2 mi² (93.8 km²).

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

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

GAGE.--Water-stage recorder. Concrete control since Oct. 28, 1938. Altitude of gage is 7,650 ft (2,332 m), from topographic map. Prior to Oct. 28, 1938, at datum 1.92 ft (0.585 m) lower.

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

AVERAGE DISCHARGE.--43 years, 33.6 ft³/s (0.952 m³/s), 24,340 acre-ft/yr (30.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 541 ft³/s (15.3 m³/s) May 13, 1941; maximum gage height, 4.81 ft (1.466 m) Jan. 5, 1970 (ice jam); minimum discharge, about 1 ft³/s (0.03 m³/s) Jan. 27, 1942, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 84 ft³/s (2.38 m³/s) at 0045 hours Aug. 17, gage height, 2.50 ft (0.762 m), no other peak above base of 80 ft³/s (2.3 m³/s); maximum gage height, 3.03 ft (0.924 m) Dec. 1 (backwater from ice); minimum discharge, 6.8 ft³/s (0.19 m³/s) Feb. 28 (result of freezeup), but may have been less during periods of ice effect.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	13	8.0	10	10	10	7.9	17	30	17	22	23
2	15	13	8.0	9.5	10	9.8	7.6	17	31	18	21	24
3	15	13	9.0	8.8	10	9.5	7.8	18	31	17	21	25
4	15	13	9.5	9.0	10	9.5	8.5	18	31	21	21	27
5	16	13	10	9.1	10	9.2	8.3	20	31	25	20	23
6	15	12	10	8.5	10	9.9	8.4	20	32	21	20	22
7	16	12	10	8.0	10	10	8.7	21	35	20	19	21
8	15	12	9.7	8.0	9.5	9.2	9.3	23	34	21	18	20
9	15	12	9.7	8.0	9.5	9.4	10	25	35	20	19	19
10	15	12	9.7	8.0	9.5	9.4	11	27	34	18	19	18
11	15	12	10	8.5	10	9.5	11	27	34	17	19	19
12	15	12	10	8.5	10	9.5	10	28	33	17	19	22
13	15	11	9.8	9.0	10	9.7	10	29	31	17	17	23
14	15	12	10	8.5	10	9.4	11	30	30	19	16	20
15	15	11	10	9.0	10	9.5	10	28	29	20	16	19
16	15	10	10	9.5	10	9.3	10	28	28	19	17	18
17	15	11	9.9	9.5	10	9.1	9.8	27	26	19	44	18
18	15	11	10	10	11	9.0	11	28	25	18	32	17
19	14	11	10	10	10	9.0	13	29	23	17	30	17
20	14	11	10	10	10	8.8	13	29	23	17	27	16
21	14	10	9.5	10	10	8.9	12	27	22	17	26	16
22	15	10	9.5	11	10	9.2	12	25	21	19	26	16
23	15	10	9.5	10	10	9.2	12	25	24	20	27	26
24	15	10	10	10	10	9.3	12	26	26	22	30	19
25	15	10	10	9.5	9.8	9.3	13	26	23	27	30	18
26	15	10	10	9.5	9.0	9.3	14	24	21	25	30	17
27	14	8.2	10	9.5	8.5	9.3	14	23	20	27	29	17
28	13	7.5	9.9	9.5	9.0	8.6	15	24	19	25	28	17
29	14	7.0	9.5	9.5	---	8.5	16	25	19	23	26	16
30	14	7.5	9.5	10	---	8.5	16	27	18	22	25	16
31	14	---	10	10	---	8.5	---	28	---	22	24	---
TOTAL	459	327.2	300.7	287.9	275.8	287.3	332.3	769	819	627	738	589
MEAN	14.8	10.9	9.70	9.29	9.85	9.27	11.1	24.8	27.3	20.2	23.8	19.6
MAX	16	13	10	11	11	10	16	30	35	27	44	27
MIN	13	7.0	8.0	8.0	8.5	8.5	7.6	17	18	17	16	16
AC=FT	910	649	596	571	547	570	659	1530	1620	1240	1460	1170
CAL YR 1976 TOTAL	10507.9		MEAN 28.7	MAX 143	MIN 7.0	AC=FT 20840						
WTR YR 1977 TOTAL	5812.2		MEAN 15.9	MAX 44	MIN 7.0	AC=FT 11530						

08268500 ARROYO HONDO AT ARROYO HONDO, NM

LOCATION.--Lat 36°31'56", long 105°41'06", Taos County, Hydrologic Unit 13020101, in Arroyo Hondo Grant, on left bank 0.9 mi (1.4 km) downstream from Arroyo Hondo, and at mile 1.4 (2.3 km).

DRAINAGE AREA.--65.6 mi² (169.9 km²).

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

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

GAGE.--Water-stage recorder. Altitude of gage is 6,670 ft (2,033 m), from topographic map. See WSP 1923 for history of changes prior to Sept. 11, 1963. Sept. 11, 1963 to Apr. 2, 1969, at site 25 ft (8 m) downstream on right bank at same datum.

REMARKS.--Records good. Diversions above station for irrigation of about 2,500 acres (10 km²). Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--61 years (water years 1913-28, 1933-77), 26.4 ft³/s (0.748 m³/s), 19,130 acre-ft/yr (23.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1937).--Maximum discharge, 1,060 ft³/s (30.0 m³/s) July 19, 1948, gage height, 3.75 ft (1.143 m), from rating curve extended above 200 ft³/s (5.7 m³/s); maximum gage height, 3.90 ft (1.189 m) June 15, 1973; minimum discharge, 3.3 ft³/s (0.093 m³/s) May 7, 1977.

Maximum gage height observed, 5.45 ft (1.661 m), site and datum then in use, Aug. 23, 1935; discharge uncertain, but probably exceeded 1,200 ft³/s (34 m³/s). A minimum daily discharge of 3 ft³/s (0.08 m³/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.--Maximum discharge, 71 ft³/s (2.01 m³/s) July 27, gage height, 3.20 ft (0.975 m), no peak above base of 75 ft³/s (2.1 m³/s); minimum, 3.3 ft³/s (0.093 m³/s) May 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	10	14	16	16	17	10	4.5	5.0	6.1	6.5	7.2
2	6.6	10	16	16	15	16	10	4.4	5.2	6.2	5.7	7.6
3	6.8	10	18	15	15	15	11	4.5	5.2	6.1	5.4	8.1
4	7.3	10	19	15	15	16	11	4.3	5.4	10	5.4	7.6
5	6.8	9.8	21	15	15	16	11	4.3	5.0	7.4	5.4	7.5
6	6.4	9.6	19	15	15	16	10	4.3	5.4	6.7	5.3	7.6
7	6.2	9.6	18	13	15	16	10	4.1	5.4	6.4	5.2	7.5
8	6.3	9.5	19	16	15	16	10	4.0	5.2	9.0	5.4	7.2
9	6.3	9.5	16	15	15	16	8.6	4.0	5.2	6.9	5.4	7.1
10	6.5	9.8	16	12	16	16	8.5	4.0	5.2	6.2	6.4	7.1
11	6.2	10	17	15	16	15	8.4	4.0	5.8	6.6	7.5	7.5
12	6.1	10	17	15	16	15	7.9	4.6	6.2	5.9	8.4	8.9
13	6.2	10	17	16	16	16	7.6	5.2	5.5	5.9	8.4	8.4
14	6.3	10	16	15	17	15	7.4	6.4	5.4	6.2	7.2	7.4
15	6.2	10	16	15	16	12	5.9	5.0	5.3	6.0	6.6	7.1
16	6.3	9.6	15	15	17	12	4.7	4.8	5.3	6.0	6.6	7.3
17	6.3	9.8	15	15	17	11	4.5	4.7	5.3	5.6	11	7.3
18	6.5	9.8	15	15	17	11	4.4	4.6	5.4	5.5	8.8	7.4
19	7.6	9.6	14	15	17	11	5.2	4.6	5.4	5.3	8.3	7.2
20	7.6	9.5	14	15	17	11	6.6	4.9	5.9	5.6	7.7	7.1
21	8.2	9.5	13	15	17	11	6.1	5.4	6.3	5.3	7.7	7.0
22	8.8	9.5	13	15	17	11	5.2	5.0	6.0	5.3	7.6	7.9
23	10	9.3	13	16	16	11	4.5	5.0	7.9	5.1	7.3	8.8
24	9.5	9.2	14	16	17	12	4.8	5.0	7.9	5.3	7.0	7.5
25	9.4	9.0	14	15	16	12	4.9	5.1	6.9	6.1	7.1	7.6
26	9.1	8.7	13	13	14	11	4.7	5.2	6.3	5.4	6.9	7.6
27	9.4	9.1	15	14	15	9.5	4.8	5.0	6.3	11	7.0	7.5
28	11	9.8	15	15	15	8.8	4.9	5.4	6.3	11	7.1	7.5
29	10	9.5	14	16	---	8.1	4.7	5.4	6.3	6.5	7.1	7.6
30	10	11	15	15	---	9.5	4.6	5.0	6.0	5.7	7.1	7.6
31	10	---	17	15	---	11	---	5.0	---	5.4	7.1	---
TOTAL	236.2	290.7	488	464	445	403.9	211.9	147.7	173.9	201.7	215.6	226.7
MEAN	7.62	9.69	15.7	15.0	15.9	13.0	7.06	4.76	5.80	6.51	6.95	7.56
MAX	11	11	21	16	17	17	11	6.4	7.9	11	11	8.9
MIN	6.1	8.7	13	12	14	8.1	4.4	4.0	5.0	5.1	5.2	7.0
AC-FT	469	577	968	920	883	801	420	293	345	400	428	450

CAL YR 1976 TOTAL 5376.6 MEAN 14.7 MAX 61 MIN 5.0 AC-FT 10660
WTR YR 1977 TOTAL 3505.3 MEAN 9.60 MAX 21 MIN 4.0 AC-FT 6950

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

DRAINAGE AREA.--8,760 mi² (22,690 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

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

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

REMARKS.--Records good except those for December, January, April, May, and September, which are fair. Diversions above station for irrigation of about 620,000 acres (2,500 km²) in Colorado and 15,000 acres (61 km²) in New Mexico. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 546 ft³/s (15.46 m³/s), 395,600 acre-ft/yr (488 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,400 ft³/s (125 m³/s) June 22, 1965, gage height, 5.81 ft (1.771 m); maximum gage height, 5.82 ft (1.774 m) May 23, 1973; minimum discharge, 136 ft³/s (3.85 m³/s) Aug. 2, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 712 ft³/s (20.2 m³/s) July 26, gage height, 2.37 ft (0.722 m), no peak above base of 1,400 ft³/s (40 m³/s); minimum, 146 ft³/s (4.13 m³/s) June 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	307	245	255	287	401	401	245	167	176	185	158
2	243	311	236	255	293	394	401	245	168	184	177	159
3	221	313	241	255	292	381	389	235	170	176	166	169
4	206	308	244	260	296	360	378	230	169	189	167	200
5	201	296	250	265	296	389	336	225	170	195	166	160
6	201	286	259	270	300	378	310	235	173	185	164	155
7	207	278	263	255	302	380	293	230	176	180	160	160
8	212	268	277	265	303	389	279	225	180	202	160	155
9	214	269	284	270	308	400	260	220	178	180	154	150
10	230	263	289	255	307	403	250	210	175	175	151	150
11	237	255	289	255	309	405	244	204	174	167	152	155
12	233	251	297	255	314	377	234	201	172	161	156	160
13	239	250	303	255	315	418	244	207	168	159	156	175
14	239	246	300	255	321	453	247	223	164	159	154	160
15	231	242	295	250	321	442	250	213	161	163	154	155
16	241	264	290	250	324	454	238	209	161	164	152	155
17	239	254	287	250	328	475	225	204	159	166	188	160
18	243	266	281	250	335	482	222	196	155	171	189	165
19	235	294	279	250	345	488	225	189	156	165	193	160
20	221	292	270	255	348	497	250	189	155	163	214	160
21	215	293	260	260	359	484	270	190	156	173	183	160
22	231	296	260	260	377	907	270	186	154	167	200	155
23	240	292	250	258	380	568	280	182	158	170	183	220
24	237	278	245	250	373	572	255	179	166	169	176	170
25	235	261	245	258	385	508	240	176	166	187	161	170
26	233	254	235	263	367	499	230	175	163	362	155	170
27	235	238	240	259	314	486	240	178	167	242	154	165
28	236	188	235	269	382	472	250	177	166	240	152	165
29	241	184	225	275	---	451	250	176	195	200	155	165
30	257	192	230	281	---	442	255	173	186	200	159	162
31	305	---	245	282	---	434	---	169	---	192	159	---
TOTAL	7218	7989	8149	8045	9181	13789	8216	6296	5028	5782	5195	4923
MEAN	233	266	263	260	328	445	274	203	168	187	168	164
MAX	305	313	303	282	385	572	401	245	195	362	214	220
MIN	201	184	225	250	287	360	222	169	154	159	151	150
AC=FT	14320	15850	16160	15960	18210	27350	16300	12490	9970	11470	10300	9760
CAL YR 1976 TOTAL	182630											
WTR YR 1977 TOTAL	89811											
MEAN 499												
MAX 572												
MIN 166												
AC=FT 362200												
AC=FT 178100												

NOTE.--No gage-height record Dec. 19 to Jan. 21.

08269000 RIO PUEBLO DE TAOS NEAR TAOS, NM

LOCATION.--Lat 36°26'22", long 105°30'11", in SW¼SE¼ sec. 36, T.26 N., R.13 E., Taos County, Hydrologic Unit 13020101, in Taos Pueblo Grant, on right bank 2.3 mi (3.7 km) east of Taos Pueblo, 4.5 mi (7.2 km) northeast of Taos, 5.8 mi (9.3 km) upstream from Rio Lucero, and at mile 15.1 (24.3 km).

DRAINAGE AREA.--66.6 mi² (172.5 km²).

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

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

GAGE.--Water-stage recorder. Concrete control since Nov. 20, 1962. Altitude of gage is 7,380 ft (2,249 m), from topographic map. See WSP 1923 for history of changes prior to Nov. 20, 1962.

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

AVERAGE DISCHARGE.--32 years (water years 1911-16, 1941-51, 1963-77), 27.0 ft³/s (0.765 m³/s), 19,560 acre-ft/yr (24.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 970 ft³/s (27.5 m³/s) May 14, 1941, gage height, 3.90 ft (1.189 m), from floodmark, site and datum then in use, from rating curve extended above 290 ft³/s (8.2 m³/s); minimum, about 0.9 ft³/s (0.03 m³/s) Jan. 9, 1964, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35 ft³/s (0.99 m³/s) May 2, gage height, 1.06 ft (0.323 m), no peak above base of 60 ft³/s (1.7 m³/s); maximum gage height, 1.79 ft (0.546 m) Feb. 11 (backwater from ice); minimum discharge, 2.3 ft³/s (0.065 m³/s) Mar. 30, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	7.6	4.5	5.9	6.0	6.0	6.6	32	15	8.5	9.8	9.0
2	7.8	7.7	4.5	5.5	5.5	6.0	6.0	32	15	8.8	9.0	9.6
3	7.4	7.7	5.0	5.5	5.5	5.5	5.9	31	15	8.2	8.5	12
4	7.4	7.5	6.0	5.5	5.5	6.0	5.5	29	16	12	8.0	10
5	9.2	7.3	6.5	5.5	5.5	5.5	6.0	28	15	14	7.5	11
6	8.1	7.3	7.0	5.0	5.5	6.0	6.8	27	15	10	7.1	9.7
7	7.8	7.3	6.6	4.5	5.5	6.0	8.4	27	16	9.1	6.9	9.0
8	7.7	7.0	6.7	4.5	5.0	6.5	11	27	15	10	6.9	8.5
9	7.8	7.1	6.7	4.0	5.0	6.5	13	28	14	16	6.8	7.9
10	7.5	7.0	6.6	4.0	5.5	6.0	15	28	14	12	8.2	7.6
11	7.4	7.7	6.3	4.5	5.5	5.5	17	26	13	11	8.9	7.6
12	7.2	7.2	6.6	4.5	5.5	6.0	15	25	13	9.6	10	9.3
13	7.1	6.2	6.6	4.5	6.0	6.5	16	27	12	8.7	8.5	11
14	7.2	6.9	6.5	5.0	6.0	6.5	15	26	11	8.9	7.7	9.0
15	7.1	6.5	6.7	5.0	6.0	6.5	15	25	10	9.8	11	7.7
16	7.1	5.4	6.8	5.0	6.0	6.5	14	24	9.9	9.3	8.4	7.3
17	7.1	5.7	7.5	5.2	6.0	6.4	14	22	9.4	12	23	7.0
18	7.0	6.5	7.5	5.4	6.3	6.0	15	21	8.6	8.9	29	6.7
19	6.7	6.9	7.7	5.6	6.3	6.0	20	20	8.3	7.7	22	6.5
20	6.6	6.6	7.2	5.7	6.4	6.4	20	19	8.2	9.7	20	6.3
21	7.0	6.6	6.1	5.7	6.4	6.2	18	18	8.0	13	18	6.0
22	7.3	6.2	5.5	5.7	6.6	6.4	18	17	7.6	11	17	5.8
23	8.2	6.2	5.5	5.7	5.4	7.1	18	16	12	10	18	11
24	8.5	5.4	5.5	5.7	6.2	7.3	19	16	15	9.5	16	7.6
25	8.0	4.7	6.0	5.5	6.1	7.6	21	16	14	11	14	6.6
26	8.3	6.4	6.0	5.0	5.4	7.6	21	16	11	12	13	6.3
27	7.6	4.7	6.5	5.0	5.4	7.7	22	15	10	17	12	6.1
28	7.2	4.0	6.5	5.2	5.5	7.0	26	15	9.4	17	11	6.3
29	8.2	3.5	6.0	5.5	---	5.4	28	14	9.5	14	10	6.3
30	7.4	4.0	6.0	5.5	---	5.0	28	14	9.2	12	10	5.9
31	8.1	---	6.0	6.0	---	7.1	---	14	---	11	10	---
TOTAL	235.2	190.8	195.1	160.8	161.5	196.7	464.2	695	359.1	341.7	376.2	240.6
MEAN	7.59	6.36	6.29	5.19	5.77	6.35	15.5	22.4	12.0	11.0	12.1	8.02
MAX	9.2	7.7	7.7	6.0	6.6	7.7	28	32	16	17	29	12
MIN	6.6	3.5	4.5	4.0	5.0	5.0	5.5	14	7.6	7.7	6.8	5.8
AC-FT	467	378	387	319	320	390	921	1380	712	678	746	477
CAL YR 1976	TOTAL	7086.6	MEAN	19.4	MAX	104	MIN	3.5	AC-FT	14060		
WTR YR 1977	TOTAL	3616.9	MEAN	9.91	MAX	32	MIN	3.5	AC-FT	7170		

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

DRAINAGE AREA.--16.6 mi² (43.0 km²).

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

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

GAGE.--Water-stage recorder. Concrete control since Nov. 21, 1962. Datum of gage is 8,051.44 ft (2,454.070 m) above mean sea level. See WSP 1923 for history of changes prior to Nov. 21, 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 1911-15, 1934-51, 1963-77), 21.4 ft³/s (0.606 m³/s), 15,500 acre-ft/yr (19.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 300 ft³/s (8.50 m³/s) May 13, 1941, gage height, 3.12 ft (0.951 m), datum then in use; minimum discharge, about 1.4 ft³/s (0.04 m³/s) Nov. 2, 1951, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 32 ft³/s (0.91 m³/s) Sept. 23, gage height, 1.21 ft (0.369 m), no peak above base of 70 ft³/s (2.0 m³/s); maximum gage height, 2.10 ft (0.640 m) Nov. 29 (ice jam); minimum discharge, 1.9 ft³/s (0.054 m³/s) Mar. 30, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	6.5	5.0	6.0	4.4	3.9	4.2	17	21	14	14	15
2	8.8	6.5	5.2	5.5	4.4	4.0	4.2	17	22	14	14	18
3	8.7	6.5	5.5	5.5	4.4	4.1	4.0	18	23	13	14	19
4	8.9	6.3	5.5	5.5	4.3	4.1	4.0	17	22	16	13	18
5	9.3	6.2	5.5	5.5	4.3	4.0	4.2	17	22	17	13	17
6	8.7	6.1	5.5	5.0	4.2	4.1	5.0	18	22	15	12	16
7	8.5	6.1	5.3	4.5	4.2	4.1	6.6	19	22	14	12	15
8	8.2	6.0	5.3	4.5	4.2	4.1	7.7	22	22	16	12	15
9	8.1	5.9	5.6	4.5	4.2	4.0	9.3	23	21	15	12	14
10	8.0	5.8	5.6	4.5	4.2	4.0	9.7	23	20	14	11	14
11	7.7	5.5	5.6	4.5	4.3	4.0	9.3	22	19	14	13	14
12	7.6	5.4	5.6	4.5	4.2	3.9	8.5	22	18	14	13	16
13	7.5	5.2	5.9	4.8	4.3	4.0	8.6	23	17	13	12	16
14	7.7	5.4	5.9	4.5	4.3	4.1	7.9	23	16	13	12	14
15	7.7	4.8	5.9	4.6	4.3	4.0	7.4	21	15	15	11	13
16	7.6	4.9	5.7	4.6	4.3	4.0	6.9	20	15	15	11	13
17	7.4	5.5	5.7	4.6	4.3	3.8	6.7	19	14	15	23	12
18	7.4	5.8	5.6	4.6	4.3	3.8	7.4	19	14	14	24	12
19	6.9	5.6	5.6	4.6	4.4	3.8	9.3	19	13	13	23	11
20	6.9	5.4	5.6	4.6	4.4	3.8	8.4	18	13	14	21	11
21	7.0	5.2	5.5	4.6	4.4	3.9	8.4	17	13	12	21	10
22	7.4	5.3	5.5	4.6	4.4	4.1	9.3	16	13	12	22	11
23	7.6	5.0	5.5	4.7	4.1	4.4	11	16	15	13	21	18
24	7.3	4.9	5.5	4.6	4.1	4.6	11	17	18	12	20	13
25	6.9	4.8	5.8	4.6	4.2	4.6	12	17	16	15	18	12
26	7.3	4.5	5.8	4.6	4.0	4.7	12	17	15	15	18	11
27	6.5	4.0	6.0	4.6	3.9	4.7	14	16	15	18	17	11
28	6.6	3.5	6.0	4.6	3.9	4.3	15	17	15	17	16	11
29	7.0	4.0	6.0	4.6	3.5	15	18	14	16	15	15	11
30	6.7	4.5	6.0	4.6	4.6	16	19	14	16	15	15	10
31	6.7	---	6.0	4.6	4.4	---	---	20	---	15	15	---
TOTAL	237.4	161.1	174.7	147.6	118.9	127.4	263.0	587	519	449	488	411
MEAN	7.66	5.37	5.64	4.76	4.25	4.11	8.77	18.9	17.3	14.5	15.7	13.7
MAX	9.3	6.5	6.0	6.0	4.4	4.7	16	23	23	18	24	19
MIN	6.5	3.5	5.0	4.5	3.9	3.5	4.0	16	13	12	11	10
AC=FT	471	320	347	293	236	253	522	1160	1030	891	968	815

CAL YR 1976 TOTAL 5342.9 MEAN 14.6 MAX 65 MIN 3.5 AC=FT 10600
WTR YR 1977 TOTAL 3684.1 MEAN 10.1 MAX 24 MIN 3.5 AC=FT 7310

NOTE.--No gage-height record Dec. 21 to Jan. 22.

08275000 RIO FERNANDO DE TAOS NEAR TAOS, NM

LOCATION.--Lat 36°22'32", long 105°32'55", in W¹SW⁴ sec.27, T.25 N., R.13 E., Taos County, Hydrologic Unit 13020101, in Carson National Forest, on right bank 175 ft (53 m) upstream from Acequia Madre del Norte del Canon, 2.5 mi (4.0 km) southeast of Taos, and at mile 5.0 (8.0 km).

DRAINAGE AREA.--71.7 mi² (185.7 km²).

PERIOD OF RECORD.--April to September 1910 (gage heights and discharge measurements only), October 1910 to June 1911 (discharge measurements only), October 1912 to September 1917, October 1927 to December 1928, October to November 1962 (monthly discharge only), December 1962 to current year.

REVISED RECORDS.--WSP 1512; 1914-15. WSP 1923: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Dec. 13, 1962. Altitude of gage is 7,140 ft (2,176 m), from topographic map. See WSP 1923 for history of changes prior to Dec. 13, 1962.

REMARKS.--Records good except those for March and April, which are poor. A few very small diversions above station for irrigation. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years (water years 1913-17, 1928, 1963-77), 6.00 ft³/s (0.170 m³/s), 4,350 acre-ft/yr (5.36 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1962).--Maximum discharge, 219 ft³/s (6.20 m³/s) May 13, 1973, gage height, 2.38 ft (0.725 m); minimum, 0.02 ft³/s (0.001 m³/s) Jan. 14-18, 1967, Sept. 15, 16-17, 18-19, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood of undetermined magnitude occurred July 21, 1921.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8.1 ft³/s (0.23 m³/s) Apr. 25, gage height, 0.79 ft (0.241 m), no peak above base of 25 ft³/s (0.7 m³/s); minimum, 0.12 ft³/s (0.003 m³/s) Aug. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	1.7	1.3	.72	1.3	2.0	2.8	6.2	1.9	.48	.40	.22
2	.89	1.6	1.3	.71	1.4	2.2	2.5	5.9	1.8	.43	.34	.70
3	.84	1.6	1.3	.66	1.4	2.0	2.4	5.7	1.8	.42	.27	1.5
4	.90	1.6	1.2	.65	1.4	2.2	2.2	5.6	1.8	.55	.24	.91
5	1.3	1.6	1.2	.65	1.4	2.2	2.5	5.5	1.7	1.2	.21	.55
6	1.3	1.6	1.2	.64	1.4	2.3	2.8	5.2	1.5	.91	.18	.44
7	1.2	1.7	1.2	.63	1.4	2.5	3.0	5.0	1.9	.66	.15	.38
8	1.4	1.5	1.3	.60	1.5	2.8	3.5	4.9	1.8	.92	.14	.29
9	1.2	1.6	1.4	.60	1.7	3.0	4.0	4.7	1.5	.83	.14	.24
10	1.1	1.5	1.4	.60	1.7	2.8	4.5	4.7	1.5	.57	.24	.21
11	1.1	1.7	1.3	.65	1.8	2.5	4.8	4.4	1.3	.47	.28	.22
12	1.1	1.7	1.4	.65	1.8	2.6	4.0	4.5	1.3	.40	.50	.23
13	1.1	1.6	1.3	.65	1.9	2.8	4.3	5.0	1.1	.35	.28	.34
14	1.2	1.7	1.3	.65	2.0	3.0	4.2	5.4	.97	.44	.23	.41
15	1.1	1.5	1.3	.70	2.1	3.0	4.3	5.6	.83	.51	.25	.29
16	1.1	.95	1.3	.70	2.1	2.9	4.3	5.0	.71	.70	.20	.27
17	1.1	1.1	1.2	.70	2.2	2.8	4.2	4.5	.66	.61	.91	.25
18	1.1	1.3	1.2	.75	2.3	2.8	4.2	4.2	.59	.46	1.3	.22
19	1.2	1.5	1.2	.75	2.4	2.5	4.6	4.1	.54	.39	1.1	.21
20	1.0	1.4	1.2	.75	2.4	2.7	6.4	4.1	.55	1.3	.82	.15
21	1.1	1.4	1.2	.75	2.4	2.7	6.6	4.1	.53	2.2	.66	.13
22	1.3	1.2	1.1	.80	2.5	2.8	6.9	3.7	.49	1.5	.56	.13
23	1.3	1.2	.94	.83	2.0	3.0	6.0	3.5	.49	1.3	.55	.47
24	1.4	.87	.94	.76	2.2	3.5	6.7	3.3	.78	1.0	.55	.26
25	1.5	.89	.93	.74	2.0	3.5	7.7	3.3	1.1	1.0	.48	.22
26	1.6	1.1	.97	.94	1.9	3.8	7.5	3.4	.87	.97	.39	.18
27	1.7	.52	1.0	1.1	1.8	3.8	6.9	3.3	.68	1.0	.31	.14
28	1.6	.75	.96	1.2	1.8	3.5	6.7	3.1	.60	1.1	.28	.14
29	1.8	1.0	.85	1.2	---	3.0	6.5	2.6	.60	.88	.26	.13
30	1.7	1.2	.75	1.2	---	2.5	6.6	2.4	.57	.65	.27	.13
31	1.8	---	.72	1.3	---	3.0	---	2.1	---	.50	.25	---
TOTAL	38.93	40.58	35.86	24.23	52.2	86.7	143.6	135.0	32.46	24.70	12.74	9.96
MEAN	1.26	1.35	1.16	.78	1.86	2.80	4.79	4.35	1.08	.80	.41	.33
MAX	1.8	1.7	1.4	1.3	2.5	3.8	7.7	6.2	1.9	2.2	1.3	1.5
MIN	.84	.52	.72	.60	1.3	2.0	2.2	2.1	.49	.35	.14	.13
AC-FT	77	80	71	48	104	172	285	268	64	49	25	20

CAL YR 1976 TOTAL 1805.80 MEAN 4.93 MAX 32 MIN .48 AC-FT 3580
WTR YR 1977 TOTAL 636.96 MEAN 1.75 MAX 7.7 MIN .13 AC-FT 1260

NOTE.--No gage-height record Feb. 21 to Apr. 13.

RIO GRANDE BASIN

08275300 RIO PUEBLO DE TAOS NEAR RANCHITO, NM.

LOCATION.--Lat 36°23'38", long 105°37'23", Taos County, Hydrologic Unit 13020101, in Gijosa Grant, on left bank 1,100 ft (340 m) downstream from Rio Fernando de Taos, 1.6 mi (2.6 km) southwest of Ranchito, and at mile 7.9 (12.7 km).

DRAINAGE AREA.--199 mi² (515 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 6,747 ft (2,056 m), from topographic map.

REMARKS.--Records fair. Diversions for irrigation of about 9,000 acres (36 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 26.1 ft³/s (0.739 m³/s), 18,910 acre-ft/yr (23.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 702 ft³/s (19.9 m³/s) May 21, 1973, gage height, 4.24 ft (1.292 m); maximum gage height, 4.45 ft (1.356 m) Jan. 22, 1975 (backwater from ice); minimum discharge, 0.21 ft³/s (0.006 m³/s) Aug. 24, 1972, result of regulation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 99 ft³/s (2.80 m³/s) Sept. 2, gage height, 2.68 ft (0.817 m), no peak above base of 100 ft³/s (2.8 m³/s); maximum gage height, 4.11 ft (1.253 m) Jan. 15 (backwater from ice); minimum discharge, 1.4 ft³/s (0.040 m³/s) June 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	18	15	14	14	18	15	20	3.3	2.3	2.2	3.8
2	6.2	18	16	14	14	17	15	20	3.0	2.3	2.1	7.8
3	6.0	18	16	13	14	16	16	18	3.0	2.1	1.9	18
4	6.0	19	15	12	15	17	18	17	3.2	2.1	2.0	7.2
5	6.7	19	15	11	15	18	18	16	2.8	3.0	2.0	8.9
6	6.2	18	15	10	15	19	16	13	2.0	2.5	1.8	6.7
7	6.2	18	14	9.0	15	19	15	10	2.2	1.9	1.7	5.9
8	6.2	18	13	8.0	16	20	15	9.8	2.4	2.0	1.8	5.3
9	6.2	18	14	7.0	17	21	14	8.9	2.3	2.4	1.9	3.9
10	6.2	17	14	7.0	17	19	16	4.9	2.7	2.3	1.8	3.9
11	6.1	17	13	8.0	17	18	18	4.0	2.5	2.4	1.8	4.4
12	6.3	14	13	9.0	17	18	15	4.3	2.4	2.6	3.2	5.4
13	6.5	15	14	10	17	19	15	7.9	2.3	2.3	2.6	6.9
14	6.4	15	13	10	18	18	16	7.8	1.9	2.2	3.3	5.3
15	6.2	14	12	10	18	16	16	9.3	1.8	2.9	3.4	4.9
16	6.1	14	12	10	19	16	15	8.9	1.8	2.8	3.6	4.8
17	6.4	14	11	10	21	15	14	7.9	1.8	2.8	4.3	5.4
18	6.2	14	11	11	24	14	16	6.3	1.9	2.9	6.1	5.5
19	6.8	14	11	11	25	14	27	5.5	1.9	2.6	7.6	5.2
20	7.0	13	11	11	26	14	33	6.2	2.0	2.6	8.2	4.8
21	6.9	13	10	12	26	13	33	6.2	2.0	2.7	6.9	4.6
22	7.3	13	10	13	25	13	26	5.1	2.2	2.7	5.8	4.6
23	8.7	12	10	14	22	13	22	4.7	3.2	2.7	5.2	9.2
24	9.5	12	10	13	20	13	18	2.9	4.2	3.1	5.3	5.8
25	10	12	11	12	18	13	18	2.8	4.0	5.1	5.1	5.3
26	13	10	12	13	18	13	19	4.4	3.3	4.3	4.8	5.0
27	13	8.0	14	14	18	12	23	3.7	3.0	5.9	4.7	5.6
28	13	6.0	13	15	18	11	21	3.3	2.7	4.0	4.4	5.8
29	15	9.0	12	15	---	10	23	3.0	2.4	3.4	4.1	5.5
30	14	15	12	13	---	13	21	2.8	2.4	3.1	4.2	4.9
31	16	---	13	14	---	14	---	3.3	---	2.5	4.1	---
TOTAL	253.1	435.0	395	353.0	519	484	567	247.9	76.6	88.5	117.9	180.3
MEAN	8.16	14.5	12.7	11.4	18.5	15.6	18.9	8.00	2.55	2.85	3.80	6.01
MAX	16	19	16	15	26	21	33	20	4.2	5.9	8.2	18
MIN	6.0	6.0	10	7.0	14	10	14	2.8	1.8	1.9	1.7	3.8
AC-FT	502	863	783	700	1030	960	1120	492	152	176	234	358

CAL YR 1976 TOTAL 6887.0 MEAN 18.8 MAX 78 MIN 2.9 AC-FT 13660
WTR YR 1977 TOTAL 3717.3 MEAN 10.2 MAX 33 MIN 1.7 AC-FT 7370

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

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1955, published as Rio Grande del Rancho near Ranchos de Taos, and October 1955 to September 1960 as Rio Grande de Ranchos near Taipa.

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

AVERAGE DISCHARGE.--25 years, 18.9 ft³/s (0.535 m³/s), 13,690 acre-ft/yr (16.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 497 ft³/s (14.1 m³/s) May 21, 1973, gage height, 3.87 ft (1.180 m); maximum gage height, 4.01 ft (1.222 m) Sept. 10, 1964, site and datum then in use; minimum discharge, 0.2 ft³/s (0.01 m³/s) Jan. 5, 1955, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28 ft³/s (0.79 m³/s) May 14, 15, gage height, 1.32 ft (0.402 m), no peak above base of 60 ft³/s (1.7 m³/s); maximum gage height, 1.77 ft (0.539 m) Jan. 9 (backwater from ice); minimum discharge, 1.6 ft³/s (0.045 m³/s) Mar. 30, result of freezeup.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	5.1	3.5	3.6	4.0	4.5	5.8	18	13	4.7	5.3	4.7
2	6.0	5.0	4.0	2.5	4.3	5.5	5.5	19	12	4.3	5.1	6.8
3	5.9	5.0	4.4	2.2	4.5	5.0	5.0	20	12	4.9	4.7	9.7
4	6.1	5.0	4.3	2.6	4.5	5.5	4.2	19	12	9.2	4.3	7.3
5	7.3	4.9	3.9	3.1	4.7	5.5	5.6	19	11	11	4.3	6.2
6	6.6	4.7	3.9	3.1	4.8	5.3	5.6	20	10	9.6	3.9	5.6
7	6.7	4.8	3.9	2.5	4.8	5.7	5.8	20	10	8.7	3.7	5.1
8	6.5	4.7	4.1	2.8	4.4	5.7	6.3	21	9.5	9.2	3.7	4.6
9	6.5	4.7	4.0	2.5	4.4	5.9	7.9	21	9.6	10	3.7	4.3
10	6.3	4.4	4.0	2.8	4.4	5.6	10	21	9.2	8.9	4.2	4.1
11	5.6	4.5	4.0	3.0	4.4	5.2	11	22	8.5	8.1	5.4	4.1
12	5.4	4.4	4.0	3.0	4.6	5.1	11	22	8.2	7.8	9.0	4.8
13	5.4	4.2	4.5	3.0	4.7	5.9	11	25	7.6	7.7	7.8	6.3
14	5.4	4.3	4.5	3.3	4.6	6.0	10	27	6.9	7.6	5.8	5.3
15	5.3	4.0	4.5	3.6	4.5	5.5	9.8	26	6.2	8.5	6.0	4.3
16	5.3	3.5	4.3	3.6	4.3	5.8	9.5	25	5.8	9.6	5.7	3.9
17	4.9	3.7	4.3	3.7	4.3	5.8	9.1	23	5.4	8.9	6.9	4.0
18	4.8	4.0	4.3	4.0	4.3	4.6	9.2	22	5.0	9.9	9.8	3.8
19	4.7	4.2	4.3	4.0	4.4	4.8	11	22	4.7	7.6	10	3.6
20	4.3	4.0	4.3	4.2	4.4	5.5	12	22	4.5	8.9	9.2	3.4
21	4.3	4.2	4.0	4.1	4.4	5.6	11	21	4.6	12	7.8	3.2
22	4.6	4.0	4.3	4.1	4.9	5.4	10	19	4.7	9.3	6.8	3.3
23	4.8	4.0	4.3	4.2	4.0	5.8	11	18	6.8	8.8	6.4	4.2
24	5.0	3.4	4.5	4.3	4.9	6.2	12	17	8.5	8.8	6.2	3.8
25	5.1	3.3	5.0	3.9	4.6	6.3	13	17	8.6	9.5	5.9	3.4
26	5.0	3.9	3.5	3.5	4.0	5.8	14	17	6.3	9.7	5.6	3.3
27	4.9	2.7	4.0	3.9	4.5	6.1	15	16	5.7	8.9	5.2	3.3
28	5.3	2.4	4.0	3.9	3.9	6.0	18	15	6.2	8.6	5.1	3.4
29	5.5	3.0	2.5	3.9	---	4.7	17	14	5.8	7.2	4.9	3.4
30	5.1	3.0	3.5	3.9	---	3.8	17	13	4.8	6.6	5.5	3.4
31	5.2	---	4.1	4.0	---	5.8	---	13	---	5.8	5.4	---
TOTAL	170.2	123.0	126.7	106.8	124.5	169.9	303.3	614	233.1	260.3	183.3	136.6
MEAN	5.49	4.10	4.09	3.45	4.45	5.48	10.1	19.8	7.77	8.40	5.91	4.55
MAX	7.3	5.1	5.0	4.3	4.9	6.3	18	27	13	12	10	9.7
MIN	4.3	2.4	2.5	2.2	3.9	3.8	4.2	13	4.5	4.3	3.7	3.2
AC-FT	338	244	251	212	247	337	602	1220	462	516	364	271
CAL YR 1976	TOTAL	6664.6	MEAN	18.2	MAX	148	MIN	2.4	AC-FT	13220		
WTR YR 1977	TOTAL	2551.7	MEAN	6.99	MAX	27						

RIO GRANDE BASIN

08275600 RIO CHIQUITO NEAR TALPA, NM

LOCATION.--Lat 36°19'55", long 105°34'42", Taos County, Hydrologic Unit 13020101, in Carson National Forest, Rancho del Rio Grande Grant, on right bank 1 mi (2 km) southeast of Talpa, and at mile 2.1 (3.4 km).

DRAINAGE AREA.--37.0 mi² (95.8 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 7,223 ft (2,202 m), from topographic map.

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

AVERAGE DISCHARGE.--20 years, 7.66 ft³/s (0.217 m³/s), 5,550 acre-ft/yr (6.84 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 303 ft³/s (8.58 m³/s) July 22, 1976, gage height, 2.75 ft (0.838 m); maximum gage height, 3.50 ft (1.067 m) May 20, 1973 (backwater from debris); minimum discharge, 0.16 ft³/s (0.005 m³/s) Jan. 31, 1972, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9.0 ft³/s (0.25 m³/s) Aug. 18, gage height, 1.52 ft (0.463 m), no peak above base of 25 ft³/s (0.7 m³/s); minimum, 0.51 ft³/s (0.014 m³/s) Nov. 27, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	2.5	1.0	1.6	2.4	2.9	3.0	7.1	3.3	1.8	1.5	1.4
2	2.7	2.5	1.5	.89	2.4	2.9	2.8	7.1	3.2	1.7	1.5	2.2
3	2.6	2.6	2.0	.91	2.4	2.4	2.5	7.1	3.2	1.6	1.4	2.7
4	2.7	2.6	2.0	1.1	2.4	2.8	2.5	6.7	3.2	2.4	1.3	2.0
5	3.1	2.4	2.0	1.3	2.5	2.7	2.8	6.3	3.0	3.7	1.3	1.9
6	3.0	2.6	2.2	1.3	2.6	2.8	3.1	6.3	2.8	3.0	1.2	1.8
7	3.1	2.6	2.2	.85	2.6	2.7	3.3	6.5	2.9	2.5	1.1	1.6
8	2.9	2.5	2.3	.95	2.5	2.6	3.7	6.4	2.7	2.5	1.0	1.5
9	3.0	2.5	2.3	.80	2.6	2.6	4.2	6.4	2.7	3.1	1.0	1.3
10	2.8	2.4	2.3	.90	2.6	2.6	5.1	6.3	2.7	2.3	1.1	1.3
11	2.7	2.6	2.3	1.2	2.6	2.4	5.3	6.1	2.5	2.0	1.6	1.3
12	2.7	2.4	2.3	1.2	2.8	2.3	5.2	6.0	2.5	1.9	2.3	1.5
13	2.6	2.4	2.4	1.2	2.8	2.6	5.2	6.9	2.3	1.8	2.2	1.9
14	2.6	2.4	2.4	1.3	2.8	2.7	4.9	8.0	2.1	1.8	1.8	1.7
15	2.6	2.2	2.4	1.5	2.8	2.5	4.6	8.1	1.9	2.1	2.0	1.5
16	2.6	1.8	2.3	1.5	2.8	2.7	4.2	7.6	1.8	2.5	2.0	1.5
17	2.6	1.9	2.3	1.6	2.8	2.6	4.1	7.0	1.7	2.3	2.1	1.4
18	2.6	2.1	2.3	1.8	2.8	2.3	4.1	6.5	1.6	2.2	6.0	1.4
19	2.4	2.2	2.3	1.8	2.8	2.3	4.8	6.2	1.6	1.9	5.4	1.3
20	2.3	2.1	2.3	1.9	2.8	2.7	5.6	6.1	1.6	2.3	3.6	1.2
21	2.3	2.2	2.0	2.0	2.8	2.6	5.1	5.9	1.6	4.1	2.9	1.1
22	2.6	2.1	2.3	2.0	2.8	2.6	4.8	5.4	1.6	3.0	2.5	1.1
23	2.6	2.1	2.3	2.0	2.5	2.8	5.4	5.0	2.0	2.6	2.2	1.8
24	2.6	1.9	2.3	2.1	2.7	2.9	5.7	4.7	2.5	2.5	2.0	1.5
25	2.5	1.7	2.5	2.2	2.7	3.1	6.2	4.8	2.9	3.0	1.8	1.3
26	2.7	2.1	1.7	2.1	2.1	3.2	6.5	4.7	2.3	3.0	1.7	1.3
27	2.6	.80	2.1	2.3	2.5	3.3	6.8	4.4	2.7	2.8	1.5	1.3
28	2.5	.75	2.1	2.4	2.0	3.2	7.0	4.1	2.5	2.5	1.5	1.3
29	2.8	.85	1.3	2.4	---	2.6	7.1	3.8	2.4	2.1	1.4	1.3
30	2.4	.85	1.6	2.4	---	2.0	7.0	3.6	2.0	1.9	1.5	1.3
31	2.7	---	1.6	2.5	---	3.1	---	3.4	---	1.6	1.6	---
TOTAL	82.8	62.65	64.9	50.00	72.9	83.5	142.6	184.5	71.8	74.5	62.0	45.7
MEAN	2.67	2.09	2.09	1.61	2.60	2.69	4.75	5.95	2.39	2.40	2.00	1.52
MAX	3.1	2.6	2.5	2.5	2.8	3.3	7.1	8.1	3.3	4.1	6.0	2.7
MIN	2.3	.75	1.0	.80	2.0	2.0	2.5	3.4	1.6	1.6	1.0	1.1
AC-FT	164	124	129	99	145	166	283	366	142	148	123	91
CAL YR 1976 TOTAL	2612.15			MEAN 7.14	MAX 45	MIN .75	AC-FT 5180					
WTR YR 1977 TOTAL	997.85			MEAN 2.73	MAX 8.1	MIN .75	AC-FT 1980					

LOCATION.--Lat 36°22'39", long 105°40'05", Taos County, Hydrologic Unit 13020101, in Gijosa Grant, on left bank 1.9 mi (3.1 km) southwest of Los Cordovas, 2.5 mi (4.0 km) downstream from Rio Grande del Rancho, and at mile 5.1 (8.2 km).

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

REVISED RECORDS.--WSP 1732: 1957(M). WSP 1923: 1957(P), 1958.

GAGE.--Water-stage recorder. Concrete control since July 16, 1963. Datum of gage is 6,652 ft (2,028 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation of about 12,000 acres (49 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 45.5 ft³/s (1.289 m³/s), 32,960 acre-ft/yr (40.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,380 ft³/s (67.4 m³/s) Aug. 24, 1957, gage height, 5.80 ft (1.768 m), from rating curve extended above 900 ft³/s (25 m³/s); minimum, 1.9 ft³/s (0.054 m³/s) July 31, Aug. 1, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 554 ft³/s (15.7 m³/s) at 0130 hours Sept. 23, gage height, 3.61 ft (1.100 m), no other peak above base of 230 ft³/s (6.5 m³/s); minimum, 3.1 ft³/s (0.088 m³/s) July 10.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	26	30	23	30	31	31	24	7.5	4.5	5.2	8.1
2	17	26	31	22	29	32	30	24	6.7	4.2	5.2	27
3	17	25	29	20	28	30	30	22	7.0	4.5	5.2	20
4	18	24	26	19	27	31	33	22	7.5	4.8	5.2	12
5	20	24	26	18	27	32	33	21	7.0	5.5	5.2	13
6	18	24	26	17	27	33	30	19	6.0	5.2	5.2	11
7	18	25	25	16	27	33	28	16	6.3	4.0	5.2	11
8	18	24	24	16	26	35	27	15	5.6	3.8	5.5	11
9	18	24	23	15	27	40	25	14	5.5	4.0	5.9	9.4
10	18	24	25	15	28	38	27	11	5.8	3.5	6.9	9.3
11	18	24	24	16	29	35	30	9.5	6.2	3.5	6.2	9.8
12	18	22	24	17	30	36	29	9.5	5.5	3.8	11	11
13	18	23	26	17	31	38	32	14	5.2	3.8	7.9	13
14	18	23	24	18	32	40	32	14	4.5	3.8	7.7	12
15	18	22	23	20	33	37	31	17	4.0	6.6	7.5	11
16	18	22	23	21	33	38	31	16	4.0	4.8	7.6	11
17	18	22	22	23	35	37	28	15	4.2	4.5	9.2	11
18	18	22	22	25	38	36	26	13	4.5	4.8	15	11
19	18	22	22	26	41	35	36	12	4.0	4.0	15	10
20	18	22	22	28	44	35	45	12	3.8	3.8	15	10
21	18	22	21	30	45	35	47	13	4.0	4.2	12	10
22	18	22	20	32	45	35	39	11	4.2	4.8	10	10
23	19	22	20	35	39	34	34	11	4.8	4.5	9.4	34
24	19	21	20	33	41	33	26	8.7	6.5	4.5	9.3	11
25	18	21	21	30	40	33	25	8.5	6.8	6.8	8.8	1
26	20	22	22	28	32	32	24	9.9	5.8	18	8.5	0
27	20	14	25	30	30	32	28	9.2	4.5	7.8	8.1	1
28	21	12	24	31	30	31	26	8.5	4.8	6.2	7.8	11
29	22	20	22	32	---	31	27	8.3	4.8	5.8	7.7	11
30	22	30	22	28	---	32	26	8.3	4.5	5.5	8.5	10
31	24	---	23	30	---	31	---	7.6	---	5.5	8.6	---
TOTAL	580	676	737	731	924	1061	916	424.0	161.5	161.0	255.5	370.6
MEAN	18.7	22.5	23.8	23.6	33.0	34.2	30.5	13.7	5.38	5.19	8.24	12.4
MAX	24	30	31	35	45	40	47	24	7.5	18	15	34
MIN	17	12	20	15	26	30	24	7.6	3.8	3.5	5.2	8.1
AC-FT	1150	1340	1460	1450	1830	2100	1820	841	320	319	507	735
CAL YR 1976	TOTAL	13929.5	MEAN 38.1	MAX 192	MIN 9.3	AC-FT 27630						
WTR YR 1977	TOTAL	6997.6	MEAN 19.2	MAX 47	MIN 3.5	AC-FT 13880						

RIO GRANDE BASIN

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

LOCATION.--Lat 36°19'12", long 105°45'14", in NW¼NE¼ sec. 15, T.24 N., R.11 E., Taos County, Hydrologic Unit 13020101, on left bank 1.7 mi (2.7 km) downstream from bridge on State Highway 96, 2.0 mi (3.2 km) downstream from Rio Pueblo de Taos, 11.8 mi (19.0 km) southwest of Taos, and at mile 1,657.7 (2,667.2 km).

DRAINAGE AREA.--9,730 mi² (25,200 km²), approximately, including 2,940 mi² (7,610 km²) 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: 1931-32, 1935, 1937, 1945, 1950.

GAGE.--Water-stage recorder. Datum of gage is 6,050.3 ft (1,844.1 m) above mean sea level. Prior to Apr. 14, 1934, at bridge 1.7 mi (2.7 km) upstream at different datum.

REMARKS.--Water-discharge records excellent. Diversions above station for irrigation of about 620,000 acres (2,500 km²) in Colorado and 30,000 acres (120 km²) in New Mexico.

AVERAGE DISCHARGE.--52 years, 714 ft³/s (20.22 m³/s), 517,300 acre-ft/yr (638 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,730 ft³/s (276 m³/s) June 7, 1948, gage height, 9.18 ft (2.798 m), and June 22, 1949, gage height, 9.23 ft (2.813 m); minimum, 155 ft³/s (4.39 m³/s) Sept. 21, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1888, about 14,000 ft³/s (400 m³/s) June 19, 1903, from records for Rio Grande at Embudo and estimated inflow. Other floods exceeding 10,000 ft³/s (280 m³/s) occurred June 9, 1905, May 28, 1920, and June 16, 1921, from comparison of records for stations near Labatos and at Embudo.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,110 ft³/s (31.4 m³/s) July 26, gage height, 4.76 ft (1.451 m), no peak above base of 1,600 ft³/s (45 m³/s); minimum, 167 ft³/s (4.73 m³/s) Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	293	353	260	301	331	451	437	278	190	197	214	172
2	287	353	265	300	339	439	447	276	189	203	207	208
3	267	358	275	301	336	418	438	265	193	202	195	217
4	251	353	285	304	335	416	427	258	193	206	189	244
5	247	342	295	310	342	421	389	255	191	238	195	195
6	241	331	310	314	343	424	362	267	192	212	190	186
7	246	326	310	299	348	429	340	260	197	210	185	193
8	252	315	331	311	343	432	329	254	198	236	181	183
9	254	315	342	314	352	448	307	250	202	220	183	175
10	266	310	348	299	352	451	298	243	197	204	176	171
11	276	305	348	300	353	450	295	234	196	198	178	176
12	273	295	348	300	359	430	287	230	196	189	189	182
13	275	295	353	300	360	454	291	243	189	186	183	207
14	279	295	348	300	364	487	299	253	185	185	186	190
15	268	290	342	295	367	482	300	256	180	191	181	185
16	275	305	336	294	368	491	295	245	179	194	181	186
17	276	305	336	294	374	511	281	240	176	194	197	188
18	281	305	331	297	385	516	267	232	174	199	230	192
19	275	331	326	297	396	524	278	220	172	195	231	187
20	265	336	320	299	404	536	298	220	171	188	254	185
21	252	336	310	303	412	529	306	223	174	201	221	183
22	259	331	310	306	434	539	305	216	172	197	225	180
23	280	326	300	307	426	588	315	213	174	201	222	249
24	280	310	296	299	429	617	290	205	186	196	209	199
25	275	290	296	300	428	552	276	198	191	216	195	199
26	275	275	287	300	419	543	266	199	183	371	185	198
27	275	250	289	303	367	526	276	200	186	335	181	192
28	280	220	286	311	395	517	284	200	186	286	180	193
29	283	195	277	317	---	490	285	198	206	234	175	193
30	290	220	283	325	---	481	288	197	211	228	175	194
31	342	---	294	326	---	472	---	193	---	221	176	---
TOTAL	8438	9171	9637	9426	10461	15064	9556	7221	5629	6733	6069	5802
MEAN	272	306	311	304	374	486	319	233	188	217	196	193
MAX	342	358	353	326	434	617	447	278	211	371	254	249
MIN	241	195	260	294	331	416	266	193	171	185	175	171
AC-FT	16740	18190	19110	18700	20750	29880	18950	14320	11170	13350	12040	11510
CAL YR 1976	TOTAL	202682	MEAN 554	MAX 1700	MIN 195	AC-FT 402000						
WTR YR 1977	TOTAL	103207	MEAN 283	MAX 617	MIN 171	AC-FT 204700						

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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)
OCT								
13...	1150	280	390	8.3	14.0	5	120	13
22...	1005	262	350	8.0	9.0	--	--	--
NOV								
19...	1435	356	362	8.4	6.5	7	130	10
DEC								
22...	1100	310	184	8.5	--	8	54	8
FEB								
22...	1035	438	322	7.8	6.0	10	110	13
MAR								
24...	1230	595	274	8.1	8.0	10	93	13
MAY								
24...	1625	205	307	8.9	16.0	3	79	0
JUN								
27...	1220	194	331	7.9	20.5	1	110	8
JUL								
08...	1245	196	292	7.1	25.0	35	99	0
AUG								
25...	1430	198	292	8.3	24.0	10	95	0

DATE	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
OCT									
13...	36	7.9	27	1.1	3.8	133	0	59	7.5
22...	--	--	--	--	--	--	--	--	--
NOV									
19...	38	8.8	28	1.1	3.9	142	3	52	7.7
DEC									
22...	15	4.1	13	.8	1.9	30	13	26	3.9
FEB									
22...	32	7.2	20	.8	3.5	118	0	47	6.3
MAR									
24...	28	5.5	17	.8	3.1	97	0	44	7.4
MAY									
24...	18	8.3	34	1.7	3.9	82	7	68	12
JUN									
27...	30	7.6	25	1.1	3.1	120	0	44	7.8
JUL									
08...	29	6.4	24	1.1	3.9	120	0	44	7.6
AUG									
25...	28	6.0	21	.9	3.4	120	0	32	6.5

RIO GRANDE BASIN

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTH0. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT 13...	.7	23	241	231	.07	.00	60	0
22...	--	--	--	--	--	--	--	--
NOV 19...	.6	26	250	239	.23	.01	60	10
DEC 22...	.6	23	127	116	.08	.03	--	--
FEB 22...	.5	27	212	204	.43	.08	--	--
MAR 24...	.5	26	185	181	.32	.06	--	--
MAY 24...	.8	17	197	210	.02	.02	--	--
JUN 27...	.9	28	202	207	.28	.03	--	--
JUL 08...	.8	27	197	204	.48	.02	--	--
AUG 25...	.8	28	182	186	.16	.06	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL MOLYB- DENUM (MO) (UG/L) (01062)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)
OCT 13...	1150	60	0	31	--
NOV 19...	1435	60	10	16	15
DEC 22...	1100	--	--	9	--
FEB 22...	1035	--	--	25	--
MAR 24...	1230	--	--	15	--
MAY 24...	1625	--	--	26	--
JUN 27...	1220	--	--	22	--
JUL 08...	1245	--	--	26	--
AUG 25...	1430	--	--	18	--

08279000 EMBUDO CREEK AT DIXON, NM

LOCATION.--Lat 36°12'39", long 105°54'47", in NE¼SE¼ sec.19, T.23 N., R.10 E., Rio Arriba County, Hydrologic Unit 13020101, on right bank 750 ft (230 m) upstream from U.S. Highway 64, 0.5 mi (0.8 km) upstream from mouth, 0.5 mi (0.8 km) east of Embudo Post Office, and 1.7 mi (2.7 km) northwest of Dixon.

DRAINAGE AREA.--305 mi² (790 km²).

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 5,858.60 ft (1,785.701 m) above mean sea level. Prior to Nov. 30, 1938, at site about 1 mi (2 km) upstream at different datums. Nov. 30, 1938 to Aug. 1, 1941, at site about 0.9 mi (1.4 km) upstream at datum about 59.9 ft (18.26 m) higher. Aug. 2, 1941 to Sept. 1, 1971, at site 750 ft (230 m) downstream at datum 9.10 ft (2.774 m) lower. April 1956 to Sept. 21, 1962, crest-stage gage.

REMARKS.--Water-discharge records good except those for July and August, which are fair. Diversions above station for irrigation of about 6,500 acres (26 km²), a small part of which is below gage.

AVERAGE DISCHARGE.--46 years (water years 1924-25, 1927-55, 1963-77), 75.6 ft³/s (2.141 m³/s), 54,770 acre-ft/yr (67.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1941).--Maximum discharge, 4,200 ft³/s (119 m³/s) Aug. 23, 1977, gage height, 7.10 ft (2.164 m), from rating curve extended above 1,600 ft³/s (45 m³/s); maximum gage height, 7.6 ft (2.32 m) Aug. 4, 1967; minimum discharge, 0.06 ft³/s (0.002 m³/s) June 26, 27, 1950.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 25	2000	818 23.2	4.22 1.286	Aug. 29	1700	*4,200 119	7.10 2.164
Aug. 13	1945	2,270 64.3	5.72 1.743	Aug. 30	1745	1,220 34.6	4.75 1.448

Minimum discharge, 6.5 ft³/s (0.18 m³/s) July 24, result of regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	30	31	25	25	24	22	57	13	12	10	51
2	34	29	30	25	26	22	19	58	14	12	10	77
3	33	30	31	23	26	20	21	54	16	11	10	85
4	32	30	31	24	23	23	18	45	14	11	10	81
5	32	28	30	24	24	22	24	42	13	11	9.0	57
6	32	27	30	25	25	22	26	37	13	10	9.0	40
7	31	28	26	20	22	23	24	35	26	9.4	9.0	38
8	31	29	28	23	21	25	26	35	31	9.2	9.0	35
9	31	29	29	26	22	27	28	33	25	9.0	9.0	35
10	30	29	29	20	22	28	29	38	23	8.7	10	34
11	29	29	27	22	24	22	33	35	18	9.4	25	33
12	28	29	25	21	24	23	31	35	16	10	45	43
13	26	27	27	22	24	25	32	63	13	9.9	130	62
14	26	27	25	20	26	27	31	73	12	8.6	40	58
15	25	26	26	21	27	24	32	77	11	9.4	30	41
16	24	24	25	22	24	25	30	68	10	9.0	30	33
17	24	22	25	22	27	24	26	58	9.9	8.9	35	30
18	25	25	23	23	28	21	26	50	9.2	8.9	45	29
19	25	30	24	23	28	22	28	45	8.8	8.6	40	26
20	25	29	23	24	29	25	36	43	8.7	8.5	35	25
21	21	29	20	24	28	23	37	41	8.6	9.3	35	23
22	22	26	20	24	28	22	34	33	8.6	9.1	30	23
23	24	26	19	26	21	23	35	28	9.0	9.3	30	24
24	23	24	20	25	24	24	34	26	9.4	9.8	30	22
25	24	23	22	22	24	23	35	26	12	70	30	18
26	26	25	19	20	17	24	38	26	11	15	27	18
27	26	21	21	24	23	24	45	24	9.7	13	23	17
28	25	15	21	24	18	21	52	22	9.3	12	22	15
29	29	22	19	22	---	17	61	17	9.7	11	230	15
30	28	22	21	24	---	14	60	15	11	11	130	15
31	29	---	23	23	---	21	---	14	---	10	45	---
TOTAL	855	790	770	713	680	710	973	1253	402.9	374.0	1182.0	1103
MEAN	27.6	26.3	24.8	23.0	24.3	22.9	32.4	40.4	13.4	12.1	38.1	36.8
MAX	35	30	31	26	29	28	61	77	31	70	230	85
MIN	21	15	19	20	17	14	18	14	8.6	8.5	9.0	15
AC-FT	1700	1570	1530	1410	1350	1410	1930	2490	799	742	2340	2190
CAL YR 1976	TOTAL	18844.9	MEAN	51.5	MAX	230	MIN	9.9	AC-FT	37380		
WTR YR 1977	TOTAL	9805.9	MEAN	26.9	MAX	230	MIN	8.5	AC-FT	19450		

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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPECIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA, MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
OCT 18...	1430	26	406	7.8	14.0	190	3	62	7.7	10	.3	1.6
DEC 22...	1315	21	284	7.7	4.5	130	7	38	7.6	9.3	.4	1.2
JAN 24...	1200	26	373	7.8	5.0	180	12	62	7.1	8.8	.3	1.2
FEB 22...	1215	27	344	7.6	--	160	11	51	7.4	8.4	.3	1.4
MAR 24...	1050	26	370	8.3	9.0	180	21	62	7.2	8.7	.3	1.3
MAY 24...	1325	29	366	7.8	16.5	160	5	53	7.0	9.5	.3	1.4
JUN 27...	1040	9.6	428	7.4	18.0	200	16	67	9.0	14	.4	1.6
JUL 25...	1330	11	410	7.2	24.0	190	26	64	7.4	14	.4	1.8
AUG 25...	1230	30	415	7.6	23.5	180	0	60	7.7	8.9	.3	2.2
SEP 31...	1247	44	436	8.0	21.5	--	--	--	--	--	--	--
SEP 26...	1300	39	409	8.0	15.0	200	24	65	8.3	12	.4	1.7

DATE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED NITRIIE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT 18...	224	0	21	5.1	.4	14	235	233	.19	.01	30	10
DEC 22...	145	0	26	5.6	.2	16	--	177	.33	--	--	--
JAN 24...	210	0	26	6.8	.3	14	--	231	.26	--	--	--
FEB 22...	179	0	22	5.2	.2	13	--	198	.17	--	--	--
MAR 24...	199	0	25	5.7	.4	11	--	220	.11	--	--	--
MAY 24...	190	0	24	6.1	.3	12	--	207	.03	--	--	--
JUN 27...	230	0	25	7.8	.5	16	--	255	.26	--	--	--
JUL 25...	200	0	25	11	.5	17	--	240	.17	--	--	--
AUG 25...	230	0	18	5.5	.4	18	--	235	.10	--	--	--
SEP 31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 26...	210	0	33	7.7	.4	17	250	249	.17	.00	30	20

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 (0.3 km) downstream from bridge at Embudo, 2.8 mi (4.5 km) downstream from Embudo Creek, and at mile 1,643.1 (2,643.7 km).

DRAINAGE AREA.--10,400 mi² (26,940 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

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

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

GAGE.--Water-stage recorder. Datum of gage is 5,789.14 ft (1,764.530 m) above mean sea level. Jan. 1 to Feb. 28, 1889, nonrecording gage 1.2 mi (1.9 km) upstream at different datum. March 1889 to December 1903, nonrecording gage 1,300 ft (400 m) upstream at different datum. September 1912 to June 1914, water-stage recorder on downstream end of bridge pier at site 200 ft (60 m) upstream at present datum.

REMARKS.--Records good. Diversions above station for irrigation of about 620,000 acres (2,500 km²) in Colorado and 40,000 acres (160 km²) 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 ft³/s (35.06 m³/s), 896,900 acre-ft/yr (1.11 km³/yr); 47 years (water years 1931-77), 769 ft³/s (21.78 m³/s), 557,100 acre-ft/yr (687 hm³/yr), subsequent to upstream development.

EXTREMES FOR PERIOD OF RECORD (1889-1903 AND SINCE 1911).--Maximum discharge, 16,200 ft³/s (459 m³/s) June 19, 1903, gage height, about 15.9 ft (4.85 m); minimum daily, 130 ft³/s (3.68 m³/s) June 30, 1902.

A flood of about 14,000 ft³/s (400 m³/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.--Maximum discharge, 2,480 ft³/s (70.2 m³/s) at 1800 hours Aug. 29, gage height, 5.87 ft (1.789 m), no other peak above base of 2,000 ft³/s (57 m³/s); minimum, 168 ft³/s (4.76 m³/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	308	382	319	321	351	489	456	347	204	208	210	217
2	320	382	331	322	362	474	456	347	204	205	203	229
3	299	386	334	319	362	451	456	332	206	204	191	301
4	283	386	339	326	355	451	438	314	205	200	184	291
5	275	374	340	331	366	447	420	300	203	231	188	262
6	269	362	333	339	366	460	386	300	203	213	185	232
7	270	358	323	320	370	456	362	293	219	203	180	242
8	274	347	344	352	362	460	347	283	224	201	177	230
9	276	339	356	354	370	474	332	277	222	234	178	218
10	282	343	361	331	374	484	318	277	216	200	173	208
11	295	332	358	310	382	474	314	264	212	196	186	206
12	295	324	355	310	386	460	307	261	211	189	259	229
13	292	321	370	320	391	474	304	300	202	187	312	250
14	299	321	368	320	395	503	314	314	196	185	236	231
15	290	314	364	320	403	508	318	332	190	192	205	218
16	289	321	359	320	399	518	321	310	187	192	209	217
17	294	321	355	320	403	528	307	290	186	189	221	219
18	295	321	351	320	416	538	296	274	183	194	263	221
19	296	347	348	310	429	548	307	261	181	193	258	218
20	289	358	344	320	433	559	332	258	182	187	272	213
21	272	362	343	325	442	553	355	252	182	196	252	211
22	274	355	340	330	465	548	347	244	182	199	241	211
23	293	361	335	333	456	596	355	232	182	209	240	271
24	293	351	333	324	460	646	347	226	194	197	224	237
25	293	339	335	318	456	585	336	223	201	282	213	222
26	293	330	307	321	456	559	324	222	194	323	197	224
27	293	312	305	324	411	543	332	221	192	513	188	220
28	296	289	304	332	395	528	347	219	193	290	186	221
29	300	246	296	336	---	503	358	213	201	247	391	221
30	307	261	304	343	---	484	366	212	216	227	318	222
31	351	---	311	343	---	484	---	208	---	218	222	---
TOTAL	9055	10145	10465	10114	11216	15785	10558	8406	5973	6904	6962	6912
MEAN	292	338	338	326	401	509	352	271	199	223	225	230
MAX	351	386	370	354	465	646	456	347	224	513	391	301
MIN	269	246	296	310	351	447	296	208	181	185	173	206
AC=FT	17960	20120	20760	20060	22250	31310	20940	16670	11850	13690	13810	13710

CAL YR 1976 TOTAL 220619 MEAN 603 MAX 1720 MIN 215 AC=FT 437600
WTR YR 1977 TOTAL 112495 MEAN 308 MAX 646 MIN 173 AC=FT 223100

RIO GRANDE BASIN

08281100 RIO GRANDE ABOVE SAN JUAN PUEBLO, NM

LOCATION.--Lat 36°03'58", long 106°04'34", in NE¼SE¼ sec.10, T.21 N., R.8 E., Rio Arriba County, Hydrologic Unit 13020101, in San Juan Pueblo Grant, on left bank 0.8 mi (1.3 km) upstream from bridge on State Highway 74, 1.0 mi (1.6 km) northwest of San Juan Pueblo, 1.8 mi (2.9 km) upstream from Rio Chama, 5.1 mi (8.2 km) north of Espanola, and at mile 1,630.1 (2,622.8 km).

DRAINAGE AREA.--10,550 mi² (27,320 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

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

GAGE.--Water-stage recorder. Altitude of gage is 5,630 ft (1,716 m), from topographic map.

REMARKS.--Records good. Diversions above station for irrigation of about 620,000 acres (2,500 km²) in Colorado and 42,000 acres (170 km²) in New Mexico. Several observations of water temperature were made during the year. San Juan lateral and San Juan Pueblo ditch, both on left bank, and Guique ditch, 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.--14 years, 660 ft³/s (18.69 m³/s), 478,200 acre-ft/yr (590 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,310 ft³/s (179 m³/s) May 22, 1973, gage height, 5.86 ft (1.786 m); minimum, 92 ft³/s (2.61 m³/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 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Aug. 29	2015	2,860 81.0	3.74 1.140	Aug. 30	1515	*2,930 83.0	3.78 1.152

Minimum discharge, 92 ft³/s (2.61 m³/s)

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	363	305	331	350	473	478	286	170	165	168	233
2	278	361	350	325	359	465	456	272	161	161	157	229
3	270	369	340	320	358	446	472	268	142	167	148	294
4	251	368	344	326	352	453	441	246	145	160	139	273
5	242	350	348	328	363	441	422	246	137	188	129	260
6	240	345	340	340	362	462	388	263	136	192	130	230
7	245	338	340	340	366	450	356	246	152	176	127	219
8	248	318	345	345	360	460	335	233	159	166	134	219
9	251	311	345	345	367	470	325	241	156	199	114	207
10	257	313	356	325	372	482	310	237	157	181	95	201
11	264	305	345	330	373	469	300	233	162	175	101	199
12	268	296	340	328	375	464	286	229	162	159	330	206
13	270	296	345	340	377	458	286	268	152	145	265	225
14	278	296	361	341	382	490	300	315	147	149	366	223
15	273	292	356	340	392	504	300	330	141	169	236	208
16	267	298	356	342	384	506	295	305	135	187	244	203
17	270	302	356	344	392	514	282	272	121	181	249	207
18	268	306	377	345	405	523	259	263	123	176	274	208
19	269	338	365	335	418	537	277	250	142	155	284	205
20	266	347	366	335	428	542	320	241	120	148	269	196
21	265	350	363	345	435	539	330	233	107	166	260	192
22	265	349	343	344	452	532	305	225	111	191	235	195
23	275	350	339	336	448	572	295	208	114	186	235	233
24	276	341	338	331	459	633	315	200	140	178	222	216
25	275	335	341	322	445	587	291	194	149	200	204	196
26	272	323	335	323	445	555	272	189	154	311	184	200
27	279	320	325	325	419	536	277	186	153	525	160	196
28	282	286	325	330	373	522	300	187	146	282	152	192
29	292	241	325	338	---	508	315	180	133	254	384	187
30	300	247	325	345	---	484	310	176	147	215	673	189
31	333	---	319	347	---	490	---	170	---	195	304	---
TOTAL	8349	9654	10658	10391	11011	15567	9898	7392	4274	6102	6972	6441
MEAN	269	322	344	335	393	502	330	238	142	197	225	215
MAX	333	369	377	347	459	633	478	330	170	525	673	294
MIN	240	241	305	320	350	441	259	170	107	145	95	187
AC-FT	16560	19150	21140	20610	21840	30880	19630	14660	8480	12100	13830	12780
(†)	75	-	-	-	-	-	-	-	87	11	16	6
(††)	176	11	-	-	-	-	34	479	668	490	217	43
(‡)	350	7	-	-	-	-	14	201	73	201	82	332

CAL YR 1976 TOTAL 206947 MEAN 565 MAX 1630 MIN 186 AC-FT 410500
WTR YR 1977 TOTAL 106709 MEAN 292 MAX 673 MIN 95 AC-FT 211700

† Diversion, in acre-feet, by San Juan lateral; estimated subsequent to Jan. 1, 1977.

†† Diversion, in acre-feet, by San Juan Pueblo ditch.

‡ Diversion, in acre-feet, by Guique ditch.

RIO GRANDE BASIN

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08284100 RIO CHAMA NEAR LA PUENTE, NM

LOCATION.--Lat 36°39'45", long 106°37'57", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, on right bank 0.7 mi (1.1 km) downstream from Rito de Tierra Amarilla, 3.1 mi (5.0 km) southwest of La Puente, 6.7 mi (10.8 km) upstream from flow line of El Vado Reservoir, and at mile 91.4 (147.1 km).

DRAINAGE AREA.--480 mi² (1,200 km²), approximately.

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

GAGE.--Water-stage recorder. Concrete control since Nov. 9, 1965. Altitude of gage is 7,083 ft (2,159 m), from river-profile map.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 10,300 acres (42 km²) above station (1962 determination). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 296 ft³/s (8,383 m³/s), 214,500 acre-ft/yr (264 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,540 ft³/s (270 m³/s) May 19, 1973, gage height, 6.12 ft (1.865 m); minimum, 4.0 ft³/s (0.11 m³/s) Sept. 19, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of about 9,000 ft³/s (250 m³/s) occurred Apr. 16, 1937, based on flow of Rio Chama at Los Ojos (Park View) with allowance for tributary inflow. A peak on May 21 or 22, 1926, may have exceeded 10,000 ft³/s (280 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 956 ft³/s (27.1 m³/s) Apr. 19, gage height, 3.74 ft (1.140 m), no peak above base of 2,000 ft³/s (57 m³/s); minimum, 4.9 ft³/s (0.14 m³/s) Aug. 10.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	51	28	25	22	50	66	263	49	6.5	18	20
2	65	50	30	30	22	55	57	219	45	6.5	13	31
3	63	51	31	25	25	40	58	220	41	5.9	12	25
4	63	52	32	25	18	50	49	160	38	7.3	12	25
5	61	50	32	20	20	50	57	145	31	18	10	21
6	60	49	32	25	18	40	60	138	32	13	8.3	20
7	57	47	30	20	18	42	85	139	31	13	7.8	18
8	55	47	31	20	15	46	130	138	32	12	7.2	17
9	52	46	32	25	18	48	223	132	29	11	7.1	15
10	50	45	32	15	20	50	538	119	23	9.4	5.1	16
11	49	44	30	15	24	40	666	81	20	9.2	8.4	21
12	47	40	30	20	28	45	474	73	19	8.6	31	31
13	48	42	32	20	30	46	632	107	17	8.1	26	40
14	50	41	31	20	30	47	505	166	16	9.0	24	43
15	45	39	30	20	30	45	466	178	15	12	24	32
16	44	33	30	20	32	47	567	170	14	15	33	28
17	44	33	30	25	35	51	418	187	11	10	47	26
18	43	31	30	25	38	42	621	151	10	9.7	122	24
19	45	33	30	25	40	42	564	123	9.0	7.6	114	22
20	40	40	28	25	40	46	314	111	8.5	9.5	83	21
21	42	40	25	30	45	45	233	106	8.7	14	77	19
22	47	37	25	35	50	51	230	91	7.2	29	57	26
23	53	36	25	35	48	63	252	82	7.4	18	48	103
24	53	34	25	30	45	73	308	79	9.5	52	43	68
25	53	30	25	25	45	77	294	78	14	55	40	46
26	51	32	24	25	40	76	213	71	8.5	41	35	38
27	51	30	25	20	45	77	215	64	7.3	42	28	37
28	46	25	26	20	45	107	290	57	6.2	41	25	44
29	52	26	24	20	---	73	252	50	6.4	34	21	45
30	51	27	25	20	---	62	245	55	7.3	26	21	38
31	50	---	25	20	---	79	---	51	---	22	18	---
TOTAL	1600	1181	885	725	886	1705	9082	3804	573.0	575.3	1025.9	960
MEAN	51.6	39.4	28.5	23.4	31.6	55.0	303	123	19.1	18.6	33.1	32.0
MAX	70	52	32	35	50	107	666	263	49	55	122	103
MIN	40	25	24	15	15	40	49	50	6.2	5.9	5.1	15
AC-FT	3170	2340	1760	1440	1760	3380	18010	7550	1140	1140	2030	1900
CAL YR 1976	TOTAL	87554.0	MEAN	239	MAX	1980	MIN	18	AC-FT	173700		
WTR YR 1977	TOTAL	23002.2	MEAN	63.0	MAX	666	MIN	5.1	AC-FT	45620		

RIO GRANDE BASIN

08284160 AZOTEA TUNNEL AT OUTLET, NEAR CHAMA, NM

LOCATION.--Lat 36°51'12", long 106°40'18", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, on left bank at south portal, 0.2 mi (0.3 km) upstream from Azotea Creek, and 6.2 mi (10.0 km) southwest of Chama.

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

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 7,519.87 ft (2,292.056 m) above mean sea level (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.--7 years, 112 ft³/s (3.172 m³/s), 81,140 acre-ft/yr (100 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,080 ft³/s (30.6 m³/s) May 13, 1975, gage height, 7.46 ft (2.274 m); no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 780 ft³/s (22.1 m³/s) Aug. 18, gage height, 6.11 ft (1.862 m); minimum daily, 0.14 ft³/s (0.004 m³/s) July 1-4, Aug. 8-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	.99	.84	.99	1.2	.84	.84	81	189	.14	13	11
2	50	.99	.84	.99	1.2	.69	.84	65	190	.14	10	9.5
3	61	.99	.84	.99	1.2	.69	.84	129	150	.14	6.3	36
4	49	.99	.84	.99	1.2	.69	.84	64	138	.14	4.0	23
5	45	.99	.84	.99	1.2	.69	.84	77	110	2.9	2.3	20
6	34	.99	.84	.99	1.2	.84	.84	97	124	6.3	1.1	12
7	25	.99	.84	.99	1.2	.84	11	149	113	1.3	.28	17
8	22	.99	.84	.99	1.2	.84	79	195	87	.23	.14	9.0
9	21	.99	.84	.99	1.2	.84	138	230	76	.23	.14	5.5
10	19	.99	.84	.99	1.2	.99	132	214	59	.23	.14	4.2
11	15	.99	.84	.99	1.2	.99	115	84	46	.23	.14	7.8
12	13	.99	.84	.99	1.2	.99	67	73	32	.23	.14	266
13	12	.99	.84	.99	1.2	.99	84	45	19	.23	3.1	100
14	12	.99	.84	.99	1.2	.99	52	54	15	.27	8.1	57
15	7.2	.99	.84	.99	1.2	.84	60	31	10	.33	185	38
16	1.3	.84	.84	.99	1.2	.84	93	30	6.4	.33	65	28
17	1.2	.84	.84	.99	1.2	.84	106	34	2.8	.33	144	22
18	1.2	.84	.84	.99	1.2	.84	143	28	1.9	3.9	326	19
19	1.2	.84	.84	.99	1.2	.99	126	18	1.3	20	177	14
20	1.2	.84	.84	.99	1.2	.84	77	13	.44	12	181	12
21	1.2	.84	.84	.99	1.2	.84	74	7.5	.44	41	176	6.0
22	.99	.84	.84	.99	1.2	.84	87	8.4	.44	138	138	3.1
23	.99	.84	.84	.99	1.2	.99	80	15	.44	42	99	118
24	.99	.84	.84	.99	1.2	.99	89	30	.44	44	75	27
25	.99	.84	.84	.99	1.2	.99	99	31	.44	76	73	18
26	.99	.84	.84	.99	1.2	.99	88	13	.44	77	47	12
27	.99	.84	.84	.99	1.2	.99	91	5.6	.44	9.2	33	10
28	.99	.84	.84	.99	1.2	.84	125	13	.44	58	27	16
29	.99	.84	.84	.99	---	.84	123	31	.33	36	23	14
30	.99	.84	.84	.99	---	.56	144	84	.33	25	17	9.4
31	.99	---	.84	.99	---	.56	---	160	---	18	16	---
TOTAL	456.40	27.45	26.04	30.69	33.6	26.53	2288.04	2109.5	1375.02	613.80	1850.88	944.5
MEAN	14.7	.92	.84	.99	1.20	.86	76.3	68.0	45.8	19.8	59.7	31.5
MAX	61	.99	.84	.99	1.2	.99	144	230	190	138	326	266
MIN	.99	.84	.84	.99	1.2	.56	.84	5.6	.33	.14	.14	3.1
AC-FT	905	54	52	61	67	53	4540	4180	2730	1220	3670	1870
CAL YR 1976 TOTAL	42962.14			MEAN 117	MAX 880	MIN .10	AC-FT 85220					
WTR YR 1977 TOTAL	9782.45			MEAN 26.8	MAX 326	MIN .14	AC-FT 19400					

LOCATION.--Lat 36°44'33", long 106°37'34", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, on right bank 200 ft (61 m) downstream from bridge, 0.2 mi (0.3 km) downstream from Iron Spring Creek, 3.3 mi (5.3 km) west of Los Ojos, and at mile 9.7 (15.6 km).

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

REMARKS.--Records represent inflow to Heron Reservoir and since Nov. 17, 1970, include San Juan River water imported through Azotea tunnel (station 08284160).

AVERAGE DISCHARGE.--8 years (water years 1963-70), 10.5 ft³/s (0.297 m³/s), 7,610 acre-ft/yr (9.38 hm³/yr), prior to completion of Azotea tunnel; 7 years (water years 1971-77), 122 ft³/s (3.455 m³/s), 88,390 acre-ft/yr (109 hm³/yr).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 605 ft³/s (17.1 m³/s) Aug. 18, gage height, 4.00 ft (1.219 m); minimum daily, 0.03 ft³/s (0.001 m³/s) July 3.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	.42	.21	.41	1.1	1.1	.59	98	158	.05	12	13
2	57	.42	.21	.41	1.1	1.1	.52	62	176	.04	10	8.6
3	62	.42	.24	.41	1.1	1.1	.80	134	150	.03	6.0	28
4	55	.40	.19	.41	1.1	1.1	.50	77	144	32	3.9	27
5	48	.40	.15	.41	1.1	1.1	1.3	81	108	15	2.5	24
6	38	.40	.16	.41	1.1	1.1	1.2	93	116	8.2	1.2	14
7	30	.38	.12	.41	1.1	1.1	1.5	132	111	3.9	.80	16
8	21	.38	.16	.41	1.1	1.1	54	173	98	1.1	.24	10
9	21	.38	.22	.41	1.1	1.1	106	202	79	.52	.09	6.2
10	18	.36	.24	.41	1.1	1.1	134	222	70	.21	.06	4.1
11	16	.36	.59	.41	1.1	1.1	120	98	55	.12	.06	8.3
12	13	.61	.56	.41	1.1	1.1	64	81	37	.10	.26	231
13	12	.70	.34	.41	1.1	1.1	88	56	22	.09	.22	130
14	11	.59	.29	.41	1.1	1.1	51	59	16	.10	4.0	70
15	10	.59	.26	.41	1.1	4.6	57	48	10	.11	141	46
16	6.0	.49	.23	.41	1.1	2.9	86	40	7.0	.10	95	36
17	1.2	.42	.22	.41	1.1	3.2	86	39	4.5	.09	166	25
18	.96	.45	.32	.41	1.1	2.5	140	34	1.5	.08	357	22
19	1.3	.48	.15	.41	1.1	2.3	134	27	.88	10	186	16
20	1.3	.74	.36	.41	1.1	2.0	82	18	.59	12	198	13
21	.88	.88	.34	.41	1.1	2.8	91	13	.32	19	188	6.6
22	.76	.59	.34	.41	1.1	4.6	91	7.3	.19	127	169	4.3
23	1.1	.49	.34	.41	1.1	6.4	86	11	.13	46	118	101
24	1.0	.40	.34	.41	1.1	6.8	86	28	.25	51	91	37
25	.96	.36	.34	.41	1.1	5.1	103	29	.30	96	88	24
26	.88	.36	.34	.41	1.1	2.9	96	15	.11	100	62	18
27	.72	.33	.34	.41	1.1	2.5	98	7.0	.09	10	43	13
28	.56	.32	.34	.41	1.1	2.4	130	11	.08	53	34	14
29	.59	.28	.34	.41	---	1.4	130	27	.51	42	28	19
30	.63	.23	.34	.41	---	.82	152	66	.15	28	20	13
31	.52	---	.34	.41	---	.98	---	141	---	18	18	---
TOTAL	485.36	13.63	8.96	12.71	30.8	69.60	2271.41	2129.3	1366.60	673.84	2043.33	998.1
MEAN	15.7	.45	.29	.41	1.10	2.25	75.7	68.7	45.6	21.7	65.9	33.3
MAX	62	.88	.59	.41	1.1	6.8	152	222	176	127	357	231
MIN	.52	.23	.12	.41	1.1	.82	.50	7.0	.08	.03	.06	4.1
AC=FT	963	27	18	25	61	138	4510	4220	2710	1340	4050	1980

CAL YR 1976	TOTAL	44178.60	MEAN	121	MAX	861	MIN	.12	AC-FT	87630
WTR YR 1977	TOTAL	10103.64	MEAN	27.7	MAX	357	MIN	.03	AC-FT	20040

RIO GRANDE BASIN

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

LOCATION.--Lat 36°42'24", long 106°44'42", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, on right bank 3.7 mi (6.0 km) northwest of Heron Dam, 7.8 mi (12.6 km) downstream from Horse Lake, and 9.9 mi (15.9 km) west of Los Ojos.

DRAINAGE AREA.--45 mi² (120 km²), approximately.

PERIOD OF RECORD.--October and November 1962 (monthly discharge only), December 1962 to current year. No winter records subsequent to 1973. Published as "near Park View" prior to 1976.

GAGE.--Water-stage recorder. Concrete control since June 10, 1963. Datum of gage is 7,188.85 ft (2,191.161 m) above mean sea level (levels by Bureau of Reclamation). Prior to July 1, 1971, at site 1,100 ft (340 m) upstream at higher datums.

REMARKS.--Diversions 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 ft³/s (0.031 m³/s), 797 acre-ft/yr (983,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft³/s (112 m³/s) July 30, 1968, gage height, 4.9 ft (1.49 m), site and datum then in use, from rating curve extended above 37 ft³/s (1.05 m³/s) on basis of slope-area measurements at gage heights 3.20 ft (0.975 m) and 4.9 ft (1.49 m); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 m³/s) and minimum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Aug. 15	1700	186 5.27	3.07 0.936	Aug. 18	0100	*226 6.40	3.21 0.978

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
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
3	.00						.00	.00	.00	.00	.00	.00
4	.00						.00	.00	.00	.00	.00	.00
5	.00						.00	.00	.00	.00	.00	.00
6	.00						.00	.00	.00	.00	.00	.00
7	.00						.00	.00	.00	.00	.00	.00
8	.00						.00	.00	.00	.00	.00	.00
9	.00						.00	.00	.00	.00	.00	.00
10	.00						.00	.00	.00	.00	.00	.00
11	.00						.00	.00	.00	.00	.00	.01
12	.00						.00	.00	.00	.00	.00	.00
13	.00						.00	.00	.00	.00	.00	.00
14	.00						.00	.00	.00	.00	.00	.00
15	.00						.00	.00	.00	.00	11	.00
16	.00						.00	.00	.00	.00	.49	.00
17	.00						.00	.00	.00	.00	6.4	.00
18	.00						.00	.00	.00	.00	21	.00
19	.00						.00	.00	.00	.00	.08	.00
20	.00						.00	.00	.00	.00	.00	.00
21	.00						.00	.00	.00	.63	.00	.00
22	.00						.00	.00	.00	.72	.00	.18
23	.00						.00	.00	.00	.06	.00	1.2
24	.00						.00	.00	.00	.00	.00	.00
25	.00						.00	.00	.00	.00	.00	.00
26	.00						.00	.00	.00	3.0	.00	.00
27	.00						.00	.00	.00	.41	.00	.00
28	.00						.00	.00	.00	.00	.00	.00
29	.00						.00	.00	.00	.00	.00	.00
30	.00						.00	.00	.00	.00	.00	.00
31	.00						.00	.00	.00	.00	.00	.00
TOTAL	.00						.00	.00	.00	4.82	38.97	1.39
MEAN	.000						.000	.000	.000	.16	1.26	.046
MAX	.00						.00	.00	.00	3.0	21	1.2
MIN	.00						.00	.00	.00	.00	.00	.00
AC-FT	.00						.00	.00	.00	9.6	77	2.8

08284510 HERON RESERVOIR NEAR LOS OJOS, NM

LOCATION.--Lat 36°39'56", long 106°42'13", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, at Heron Dam on Willow Creek, 0.2 mi (0.3 km) upstream from Rio Chama, 5.1 mi (8.2 km) northeast of El Vado Dam, and 8.7 mi (14.0 km) southwest of Los Ojos.

DRAINAGE AREA.--193 mi² (500 km²).

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Mar. 24, 1971, nonrecording gage.

REMARKS.--Reservoir is formed by earthfill dam; storage began Oct. 21, 1970. Total capacity 401,300 acre-ft (495 hm³) at elevation 7,186.1 ft (2,190.32 m), low point on crest of uncontrolled spillway, including 1,340 acre-ft (1.65 hm³) of dead storage at elevation 7,003.0 ft (2,134.51 m), invert of gate sill of outlet tunnel. Reservoir is used for storage of transmountain water from San Juan River basin and for recreation. Figures given herein represent total storage.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 252,800 acre-ft (312 hm³) Sept. 12, 1975, elevation, 7,157.59 ft (2,181.633 m); no storage prior to Oct. 21, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 206,000 acre-ft (254 hm³) Oct. 4, elevation, 7,146.62 ft (2,178.290 m); minimum, 133,600 acre-ft (165 hm³) Sept. 28-30, elevation, 7,125.98 ft (2,171.999 m).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Bureau of Reclamation in 1971)

7,120	116,500	7,140	180,400
7,130	146,000	7,150	219,800

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205800	204600	203300	160000	160200	160300	159400	162600	164400	153600	143200	140000
2	205800	204500	203300	160000	160200	160400	159400	162800	164700	152600	143100	139300
3	205900	204400	203300	160100	160200	160300	159500	162900	165000	151600	143000	139200
4	206000	204400	203200	160100	160200	160300	159500	162800	165200	150900	142900	139300
5	205900	204400	203200	160200	160200	160300	159400	163000	165400	150000	142800	139200
6	205800	204400	203200	160200	160200	160300	159400	163100	165600	149100	142700	139200
7	205800	204400	203100	160200	160200	160300	159400	163300	165600	148100	142700	139200
8	205800	204300	203000	160200	160200	160400	159400	163600	165700	147200	142600	139000
9	205800	204200	203000	160200	160200	160400	159600	164000	165700	146300	142500	139000
10	205800	204100	202800	160200	160200	160400	159900	164300	165700	145300	141800	139000
11	205800	204100	202800	160200	160200	160400	160100	164300	165700	144400	140400	139100
12	205800	204000	202800	160200	160200	160400	160100	164500	165600	143400	139700	139500
13	205600	204000	200200	160200	160200	160400	160000	164600	165600	142800	139600	139600
14	205500	204000	196000	160200	160200	160400	160000	164700	165500	142500	139300	139600
15	205500	204000	191700	160200	160200	160400	160000	164800	165300	142400	139300	139600
16	205400	203800	187600	160200	160200	160400	160100	164800	165200	142400	139500	139600
17	205400	203800	183200	160200	160200	160100	160300	164700	165100	142400	140000	139600
18	205300	203800	179100	160200	160200	159900	160600	164700	165100	142300	140900	139600
19	205200	203800	174700	160200	160200	159900	160800	164700	165000	142300	141300	139600
20	205100	203700	170300	160200	160200	159900	160800	164600	164900	142100	141500	139500
21	205000	203700	166100	160200	160200	159900	160900	164600	164900	142400	141700	139000
22	205100	203700	161800	160200	160300	159700	161000	164600	164600	142600	142000	138300
23	205000	203600	160000	160300	160300	159600	161200	164500	164500	142600	142000	137500
24	205000	203500	160000	160300	160300	159600	161300	164400	164000	143000	142100	136600
25	205000	203500	160000	160300	160300	159600	161500	164300	162200	143100	142100	135700
26	205000	203400	160000	160300	160300	159600	161500	164200	160500	143200	142100	134700
27	204800	203500	160000	160300	160300	159600	161700	164100	159000	143200	142100	133900
28	204700	203500	159900	160300	160300	159600	161900	164100	157300	143300	142100	133600
29	204700	203500	159900	160300	---	159500	162100	164100	155600	143300	142100	133600
30	204700	203400	159900	160200	---	159500	162400	164200	154400	143200	141800	133600
31	204600	---	159900	160200	---	159400	---	164400	---	143200	140900	---
MAX	206000	204600	203300	160300	160300	160400	162400	164800	165700	153600	143200	140000
MIN	204600	203400	159900	160000	160200	159400	159400	162600	154400	142100	139300	133600
(†)	7146.29	7145.97	7134.23	7134.32	7134.34	7134.08	7134.94	7135.52	7132.57	7129.13	7128.39	7125.98
(‡)	-1200	-1200	-43500	+300	+100	-900	+3000	+2000	-10000	-11200	-2300	-7300
CAL YR 1976	MAX	207100	MIN	140100	‡	-20500						
WTR YR 1977	MAX	206000	MIN	133600	‡	-72200						

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

RIO GRANDE BASIN

08284520 WILLOW CREEK BELOW HERON DAM, NM

LOCATION.--Lat 36°39'56", long 106°42'13", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, in outlet conduits of Heron Dam, 0.2 mi (0.3 km) upstream from Rio Chama, 5.1 mi (8.2 km) northeast of El Vado Dam, and 8.7 mi (14.0 km) southwest of Los Ojos.

DRAINAGE AREA.--193 mi² (500 km²).

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

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

REMARKS.--Flow regulated by Heron Reservoir (station 08284510) since Oct. 21, 1970. Outlet conduits are 14-in (0.356 m) and 120-in (3.048 m) in diameter.

COOPERATION.--Records furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--6 years, 101 ft³/s (2.860 m³/s), 73,170 acre-ft/yr (90.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,220 ft³/s (62.9 m³/s) Dec. 12, 1973; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,160 ft³/s (61.2 m³/s) Dec. 18-20; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	7.2	.00	.00	.00	.00	.00	71	411	.00	478
2	.00	20	.00	.00	.00	.00	.00	.00	18	467	53	328
3	.00	15	.00	.00	.00	.00	.00	50	.00	467	33	.00
4	.00	.00	.00	.00	.00	.00	12	44	.00	467	3.6	.00
5	20	.00	.00	.00	.00	.00	23	.00	.00	457	10	.00
6	18	.00	.00	.00	.00	.00	18	5.9	12	471	15	.00
7	.00	.00	24	.00	.00	.00	.00	10	69	470	15	45
8	.00	.00	15	.00	.00	.00	.00	10	63	470	18	31
9	.00	29	.00	.00	.00	.00	.00	10	36	470	87	.00
10	.00	19	.00	.00	.00	.00	.00	62	22	470	296	.00
11	.00	.00	.00	.00	.00	.00	.00	48	10	469	746	.00
12	.00	.00	.00	.00	.00	.00	81	16	10	469	382	.00
13	45	.00	1270	.00	.00	.00	76	24	4.2	318	.00	50
14	27	.00	2130	.00	.00	.00	35	31	54	114	162	38
15	.00	.00	2130	.00	.00	.00	15	31	34	2.5	145	.00
16	.00	22	2120	.00	.00	.00	.00	14	.00	5.0	14	.00
17	.00	14	2150	.00	.00	100	.00	36	.00	5.0	11	.00
18	.00	.00	2160	.00	.00	90	.00	28	.00	5.5	10	.00
19	29	.00	2160	.00	.00	.00	44	.00	.00	36	29	.00
20	26	.00	2160	.00	.00	.00	38	6.0	.00	28	38	34
21	.00	.00	2150	.00	.00	.00	.00	11	88	.00	38	211
22	.00	.00	2130	.00	.00	.00	.00	11	53	16	31	481
23	.00	26	932	.00	.00	98	.00	11	.00	30	55	480
24	.00	16	.00	.00	.00	73	.00	82	374	30	40	480
25	.00	.00	.00	.00	.00	.00	.00	80	803	30	6.5	480
26	.00	.00	.00	.00	.00	.00	35	31	803	32	.00	479
27	23	.00	.00	.00	.00	.00	24	12	813	.00	.00	478
28	14	.00	.00	.00	.00	10	.00	.00	821	22	.00	174
29	.00	.00	.00	.00	---	21	.00	.00	820	15	.00	.00
30	.00	8.4	.00	.00	---	9.1	.00	.00	683	.00	186	.00
31	.00	---	.00	.00	---	.00	---	59	---	.00	467	---
TOTAL	202.00	169.40	21538.20	.00	.00	401.10	401.00	722.90	5661.20	6247.00	2891.10	4267.00
MEAN	6.52	5.65	695	.000	.000	12.9	13.4	23.3	189	202	93.3	142
MAX	45	29	2160	.00	.00	100	81	82	821	471	746	481
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	401	336	42720	.00	.00	796	795	1430	11230	12390	5730	8460
CAL YR 1976 TOTAL	49849.10			MEAN 136	MAX 2160	MIN .00	AC-FT 98880					
WTR YR 1977 TOTAL	42500.90			MEAN 116	MAX 2160	MIN .00	AC-FT 84300					

RIO GRANDE BASIN

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08285000 EL VADO RESERVOIR NEAR TIERRA AMARILLA, NM

LOCATION.--Lat 36°35'39", long 106°44'00", Rio Arriba County, Hydrologic Unit 13020102, Tierra Amarilla Grant, at outlet tower of dam on Rio Chama, at village of El Vado, 12.4 mi (20.0 km) southwest of Tierra Amarilla, and at mile 77.7 (125.0 km).

DRAINAGE AREA.--873 mi² (2,261 km²), of which about 100 mi² (260 km²) probably is noncontributing.

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

GAGE.--Water-stage recorder. Prior to October 1967, nonrecording gage only below gage height 6,879.3 ft (2,096.81 m). Datum of gage is 8.21 ft (2.502 m) above mean sea level.

REMARKS.--Reservoir is formed by rockfill dam, steel faced. Storage began in January 1935. Capacity 196,500 acre-ft (242 hm³) between gage heights 6,759.0 ft (2,060.14 m) and 6,902.0 ft (2,103.73 m), top of spillway gate. Dead storage, 1,060 acre-ft (1.31 hm³) below 6,775.0 ft (2,065.02 m), sill of outlet works. Figures given herein represent total contents. Reservoir is used to impound water for irrigation by Middle Rio Grande Conservancy District and, since December 1972, for storage of contract water from San Juan-Chama Project. Rehabilitation of outlet works, completed in December 1966, increased valve-controlled release from about 1,750 ft³/s (50 m³/s) to about 6,000 ft³/s (170 m³/s).

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 204,900 acre-ft (253 hm³), of which 7,400 acre-ft (9.12 hm³) was uncontrolled storage, June 4, 5, 1948, gage height, 6,904.2 ft (2,104.40 m); no storage at times prior to December 1966.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 126,800 acre-ft (156 hm³) Apr. 27, gage height 6,878.4 ft (2,096.54 m); minimum, 23,560 acre-ft (29.0 hm³) Sept. 30, gage height, 6,814.3 ft (2,077.00 m).

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

6,810	19,730
6,820	29,110
6,840	53,770
6,860	86,770
6,880	130,800

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79860	73160	72900	109600	109600	109600	111400	122200	104300	53990	36320	26170
2	79860	73090	72900	109700	109600	109700	111500	120800	102200	53950	36290	26280
3	79860	73040	72940	109800	109600	109700	111600	119800	100600	53910	35700	26270
4	79820	73040	72950	109700	109600	109700	111700	118500	98890	53970	34640	26220
5	79780	73040	72990	109600	109700	109800	111800	117200	97160	53940	33580	26160
6	79770	73000	72990	109600	109700	109800	111900	115900	95500	53920	32530	26110
7	79750	72990	72900	109600	109700	109900	112000	114600	93950	53900	31510	26120
8	79730	72950	72880	109700	109700	109900	112200	113400	92420	53900	29900	26120
9	79730	72970	72900	109700	109600	109900	112600	112100	90490	53840	28060	26080
10	79730	73020	72900	109700	109600	110000	113600	110900	87920	53830	26610	26080
11	79730	73020	72900	109600	109600	110000	115000	109600	85170	53780	26070	26090
12	79730	73020	72880	109600	109600	110100	116000	108900	82390	53760	26150	26090
13	79780	73020	75160	109600	109600	110100	117300	108900	79620	53030	26150	26110
14	79590	73020	79070	109600	109600	110200	118400	109000	76960	51360	26010	26120
15	78770	72920	82850	109600	109600	110200	119200	109200	74260	49370	26090	26100
16	78240	72900	86210	109600	109600	110300	120400	109200	71510	47410	26090	26070
17	77660	72880	89550	109600	109600	110200	121200	109300	68810	45400	26210	26060
18	77150	72900	92570	109600	109600	110200	122200	109300	66110	43780	27070	26040
19	76770	72920	95700	109600	109600	110200	123600	109200	63440	42420	27310	26030
20	76400	72940	99680	109700	109600	110300	124100	109100	60740	41270	27440	26020
21	75820	72940	103800	109700	109600	110300	124500	109100	58580	40300	27550	25960
22	75420	72950	107900	109600	109700	110400	124900	108900	56680	39340	27610	25960
23	74970	72940	109800	109600	109600	110500	125300	108800	54950	38360	27640	26080
24	74590	72900	109700	109600	109600	110600	125800	108700	54110	37550	27650	26120
25	74180	72880	109700	109600	109600	110600	126200	108500	54230	36680	27630	26100
26	73670	72870	109700	109600	109600	110700	126600	108400	54310	36400	27600	26050
27	73260	72900	109600	109600	109600	110900	126800	108300	54420	36430	27580	26010
28	73090	72850	109600	109600	109600	111000	126600	108100	54530	36440	27570	25490
29	73120	72850	109600	109600	---	111100	125100	107900	54630	36400	26950	24830
30	73140	72850	109600	109600	---	111200	123700	107700	54330	36380	26260	23560
31	73160	---	109600	109600	---	111300	---	106600	---	36350	26140	---
MAX	79860	73160	109800	109800	109700	111300	126800	122200	104300	53990	36320	26280
MIN	73090	72850	72880	109600	109600	109600	111400	106600	54110	36350	26010	23560
(†)	6852.4	6852.2	6871.2	6871.2	6871.2	6871.9	6877.2	6869.8	6840.4	6826.6	6817.0	6814.3
(‡)	-6700	-310	+36750	0	0	+1700	+12400	-17100	-52270	-17980	-10210	-2580
CAL YR 1976	MAX	189000	MIN	72850	‡	-16700						
WTR YR 1977	MAX	126800	MIN	23560	‡	-56300						

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

‡ Change in contents, in acre-feet.

RIO GRANDE BASIN

08285500 RIO CHAMA BELOW EL VADO DAM, NM

LOCATION:--Lat 36°34'48", long 106°43'24", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, on left bank 1.5 mi (2.4 km) downstream from El Vado Dam, 2.8 mi (4.5 km) upstream from Rio Nutrias, 13 mi (21 km) southwest of Tierra Amarilla, and at mile 76.2 (122.6 km).

DRAINAGE AREA.--877 mi² (2,271 km²), of which about 100 mi² (260 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1913 to November 1915, April to November 1916, March, April 1920, September 1920 to August 1924, October 1935 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "Chama River" prior to 1935, as "near Tierra Amarilla" 1913-14, 1935-47, as "near El Vado" 1915-16, and as "at El Vado" 1920-24.

REVISED RECORDS.--WSP 1312: 1914, 1949. WSP 1392: 1949.

GAGE.--Water-stage recorder. Datum of gage is 6,696.12 ft (2,040.977 m) above mean sea level. Prior to October 1935, at site 1.5 mi (2.4 km) upstream at different datum. October 1935 to September 1938 at site 1.1 mi (1.8 km) upstream at datum 30.34 ft (9.248 m) higher.

REMARKS.--Records good. Flow regulated by El Vado Reservoir (station 08285000) since 1935. Flow affected by release of transmountain water from Heron Reservoir (station 08284510) since May 1971. Diversions for irrigation of about 10,600 acres (43 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--5 years (water years 1914-15, 1921-23) 448 ft³/s (12.69 m³/s), 324,600 acre-ft/yr (400 hm³/yr), prior to completion of El Vado Dam; 35 years (water years 1936-70), 373 ft³/s (10.56 m³/s), 270,200 acre-ft/yr (333 hm³/yr), prior to release of transmountain water; 7 years (water years 1971-77), 342 ft³/s (9.685 m³/s), 247,800 acre-ft/yr (306 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft³/s (255 m³/s) May 22, 1920, gage height, 12 ft (3.7 m), site and datum then in use, from rating curve extended above 3,500 ft³/s (99 m³/s); no flow Mar. 25, 26, 31, 1955. Maximum discharge since construction of El Vado Dam in 1935, 6,010 ft³/s (170 m³/s) May 17, 1941, gage height, 6.89 ft (2.100 m).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,430 ft³/s (40.5 m³/s) June 10, gage height, 4.00 ft (1.219 m); minimum, 7.9 ft³/s (0.22 m³/s) Aug. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	52	24	16	20	22	24	968	1290	612	29	517
2	58	96	22	16	18	22	24	903	1080	474	61	371
3	58	88	22	16	18	22	24	777	880	474	325	52
4	67	56	22	63	18	22	24	777	880	474	509	47
5	83	56	22	70	18	22	24	770	880	474	509	45
6	76	56	31	18	18	22	26	770	880	480	503	38
7	54	56	76	18	33	22	26	770	872	480	503	47
8	47	56	73	18	42	22	26	770	872	480	780	55
9	42	56	24	16	42	22	26	770	1040	480	992	24
10	42	47	27	30	42	22	26	770	1330	486	1000	24
11	42	38	31	47	35	22	24	770	1420	486	1010	24
12	40	38	31	33	27	22	76	450	1420	486	507	24
13	64	38	109	18	27	22	86	143	1410	720	30	60
14	164	38	215	18	27	22	27	143	1400	992	198	84
15	428	38	219	18	27	22	27	143	1390	1020	209	37
16	325	52	379	18	27	22	27	140	1380	1020	73	36
17	253	49	528	19	27	91	27	162	1380	1000	89	24
18	253	24	534	22	33	122	26	163	1380	849	37	24
19	253	24	534	22	38	26	66	140	1370	721	33	24
20	253	24	237	22	38	26	75	140	1360	650	47	48
21	253	24	38	29	38	26	27	140	1180	522	49	212
22	253	26	43	35	38	96	33	140	1010	522	49	522
23	253	52	35	35	40	104	45	136	904	515	71	509
24	253	65	24	42	40	27	45	194	791	522	81	503
25	253	33	22	45	40	27	49	217	791	509	54	503
26	253	30	22	38	40	27	88	140	791	283	37	503
27	253	26	22	33	40	27	99	140	791	33	24	503
28	148	26	22	24	30	26	391	140	791	53	22	503
29	40	26	22	20	---	24	968	140	791	66	280	497
30	40	26	20	20	---	24	968	143	791	30	471	497
31	40	---	16	20	---	24	---	654	---	30	497	---
TOTAL	4710	1316	3446	859	881	1049	3424	12623	32545	15943	9079	6357
MEAN	152	43.9	111	27.7	31.5	33.8	114	407	1085	514	293	212
MAX	428	96	534	70	42	122	968	968	1420	1020	1010	522
MIN	40	24	16	16	18	22	24	136	791	30	22	24
AC-FT	9340	2610	6840	1700	1750	2080	6790	25040	64550	31620	18010	12610
CAL YR 1976 TOTAL	143024			MEAN 391	MAX 1820	MIN 16	AC-FT 283700					
WTR YR 1977 TOTAL	92232			MEAN 253	MAX 1420	MIN 16	AC-FT 182900					

RIO GRANDE BASIN

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08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, NM

LOCATION.--Lat 36°19'06", long 106°35'50", Rio Arriba County, Hydrologic Unit 13020102, on left bank 40 ft (12 m) downstream from site of former bridge, 7.7 mi (12.4 km) downstream from Rio Gallina, 9 mi (14 km) northwest of Youngsville, 15.6 mi (25.1 km) upstream from Abiquiu Dam, 30.3 mi (48.8 km) downstream from El Vado Dam, and at mile 47.4 (76.3 km).

DRAINAGE AREA.--1,600 mi² (4,144 km²), of which about 100 mi² (260 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 6,275 ft (1,913 m), from topographic map.

REMARKS.--Water-discharge records good except those for December to February, which are fair. Flow regulated by El Vado Reservoir (station 08285000). Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510). Diversions for irrigation of about 15,000 acres (61 km²) above station. Corps of Engineers gage height telemeter at station.

AVERAGE DISCHARGE.--9 years (water years 1962-70), 358 ft³/s (10.14 m³/s), 259,400 acre-ft/yr (320 hm³/yr), prior to release of transmountain water; 7 years (water years 1971-77), 363 ft³/s (10.28 m³/s), 263,000 acre-ft/yr (324 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,550 ft³/s (185 m³/s) May 20, 1973, gage height, 8.70 ft (2.652 m); minimum 7.5 ft³/s (0.21 m³/s) Oct. 17, 18, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred on Sept. 29, 1904, Oct. 4 or 5, 1911, and May 22, 1920.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,630 ft³/s, (74.5 m³/s) Aug. 12, gage height, 6.00 ft (1.829 m); minimum, 8.2 ft³/s (0.23 m³/s) Mar. 3, 4, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	44	35	21	30	40	29	969	1260	707	40	496
2	70	56	35	20	30	30	29	956	1210	465	60	599
3	63	110	32	20	28	29	34	773	882	465	200	152
4	61	74	30	20	28	31	35	773	876	472	480	80
5	74	58	30	30	28	31	38	773	876	484	480	55
6	88	57	30	75	28	29	32	773	876	521	480	52
7	68	57	30	30	28	31	30	773	876	461	480	45
8	56	57	86	25	35	33	28	773	876	465	570	57
9	49	57	83	20	40	36	28	773	941	505	950	55
10	44	56	33	20	50	56	28	773	1300	458	980	30
11	43	49	34	20	50	34	29	767	1450	461	1000	31
12	42	42	39	30	45	38	28	693	1440	461	1390	34
13	42	42	40	45	40	38	100	214	1430	531	118	36
14	75	42	120	30	35	50	69	179	1430	950	50	76
15	312	42	220	25	35	41	38	173	1420	1000	363	74
16	390	42	230	23	35	35	36	167	1410	1050	195	41
17	261	57	520	23	38	33	34	163	1410	988	636	42
18	259	52	540	23	37	129	31	205	1400	912	444	28
19	256	33	540	25	44	93	30	165	1390	713	95	28
20	256	32	520	25	55	34	94	161	1370	707	58	27
21	256	31	70	25	54	32	64	161	1280	639	69	48
22	261	30	45	30	52	32	34	159	1010	740	67	410
23	259	34	50	35	56	134	38	159	970	554	62	600
24	259	69	42	40	55	77	53	159	795	741	101	484
25	256	58	32	45	49	37	65	260	784	940	76	480
26	259	38	25	55	52	34	63	187	784	500	60	480
27	259	35	25	50	49	33	113	155	784	65	46	484
28	259	30	25	40	49	30	87	155	790	50	32	480
29	86	32	25	35	---	29	894	153	784	100	47	480
30	48	35	25	30	---	28	969	153	784	50	487	476
31	45	---	24	30	---	29	---	213	---	40	487	---
TOTAL	4850	1451	3615	965	1155	1366	3180	12910	32888	17195	10603	6460
MEAN	156	48.4	117	31.1	41.3	44.1	106	416	1096	555	342	215
MAX	390	110	540	75	56	134	969	969	1450	1050	1390	600
MIN	42	30	24	20	28	28	28	153	784	40	32	27
AC-FT	9620	2880	7170	1910	2290	2710	6310	25610	65230	34110	21030	12810
CAL YR 1976	TOTAL	149054	MEAN 407	MAX 1850	MIN 20	AC-FT 295600						
WTR YR 1977	TOTAL	96638	MEAN 265	MAX 1450	MIN 20	AC-FT 191700						

RIO GRANDE BASIN

08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, NM --- Continued

WATER-QUALITY RECORDS

PERIOD RECORD.--Water years 1962 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.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,320 micromhos Apr. 1, 1973; minimum daily, 153 micromhos May 23, 1970.

WATER TEMPERATURES: Maximum, 32.0°C Aug. 19, 1964; minimum, freezing point on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 73,800 mg/L Dec. 6, 1966; minimum daily, 10 mg/L on many days during 1968-69, 1972 and 1974.

SEDIMENT LOADS: Maximum daily, 230,000 tons (208,000 tonnes) Aug. 11, 1967; minimum daily, .81 ton (.73 tonne) July 4, 1972.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (000061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (000095)	TEMPER- ATURE (DEG C) (00010)	SUS- PEN- DED SEDI- MENT (MG/L) (80154)	SUS- PEN- DED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)
NOV											
09...	1230	55	456	7.0	26	3.9	--	--	--	--	--
DEC											
08...	1230	48	569	5.0	13	1.7	--	--	--	--	--
JAN											
05...	1225	19	667	.0	6	.31	--	--	--	--	--
FEB											
03...	1440	28	600	1.0	4	.30	--	--	--	--	--
MAR											
04...	1110	19	555	3.0	128	6.6	--	--	--	--	--
31...	1110	29	675	5.5	40	3.1	--	--	--	--	--
APR											
25...	1130	66	535	12.0	405	72	--	--	--	98	--
MAY											
24...	1447	160	358	15.0	35	15	--	--	--	--	--
JUN											
20...	1230	1320	287	13.5	181	645	--	--	--	--	--
JUL											
20...	1415	716	312	25.0	201	389	--	--	--	--	--
AUG											
19...	1310	79	870	20.0	1820	388	72	85	97	--	100
SEP											
15...	1210	65	469	18.0	259	45	--	--	--	--	--

08286900 ABIQUIU RESERVOIR NEAR ABIQUIU, NM

LOCATION.--Lat 36°14'24", long 106°25'44", Rio Arriba County, Hydrologic Unit 13020102, in Piedra Lumbre Grant, in operations building at Abiquiu Dam on Rio Chama, 6.6 mi (10.6 km) northwest of Abiquiu, and at mile 32.1 (51.6 km).

DRAINAGE AREA.--2,146 mi² (5,558 km²), of which about 100 mi² (260 km²) 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 at mean sea level.

REMARKS.--Reservoir is formed by earthfill dam, completed Feb. 5, 1963. Capacity, 1,215,000 acre-ft (1.50 km³) between elevations 6,060 ft (1,847 m), invert of outlet tunnel, and 6,350 ft (1,935 m), crest of spillway, based on capacity table effective Jan. 1, 1976. No dead storage. Reservoir is used for flood control and, since March 1976, for recreation. A desilting pool of about 2,000 acre-ft (2.5 hm³) was maintained from May 1968 to 1974, when it was increased to 4,000 acre-ft (4.9 hm³) and continued until December 1975. A recreation pool of about 25,000 acre-ft (31 hm³) has been maintained since March 1976.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 205,300 acre-ft (253 hm³) June 22, 1973, elevation, 6,219.93 ft (1,895.835 m); no storage at times prior to May 1968 and Jan. 11 to Mar. 25, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 27,320 acre-ft (33.7 hm³) June 3, elevation 6,153.10 ft (1,875.465 m); minimum, 22,640 acre-ft (27.9 hm³) Sept. 30, elevation 6,148.45 ft (1,874.048 m).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Corps of Engineers in 1976)

6,148	22,210	6,152	26,160
6,150	24,140	6,154	28,300

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25430	25290	25060	25110	25060	25110	25040	24730	24940	23650	23220	23130
2	25410	25220	25060	25090	25060	25090	25030	24720	24680	23550	23210	23240
3	25380	25250	25050	25090	25060	25050	25130	24660	24990	23560	23270	23080
4	25360	25190	25040	25050	25070	25060	25100	24670	25830	23690	23450	23150
5	25380	25130	25050	25030	25060	25050	25060	24650	24670	23600	23260	23100
6	25400	25150	25060	25040	25060	25040	25020	24630	24240	23490	23240	23070
7	25410	25180	25060	24970	25050	25040	24970	24610	24240	23450	23240	23050
8	25440	25190	25080	25000	25050	25070	24930	24620	24180	23730	23490	23030
9	25460	25190	25070	25020	25090	25070	24940	24590	24160	23800	23920	23050
10	25460	25180	25020	25020	25090	25090	24960	24560	24370	23640	23720	23000
11	25440	25140	25020	25050	25040	25070	24960	24510	24520	23440	23740	23010
12	25420	25110	25040	25050	25040	25040	24850	24560	24490	23450	25500	23100
13	25420	25110	25050	25110	25040	25040	24880	24450	24410	23530	23730	23050
14	25450	25110	24990	25120	25070	25070	24920	24510	24300	23720	23060	23040
15	25480	25110	25120	25070	25090	25070	24810	24480	24150	23620	23470	23000
16	25550	25110	25170	25050	25120	25090	24760	24460	24080	23630	23910	22900
17	25560	25110	25470	25050	25100	25070	24760	24460	24040	23470	23970	22930
18	25420	25120	25950	25070	25070	25070	24760	24510	24060	23430	23400	22900
19	25310	25080	26410	25080	25040	25060	24800	24490	24040	23410	22990	22890
20	25310	25050	26830	25070	25070	25020	24790	24440	24030	23550	23180	22890
21	25300	25050	26220	25070	25110	24970	24740	24430	24030	23940	23210	22920
22	25300	25050	25390	25090	25140	24970	24730	24430	23860	24120	23210	23070
23	25300	25050	25090	25120	25070	25020	24730	24430	23960	23410	23200	23080
24	25290	25100	25140	25120	25050	25000	24780	24430	23870	23530	23250	22880
25	25270	25090	25120	25090	25050	25020	24790	24480	23770	24380	23220	22910
26	25270	25060	25060	25060	25040	25030	24760	24390	23700	24030	23220	22920
27	25250	25090	25050	25060	25040	25040	24780	24330	23690	23820	23210	22920
28	25330	25060	25060	25040	25070	25030	24730	24330	23710	23970	23190	22860
29	25340	25040	25060	25070	---	25010	25030	24330	23690	23690	23170	22800
30	25350	25040	25050	25070	---	25000	24860	24330	23650	23530	23470	22780
31	25370	---	25080	25060	---	25020	---	24250	---	23310	23200	---
MAX	25560	25290	26830	25120	25140	25110	25130	24730	26990	24380	25500	23240
MIN	25250	25040	24990	24970	25040	24970	24730	24250	23650	23310	22990	22780
(†)	6151.23	6150.90	6150.94	6150.92	6150.93	6150.88	6150.73	6150.11	6149.50	6149.16	6149.04	6148.60
(‡)	-30	-330	+40	-20	+10	-50	-160	-610	-600	-340	-110	-420

CAL YR 1976 MAX 37310 MIN 0 † +21860
WTR YR 1977 MAX 26990 MIN 22780 ‡ - 2620

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

RIO GRANDE BASIN

08287000 RIO CHAMA BELOW ABIQUIU DAM, NM

LOCATION.--Lat 36°14'12", long 106°24'59", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.8, T.23 N., R.5 E., Rio Arriba County, Hydrologic Unit 13020102, on right bank 0.8 mi (1.3 km) downstream from Abiquiu Dam, 5.9 mi (9.5 km) northwest of Abiquiu, and at mile 31.3 (50.4 km).

DRAINAGE AREA.--2,147 mi² (5,561 km²), of which about 100 mi² (260 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Concrete control since Jan. 25, 1966. Altitude of gage is 6,040 ft (1,841 m), from topographic map. Prior to Jan. 25, 1966, at datum 1.60 ft (0.488 m) lower.

REMARKS.--Water-discharge records good. Flow controlled by El Vado Reservoir (station 08285000) 46.4 mi (74.7 km) upstream and Abiquiu Reservoir (station 08286900) 0.8 mi (1.3 km) upstream. Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510) 54.5 mi (87.7 km) upstream. Diversions for irrigation of about 17,600 acres (71 km²) above station. Corps of Engineers gage height telemeter at station.

AVERAGE DISCHARGE.--9 years (water years 1962-70), 384 ft³/s (10.87 m³/s), 278,200 acre-ft/yr (343 hm³/yr), prior to release of transmountain water; 7 years (water years 1971-77), 387 ft³/s (10.96 m³/s), 280,400 acre-ft/yr (346 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,990 ft³/s (84.7 m³/s) July 1, 1965, gage height, 6.69 ft (2.039 m), datum then in use; maximum gage height, 7.29 ft (2.222 m) Jan. 14, 1967 (backwater from ice); minimum discharge, about 0.5 ft³/s (0.01 m³/s) Mar. 17, 1966, Jan. 28, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,500 ft³/s (42.5 m³/s) June 3, gage height, 4.44 ft (1.353 m); minimum, 1.2 ft³/s (0.034 m³/s) Mar. 4.

DISCHARGE* IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	90	32	29	31	40	26	1050	884	741	56	569
2	85	99	32	34	31	57	27	987	453	559	29	605
3	85	89	32	37	31	45	28	840	594	481	28	299
4	73	127	32	37	31	34	56	793	1490	481	412	69
5	66	98	31	37	31	44	56	806	1480	559	628	76
6	77	48	31	85	31	44	62	819	1100	613	536	63
7	68	49	31	68	31	40	62	800	888	515	524	47
8	39	56	31	24	29	34	52	786	903	453	524	47
9	38	59	99	24	30	47	38	806	927	511	740	46
10	42	69	71	19	58	52	41	806	1150	579	1090	40
11	51	74	31	14	73	52	46	806	1340	590	1180	28
12	49	58	31	21	67	52	85	766	1420	483	1300	23
13	43	49	31	14	46	47	79	325	1460	481	1060	37
14	39	49	102	34	36	46	84	155	1460	853	452	50
15	261	47	141	46	36	44	91	179	1450	1070	346	97
16	372	43	203	33	36	35	49	179	1430	1060	446	74
17	243	53	352	23	54	44	42	167	1370	1090	801	33
18	309	65	324	23	68	123	32	167	1350	983	904	32
19	305	60	324	24	68	123	26	175	1340	783	309	22
20	247	43	324	28	62	78	72	183	1340	738	43	18
21	257	39	425	28	62	49	118	159	1280	689	62	18
22	262	34	449	28	74	35	38	152	1070	823	63	321
23	262	34	202	38	85	112	27	155	942	954	63	621
24	262	34	37	52	75	118	32	155	851	631	63	601
25	262	74	45	63	66	35	51	209	850	708	96	497
26	262	72	49	63	71	35	71	250	835	825	56	502
27	261	46	39	57	60	35	98	170	809	360	38	517
28	215	46	28	46	42	34	128	148	804	348	34	548
29	108	42	29	31	---	33	673	148	818	258	31	536
30	45	32	29	31	---	30	1050	148	823	171	331	511
31	45	---	29	31	---	27	---	178	---	152	630	---
TOTAL	4831	1778	3646	1122	1415	1624	3340	13467	32911	19542	12875	6947
MEAN	156	59.3	118	36.2	50.5	52.4	111	434	1097	630	415	232
MAX	372	127	449	85	85	123	1050	1050	1490	1090	1300	621
MIN	38	32	28	14	29	27	26	148	453	152	28	18
AC-FT	9580	3530	7230	2230	2810	3220	6620	26710	65280	38760	25540	13780
CAL YR 1976	TOTAL	139994	MEAN	382	MAX	1550	MIN	28	AC-FT	277700		
WTR YR 1977	TOTAL	103498	MEAN	284	MAX	1490	MIN	14	AC-FT	205300		

08287000 RIO CHAMA BELOW ABIQUIU DAM, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 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.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,220 micromhos July 24, 1970; minimum daily, 146 micromhos May 28, 1970.

WATER TEMPERATURES: Maximum, 28.0°C June 16, 1964; minimum, freezing point on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 85,000 mg/L Nov. 29, 1967; minimum daily, 0 mg/L Jan. 29, Feb. 27, 1974.

SEDIMENT LOADS: Maximum daily, 214,000 tons (194,000 tonnes) Aug. 1, 1969; minimum daily, 0 tons (0 tonnes) Jan. 29, Feb. 27, 1974.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)
NOV										
10...	1025	64	377	9.5	25	4.3	--	--	--	--
DEC										
09...	1210	142	455	4.0	19	7.3	--	--	--	--
JAN										
06...	1215	36	523	5.0	15	1.5	--	--	--	--
FEB										
03...	1215	32	564	6.5	15	1.3	--	--	--	--
MAR										
31...	1320	28	397	10.0	14	1.1	--	--	--	--
APR										
25...	1600	66	408	7.5	16	2.9	--	--	--	--
MAY										
24...	1145	153	370	14.0	23	9.5	--	--	--	--
JUN										
20...	1600	1370	293	13.5	32	118	--	--	--	--
JUL										
20...	1555	716	--	25.0	81	157	--	--	--	--
AUG										
17...	1530	1070	--	19.0	6180	17900	60	75	98	100
SEP										
14...	1305	49	590	21.0	35	4.6	--	--	--	--

RIO GRANDE BASIN

08289000 RIO OJO CALIENTE AT LA MADERA, NM

LOCATION.--Lat 36°20'59", long 106°02'37", in NW¼NE¼ sec.1, T.24 N., R.8 E., Rio Arriba County, Hydrologic Unit 13020102, on left bank 400 ft (120 m) upstream from bridge on State Highway 96, 2.4 mi (3.9 km) south of La Madera, 2.6 mi (4.2 km) downstream from confluence of Rio Vallecitos and Rio Tusas, 3.1 mi (5.0 km) north of Ojo Caliente, and at mile 19.9 (32.0 km).

DRAINAGE AREA.--419 mi² (1,085 km²).

PERIOD OF RECORD.--April 1932 to current year.

REVISED RECORDS.--WSP 1712: 1959.

GAGE.--Water-stage recorder. Datum of gage is 6,358.84 ft (1,938.174 m) above mean sea level. Prior to Apr. 23, 1934, at site about 2.6 mi (4.2 km) upstream at different datum. Apr. 23, 1934 to Apr. 21, 1936, at datum 12.58 ft (3.834 m) lower and Apr. 22, 1936 to Oct. 26, 1956, at datum 13.84 ft (4.218 m) lower, both at site 1,400 ft (430 m) downstream.

REMARKS.--Records fair. Diversions above station for irrigation of about 3,500 acres (14 km²), 1962 determination. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 65.2 ft³/s (1.846 m³/s), 47,240 acre-ft/yr (58.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,140 ft³/s (88.9 m³/s) Apr. 21, 1958, gage height, 6.42 ft (1.957 m), from rating curve extended above 1,300 ft³/s (37 m³/s); maximum gage height, 7.25 ft (2.210 m), from floodmarks, June 19, 1966; minimum discharge 0.2 ft³/s (0.006 m³/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.--Maximum discharge, 550 ft³/s (15.6 m³/s) July 22, gage height, 5.25 ft (1.600 m), no peak above base of 600 ft³/s (17 m³/s); minimum, 0.76 ft³/s (0.022 m³/s) May 6.

DISCHARGE* IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	9.5	13	9.5	14	15	29	14	7.0	5.2	5.2	5.8
2	7.8	9.9	13	9.8	14	16	24	9.9	7.2	4.9	4.9	5.9
3	7.7	11	13	10	14	15	24	7.6	8.5	4.8	4.9	6.1
4	7.6	11	13	11	14	15	19	6.1	11	4.9	4.7	6.1
5	8.0	11	13	11	13	16	25	4.9	10	21	4.7	5.7
6	7.8	9.3	14	11	13	16	24	2.6	9.4	18	2.8	5.3
7	8.1	8.7	13	10	14	16	30	2.2	8.9	6.4	2.2	5.3
8	8.2	9.0	13	11	13	17	46	2.2	8.2	5.1	2.3	4.9
9	8.1	8.9	13	11	14	17	98	2.4	7.6	4.9	2.4	4.6
10	8.6	9.0	13	11	14	18	132	2.9	7.3	4.5	2.4	4.5
11	9.6	9.5	12	13	14	17	116	2.6	7.0	3.5	2.4	4.5
12	9.1	10	12	13	15	17	83	3.8	6.6	2.9	3.2	4.5
13	9.6	11	12	14	15	18	87	8.1	6.4	3.1	4.7	4.5
14	9.8	9.7	12	14	16	19	71	11	6.2	3.2	7.2	4.5
15	9.8	9.6	12	14	16	19	49	13	5.1	3.4	4.8	4.7
16	9.8	9.5	11	14	16	19	45	15	2.4	4.8	6.5	5.2
17	9.7	9.1	11	14	16	18	36	21	2.7	3.4	7.7	5.7
18	8.5	8.9	11	13	17	16	46	25	2.7	3.3	7.2	5.9
19	8.3	9.4	11	13	17	16	53	22	2.7	2.9	10	5.8
20	9.0	9.4	11	13	17	17	41	19	2.8	3.0	39	5.3
21	9.2	9.7	11	14	17	18	36	15	3.0	7.6	31	5.2
22	9.2	9.9	11	14	18	19	36	13	3.1	67	23	5.2
23	9.2	10	10	14	16	21	34	11	3.4	6.9	16	7.8
24	8.8	9.5	10	14	17	28	30	11	4.1	4.2	13	9.4
25	8.6	8.7	9.8	13	16	30	24	6.6	4.8	3.0	12	7.4
26	9.3	9.0	9.6	13	15	34	22	4.9	4.8	5.8	11	6.4
27	8.7	8.9	9.9	14	15	33	17	5.8	4.8	21	10	6.4
28	9.1	9.4	9.8	14	15	38	19	5.9	5.3	9.2	9.9	6.5
29	9.4	10	9.4	14	---	31	21	6.0	6.0	6.9	9.4	6.4
30	9.7	12	9.4	14	---	24	20	6.8	5.6	6.3	9.2	6.0
31	9.8	---	9.3	14	---	29	---	7.6	---	5.6	7.7	---
TOTAL	273.7	290.5	355.2	392.3	425	642	1337	288.9	174.6	256.7	281.4	171.5
MEAN	8.83	9.68	11.5	12.7	15.2	20.7	44.6	9.32	5.82	8.28	9.08	5.72
MAX	9.8	12	14	14	18	38	132	25	11	67	39	9.4
MIN	7.6	8.7	9.3	9.5	13	15	17	2.2	2.4	2.9	2.2	4.5
AC-FT	543	576	705	778	843	1270	2650	573	346	509	558	340
CAL YR 1976	TOTAL	11331.8	MEAN	31.0	MAX	262	MIN	3.2	AC-FT	22480		
WTR YR 1977	TOTAL	4888.8	MEAN	13.4	MAX	132	MIN	2.2	AC-FT	9700		

08289000 RIO OJO CALIENTE AT LA MADERA, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH	TEMPER- ATURE (DEG C)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	
		(00061)	(00095)	(UNITS) (00400)	(00010)	(00900)	(00902)	(00915)	(00925)	(00930)	(00931)	(00935)	
MAY 05...	0900	6.7	1100	8.2	12.0	380	40	98	34	120	2.7	9.5	
DATE		BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTIT- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)
MAY 05...	420	0	180	68	1.0	22	740	.00	.04	30	150	1.9	

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	DIS-SOLVED RA-226 (RADON METHOD) (PC/L) (09511)
MAY 05...	0900	.68

RIO GRANDE BASIN

08290000 RIO CHAMA NEAR CHAMITA, NM

LOCATION.--Lat 36°04'26", long 106°06'40", in NE¼NE¼ sec.8, T.21 N., R.8 E., Rio Arriba County, Hydrologic Unit 13020102, in San Juan Pueblo Grant, at downstream end of pier nearest left bank of bridge on U.S. Highway 285, 0.5 mi (0.8 km) west of Chamita, 2.5 mi (4.0 km) northwest of San Juan Pueblo, and at mile 2.8 (4.5 km).

DRAINAGE AREA.--3,144 mi² (8,143 km²), of which about 100 mi² (260 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1912 to current year. Monthly discharge only for some periods, published WSP 1312. Published as Chama River near Chamita prior to 1928, and Chama River at Chamita 1929-30.

REVISED RECORDS.--WSP 1512: 1913-15, 1934, 1936. WSP 1632: 1929(M). WSP 1732: 1931(M). WSP 1923: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Jan. 1, 1964. Datum of gage is 5,653.61 ft (1,723.220 m) above mean sea level. Prior to Oct. 4, 1933, at railroad bridge 2.3 mi (3.7 km) downstream at different datums. Oct. 4, 1933 to Mar. 1, 1942, at site 50 ft (15 m) downstream at datum 0.22 ft (0.067 m) higher. Mar. 2, 1942 to Dec. 31, 1963, at site 200 ft (60 m) downstream, present datum.

REMARKS.--Water-discharge records good except those for December to February, which are fair. Diversions above station for irrigation of about 27,600 acres (112 km²). Chamita ditch, on left bank, and Hernandez ditch, on right bank, bypass gage for irrigation of several hundred acres below station; see tabulation below for monthly diversion during irrigation season. Flow regulated by El Vado Reservoir (station 08285000) and Abiquiu Reservoir (station 08286900), 74.9 mi (120.5 km) and 29.3 mi (47.1 km) upstream respectively. Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510) 83.0 mi (133.5 km) upstream. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--58 years (water years 1913-70), 541 ft³/s (15.32 m³/s), 392,000 acre-ft/yr (483 hm³/yr), prior to release of transmountain water; 7 years (water years 1971-77), 419 ft³/s (11.87 m³/s), 303,600 acre-ft/yr (374 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s (425 m³/s) May 22, 1920, from rating curve extended above 2,300 ft³/s (65 m³/s); maximum gage height, 10.45 ft (3.185 m) Aug. 22, 1961; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The floods of Sept. 29, 1904, and Oct. 4 or 5, 1911, probably exceeded 15,000 ft³/s (420 m³/s). Another major flood occurred in 1884, from newspaper accounts.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,880 ft³/s (110 m³/s) July 21, gage height, 6.29 ft (1.917 m); minimum, about 16 ft³/s (0.45 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	65	50	62	65	78	64	957	371	712	120	660
2	105	104	50	62	64	75	51	883	823	519	30	540
3	97	98	50	69	67	85	45	746	118	402	28	586
4	87	105	50	69	63	78	65	614	1370	406	50	65
5	77	140	50	74	63	73	94	660	1440	463	477	75
6	67	84	50	76	63	79	94	663	1230	524	377	80
7	70	69	50	100	63	79	90	627	784	497	355	66
8	66	69	50	69	63	76	103	601	794	368	365	46
9	54	65	60	60	60	69	112	638	822	393	438	42
10	55	65	110	60	61	78	161	615	970	466	918	35
11	53	80	80	50	92	82	160	624	1270	502	1050	27
12	51	92	50	50	105	85	129	637	1370	466	1360	29
13	49	83	50	55	99	82	137	489	1440	381	1300	23
14	47	76	60	55	83	79	117	155	1430	603	438	18
15	48	69	120	80	76	77	130	153	1420	1040	332	17
16	344	68	150	80	75	77	112	136	1430	987	529	71
17	239	62	260	60	75	69	71	110	1370	1030	825	53
18	237	72	360	60	91	73	57	115	1330	987	893	27
19	324	86	340	55	100	155	74	98	1330	765	650	23
20	241	76	340	60	96	117	67	107	1330	685	180	22
21	247	68	350	65	95	99	112	108	1310	924	100	19
22	264	57	480	65	96	79	124	102	1080	721	80	30
23	262	51	373	65	103	67	59	95	939	883	78	498
24	262	51	113	75	118	161	37	93	791	740	77	572
25	260	55	89	88	105	108	40	103	785	430	73	420
26	265	96	93	101	101	80	38	161	785	825	70	403
27	266	78	95	95	101	77	37	122	728	447	33	445
28	268	65	87	91	90	80	47	88	692	342	22	487
29	185	60	63	79	---	79	238	91	711	300	22	517
30	105	55	65	66	---	72	945	94	738	210	173	458
31	69	---	65	65	---	71	---	71	---	170	567	---
TOTAL	4870	2264	4253	2161	2333	2639	3610	10756	31001	18188	12010	6354
MEAN	157	75.5	137	69.7	83.3	85.1	120	347	1033	587	387	212
MAX	344	140	480	101	118	161	945	957	1440	1040	1360	660
MIN	47	51	50	50	60	67	37	71	118	170	22	17
AC-FT	9660	4490	8440	4290	4630	5230	7160	21330	61490	36080	23820	12600
(†)	600	-	-	-	-	-	245	541	782	616	607	627
(‡)	250	-	-	-	-	-	526	1380	469	839	568	688
CAL YR 1976	TOTAL	144010	MEAN 393	MAX 1840	MIN 24	AC-FT 285600	† Diversion, in acre-ft, by Chamita ditch.					
WTR YR 1977	TOTAL	100439	MEAN 275	MAX 1440	MIN 17	AC-FT 199200	‡ Diversion, in acre-ft, by Hernandez ditch.					

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.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,010 micromhos July 25, 1970; minimum daily, 175 micromhos May 12, 14, 1973.

WATER TEMPERATURES: Maximum, 36.0°C Aug. 19, 1974; minimum, freezing point on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 62,800 mg/L July 27, 1971; minimum daily, no flow on several days in August 1950, 1951, September 1953, and July 1955.

SEDIMENT LOADS: Maximum daily, 340,000 tons (308,000 tonnes) Aug. 9, 1967; minimum daily, 0 tons (0 tonnes) on several days in August 1950 and 1951, September 1953, and July 1955.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN (70337)
NOV							
10...	1400	69	494	4.0	36	6.7	--
JAN							
06...	1330	55	556	2.5	49	7.3	--
FEB							
04...	1350	68	596	6.0	53	9.7	--
MAR							
04...	1450	65	610	6.5	22	3.9	--
31...	1500	72	496	13.0	357	69	--
APR							
26...	1420	25	568	16.0	558	38	--
MAY							
25...	0940	133	440	15.0	287	103	--
JUN							
21...	1400	1290	320	16.5	94	327	--
JUL							
20...	1125	677	353	25.0	2280	4170	48
AUG							
12...	1425	1200	392	22.0	1950	6320	--
17...	1335	590	550	22.0	5670	9030	45
SEP							
16...	1130	87	610	22.0	91	21	--
29...	1030	533	548	15.5	148	213	--

DATE	SUS. SED. FALL DIAM. % FINER THAN (70338)	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. SIEVE DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. FALL DIAM. % FINER THAN (70343)	SUS. SED. FALL DIAM. % FINER THAN (70344)
NOV						
10...	--	--	--	--	--	--
JAN						
06...	--	--	--	--	--	--
FEB						
04...	--	--	--	--	--	--
MAR						
04...	--	--	--	--	--	--
31...	--	--	40	--	--	--
APR						
26...	--	--	--	--	--	--
MAY						
25...	--	--	--	--	--	--
JUN						
21...	--	--	--	--	--	--
JUL						
20...	60	88	--	100	--	--
AUG						
12...	--	--	--	--	--	--
17...	52	76	--	93	99	100
SEP						
16...	--	--	--	--	--	--
29...	--	--	--	--	--	--

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 (14.2 km) southwest of Alire, and 24 mi (39 km) northwest of Abiquiu. Period of record, April 1972 to current year.
- 08287020 ABEYTA TRUJILLO DITCH NEAR ABIQUIU, NM.--Lat 36°14'03", long 106°23'22", Rio Arriba County, in Carson National Forest, totalizing flowmeter and Parshall flume on left bank 0.9 mi (1.4 km) downstream from heading located on left bank of Rio Chama, and 4.5 mi (7.2 km) northeast of Abiquiu. Period of record, April 1972 to current year.
- 08287040 WINFIELD MORTON PUMP NEAR ABIQUIU, NM.--Lat 36°12'40", long 106°20'48", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter on discharge pipe of pump on left bank of Jose Pablo Gonzales ditch 700 ft (210 m) downstream from ditch heading located on left bank of Rio Chama, and 1.4 mi (2.3 km) west of Abiquiu. Period of record, April 1972 to current year.
- 08287060 JOSE PABLO GONZALES DITCH NEAR ABIQUIU, NM.--Lat 36°12'25", long 106°20'35", Rio Arriba County, in Town of Abiquiu Grant, totalizing flowmeter and Parshall flume on left bank, 0.5 mi (0.8 km) downstream from Winfield Morton pump, 0.6 mi (1.0 km) downstream from heading located on left bank of Rio Chama, and 1.2 mi (1.9 km) west of Abiquiu. Period of record, April 1972 to current year.
- 08287150 GONZALES DITCH AT ABIQUIU, NM.--Lat 36°12'46", long 106°19'16", Rio Arriba County, in Town of Abiquiu Grant, totalizing flowmeter and Parshall flume on right bank, 0.2 mi (0.3 km) downstream from heading located on right bank of Rio Chama, and 0.4 mi (0.6 km) northwest of Abiquiu. Period of record, April 1972 to current year.
- 08287200 LA PUENTE DITCH NEAR ABIQUIU, NM.--Lat 36°12'52", long 106°16'27", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on left bank, 100 ft (30 m) downstream from culvert on U.S. Highway 84, 0.4 mi (0.6 km) downstream from heading located on right bank of Rio Chama, and 2.5 mi (4.0 km) east of Abiquiu. Period of record, April 1972 to current year.
- 08287250 QUINTANA DITCH NEAR ABIQUIU, NM.--Lat 36°12'55", long 106°16'26", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank, 100 ft (30 m) upstream from culvert on U.S. Highway 84, 0.2 mi (0.3 km) downstream from heading located on right bank of Rio Chama, and 2.6 mi (4.2 km) east of Abiquiu. Period of record, April 1972 to current year.
- 08287270 VALENTINE MARTINEZ DITCH NEAR ABIQUIU, NM.--Lat 36°12'55", long 106°16'12", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank on north side of U.S. Highway 84, 0.2 mi (0.3 km) downstream from heading located on left bank of Quintana ditch (station 08287250), and 2.8 mi (4.5 km) east of Abiquiu. Period of record, April 1972 to current year.
- 08287300 MARIANO DITCH NEAR ABIQUIU, NM.--Lat 36°13'05", long 106°16'09", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on left bank 0.5 mi (0.8 km) downstream from heading located on left bank of Rio Chama, and 2.9 mi (4.7 km) east of Abiquiu. Period of record, April 1972 to current year.
- 08287400 FERRAN DITCH NEAR ABIQUIU, NM.--Lat 36°12'57", long 106°14'34", Rio Arriba County, in Carson National Forest, totalizing flowmeter and Parshall flume on left bank just downstream from siphon, 40 ft (12 m) upstream from forest boundary, 0.2 mi (0.3 km) downstream from culvert on State Highway 96, 0.4 mi (0.6 km) downstream from tail of Mariano ditch (station 08287300), 0.9 mi (1.4 km) downstream from heading located on left bank of Rio Chama, and 4.4 mi (7.1 km) east of Abiquiu. Period of record, April 1972 to current year.
- 08287600 TIERRA AZUL DITCH NEAR MEDANALES, NM.--Lat 36°12'06", long 106°14'11", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank 1.1 mi (1.8 km) downstream from heading located on right bank of Rio Chama, and 3.5 mi (5.6 km) northwest of Medanales. Period of record, April 1972 to current year.
- 08288050 JOSE V. MARTINEZ DITCH NEAR MEDANALES, NM.--Lat 36°11'44", long 106°13'39", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on left bank 0.1 mi (0.2 km) downstream from heading located on left bank of Rio Chama, and 2.9 mi (4.7 km) northwest of Medanales. Period of record, April 1972 to current year.
- 08288100 MANZANARES AND 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 (0.3 km) downstream from heading located on right bank of Rio Chama, and 1.7 mi (2.7 km) northeast of Medanales. Period of record, April 1972 to current year.
- 08288150 RIO DE CHAMA DITCH NEAR MEDANALES, NM.--Lat 36°11'13", long 106°12'02", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter, water-stage recorder, and Parshall flume on left bank, 0.5 mi (0.8 km) downstream from tail of Jose V. Martinez ditch (station 08288050), 0.7 mi (1.1 km) downstream from heading located on left bank of Rio Chama, and 1.3 mi (2.1 km) northwest of Medanales. Period of record, April 1972 to current year.
- 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 (91 m) downstream from tail of Manzanares and Montoya ditch (station 08288100), 0.7 mi (1.1 km) downstream from heading located on right bank of Rio Chama, and 1.1 mi (1.8 km) northwest of Medanales. Period of record, April 1972 to current year.
- 08288250 MARTINEZ AND DURANES DITCH (LOWER) NEAR MEDANALES, NM.--Lat 36°09'26", long 106°10'24", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank, 0.9 mi (1.4 km) downstream from culvert on State Highway 233, 1.4 mi (2.3 km) south of Medanales, 2.5 mi (4.0 km) downstream from "upper" gage (station 08288200), and 3.2 mi (5.1 km) downstream from heading located on right bank of Rio Chama. Period of record, April 1972 to current year.
- 08288300 CHILI DITCH NEAR HERNANDEZ, NM.--Lat 36°07'00", long 106°09'11", in SW¼SW¼ sec.24, T.22 N., R.7 E., Rio Arriba County, totalizing flowmeter and Parshall flume on left bank, 0.4 mi (0.6 km) downstream from heading located on right bank of Rio Chama, 0.5 mi (0.8 km) upstream from siphon under Rio del Oso, and 4.1 mi (6.6 km) northwest of Hernandez. Period of record, April 1972 to current year.

Diversions from Rio Chama - Continued

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, water-stage recorder, and Parshall flume on left bank, 30 ft (9 m) upstream from flume over Arroyo de la Penita, 0.7 mi (1.1 km) downstream from heading located on left bank of Rio Chama, and 1.0 mi (1.6 km) northwest of Chamita. Period of record, March 1936 to April 1941, February 1963 to current year (records furnished by Bureau of Reclamation August 1966 to December 1972).

08289800 HERNANDEZ DITCH AT HERNANDEZ, NM.--Lat 36°04'52", long 106°07'16", Rio Arriba County, in Bartolome Sanchez Grant, totalizing flowmeter, water-stage recorder, and Parshall flume on right bank, 0.7 mi (1.1 km) downstream from heading located on right bank of Rio Chama, 1.1 mi (1.8 km) north of Hernandez, and 1.3 mi (2.1 km) northwest of Chamita. Period of record, March 1963 to current year (records furnished by Bureau of Reclamation July 1965 to December 1971).

08290100 SALAZAR DITCH AT HERNANDEZ, NM.--Lat 36°03'44", long 106°06'31", in SE¼SE¼ sec.8, T.21 N., R.8 E., Rio Arriba County, in San Juan Pueblo Grant, totalizing flowmeter and Parshall flume on right bank, 0.1 mi (0.2 km) downstream from heading located on right bank of Rio Chama, and 0.6 mi (1.0 km) east of Hernandez. Period of record, April 1972 to current year.

Diversions from Rio Chama, in acre-feet, irrigation season 1977

	Diversion	APR	MAY	JUN	JUL	AUG	SEP	OCT
08286300	Monastery pump	0	0.5	0	0	0	0	0
08287020	Abeyta Trujillo ditch	186	422	415	371	532	102	142
08287040	Winfield Morton pump	4.9	12	52	100	a	a	a
08287060	Jose Pablo Gonzales ditch	355	a	880	509	305	164	181
08287150	Gonzales ditch	b20	b60	b150	b90	b20	b20	0
08287200	La Puente ditch	0	115	218	201	110	92	19
08287250	Quintana ditch	23	37	64	22	34	46	7.7
08287270	Valentine Martinez ditch	7.7	11	17	9.5	0	0	0
08287300	Mariano ditch	a	a	a	66	b90	b10	b0
08287400	Ferran ditch	0	131	274	18	0	0	0
08287600	Tierra Azul ditch	100	565	662	266	123	0	0
08288050	Jose V. Martinez ditch	61	c0	281	66	c3.0	c50	c47
08288100	Manzanares and Montoya ditch	.4	5.9	9.8	3.8	1.5	0	0
08288150	Rio de Chama ditch	207	605	947	740	355	489	433
08288200	Martinez and Duranes ditch (upper)	676	b975	b980	309	463	b250	b300
08288250	Martinez and Duranes ditch (lower)	58	743	790	64	392	212	270
08288300	Chili ditch	118	296	91	67	54	102	7.2
08289500	Chamita ditch	245	541	782	616	607	627	224
08289800	Hernandez ditch	526	1380	469	839	568	688	401
08290100	Salazar ditch	251	639	525	471	290	396	189

a No record.

b Record estimated.

c Because of gage malfunction, total monthly diversion may have exceeded this value.

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 (41 m) downstream from bridge on State Highway 4, 200 ft (61 m) downstream from confluence of Rio Medio and Rio Frijoles, 0.6 mi (1.0 km) northwest of Cundiyo, 1.8 mi (2.9 km) upstream from Santa Cruz Dam, and at mile 11.9 (19.1 km).

DRAINAGE AREA.--86 mi² (220 km²), approximately.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1953, published as Rio Santa Cruz at Cundiyo.

REVISED RECORDS.--WSP 1392: 1931(M), 1932-33, 1934-39(M), 1942, 1943(M).

GAGE.--Water-stage recorder. Concrete control since Jan. 3, 1954. Altitude of gage is 6,460 ft (1,969 m), from topographic map. Sept. 1, 1930 to Aug. 12, 1932, water-stage recorder at site about 1 mi (2 km) downstream at different datum. Aug. 13, 1932 to Oct. 29, 1934, water-stage recorder at site 35 ft (11 m) upstream at datum 0.42 ft (0.128 m) higher. Oct. 30, 1934 to Jan. 2, 1954, water-stage recorder at present site at datum 0.64 ft (0.195 m) lower.

REMARKS.--Remarks good except those for winter period, which are fair. Diversions for irrigation of about 1,000 acres (4.05 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, 28.3 ft³/s (0.801 m³/s), 20,500 acre-ft/yr (25.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft³/s (68.5 m³/s) Sept. 24, 1931, gage height, 7.8 ft (2.38 m), site and datum then in use, from rating curve extended above 170 ft³/s (4.81 m³/s); minimum, 0.19 ft³/s (0.005 m³/s) Mar. 13, 1954, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 273 ft³/s (7.73 m³/s) at 2145 hours Sept. 4, gage height, 3.00 ft (0.914 m), no other peak above base of 100 ft³/s (2.8 m³/s); minimum, 3.2 ft³/s (0.091 m³/s) Nov. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	11	8.0	7.5	8.2	9.5	8.0	30	27	12	9.2	16
2	15	11	8.0	7.4	7.8	8.1	7.5	29	26	12	8.9	21
3	14	11	8.7	7.2	7.8	7.0	7.5	28	27	13	7.7	20
4	14	11	9.2	7.3	7.5	7.0	7.8	26	25	11	8.3	25
5	14	11	9.6	7.3	7.8	7.3	7.9	28	26	22	9.4	21
6	14	11	10	7.8	7.8	9.6	8.9	28	25	15	8.9	20
7	13	11	9.4	8.2	7.6	9.0	11	28	29	13	9.1	19
8	13	10	9.5	8.2	7.7	8.1	14	28	27	14	7.3	17
9	13	10	9.2	8.3	8.0	7.8	17	30	26	25	7.6	15
10	13	9.3	9.0	8.2	8.5	7.7	21	32	25	17	15	14
11	13	9.1	9.3	8.2	8.2	7.9	22	29	24	12	25	13
12	13	7.5	8.5	8.2	7.9	7.9	21	31	23	11	39	16
13	12	5.9	8.5	8.2	7.9	8.8	21	40	18	11	23	20
14	11	10	8.5	8.2	7.9	8.9	20	41	18	13	17	16
15	11	8.5	8.5	8.2	7.6	9.3	17	37	15	20	17	14
16	10	7.7	8.0	8.1	7.8	8.9	17	36	14	23	23	14
17	9.7	7.9	7.8	8.2	7.8	7.9	16	34	13	21	22	12
18	10	11	7.8	8.2	8.3	7.5	18	32	12	16	28	11
19	9.7	11	7.7	8.2	8.0	7.5	23	33	11	13	28	10
20	9.1	10	7.7	8.5	8.5	7.7	20	33	10	12	35	9.2
21	10	9.0	7.7	8.5	8.0	7.7	17	32	10	18	31	9.5
22	12	9.0	7.7	8.5	7.7	8.3	19	30	10	21	28	9.8
23	12	9.5	7.7	8.4	7.2	8.9	24	30	14	22	25	12
24	11	8.7	7.7	8.2	7.6	9.5	23	31	17	19	24	9.8
25	11	6.5	7.9	8.0	7.1	10	25	31	14	19	23	9.4
26	11	7.0	8.0	8.0	8.2	9.9	27	30	13	19	19	9.9
27	8.6	7.1	7.5	8.2	9.5	9.2	28	29	14	16	16	11
28	11	5.0	7.6	8.4	8.5	8.4	30	27	15	15	15	11
29	10	6.5	7.1	8.1	---	6.9	29	26	15	12	15	10
30	10	7.5	7.1	7.8	---	8.2	27	27	12	13	17	9.7
31	12	---	7.3	7.8	---	8.9	---	27	---	13	17	---
TOTAL	365.1	270.7	256.2	249.5	222.4	259.3	554.6	953	555	493	578.4	425.3
MEAN	11.8	9.02	8.26	8.05	7.94	8.36	18.5	30.7	18.5	15.9	18.7	14.2
MAX	15	11	10	8.5	9.5	10	30	41	29	25	39	25
MIN	8.6	5.0	7.1	7.2	7.1	6.9	7.5	26	10	11	7.3	9.2
AC-FT	724	537	508	495	441	514	1100	1890	1100	978	1150	844

CAL YR 1976 TOTAL 7976.4 MEAN 21.8 MAX 88 MIN 5.0 AC-FT 15820
WTR YR 1977 TOTAL 5182.5 MEAN 14.2 MAX 41 MIN 5.0 AC-FT 10280

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 (91 m) upstream from Nambé Falls, 2.6 mi (4.2 km) upstream from confluence of Rio Nambé and Rio En Medio, 4.4 mi (7.1 km) southeast of Nambé Pueblo, and 5.4 mi (8.7 km) southeast of Nambé.

DRAINAGE AREA.--34.1 mi² (88.3 km²), revised.

PERIOD OF RECORD.--February 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to July 22, 1976, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by a concrete arch and earthfill dam, storage began Feb. 23, 1976. Total capacity, 2,020 acre-ft (2.49 hm³) at elevation 6,826.6 ft (2,080.75 m), crest of ogee weir spillway, including 237 acre-ft (292,000 m³) of storage in a permanent pool between elevation 6,760.9 ft (2,060.72 m), invert of outlet conduits, and 6,780.0 ft (2,066.54 m). Dead storage 121 acre-ft (149,000 m³) below elevation 6,760.9 ft (2,060.72 m). Outlet conduits are one 6 in (0.152 m) and two 12 in (0.305 m) diameter pipes. Reservoir is used for storage of irrigation water and for recreation. Figures given herein represent total storage.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,180 acre-ft (1.45 hm³) Apr. 29, 1977, elevation, 6,809.48 ft (2,075.530 m); no storage prior to Feb. 23, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,180 acre-ft (1.45 hm³) Apr. 29, elevation, 6,809.48 ft (2,075.530 m); minimum, 368 acre-ft (454,000 m³) Aug. 10, elevation, 6,780.58 ft (2,066.721 m).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Bureau of Reclamation in 1976)

6,780	358	6,800	838
6,790	565	6,810	1,200

CONTENTS. IN ACRE-FEET; WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	715	554	472	616	733	835	939	1170	776	424	392	539
2	717	543	479	620	739	838	943	1160	754	419	388	538
3	723	534	484	624	743	840	948	1150	733	415	385	542
4	726	523	490	627	746	844	951	1140	720	413	382	545
5	729	511	495	631	750	847	955	1120	720	408	379	555
6	731	501	501	635	753	850	959	1100	719	406	376	565
7	729	491	506	639	757	854	964	1090	706	403	373	576
8	730	480	511	642	761	857	972	1070	686	403	372	581
9	732	469	516	646	764	860	981	1060	665	408	370	584
10	734	458	521	650	768	864	993	1050	643	407	370	585
11	736	447	526	654	771	867	1000	1030	624	405	374	587
12	738	435	531	657	775	870	1010	1010	614	402	392	589
13	739	421	536	662	778	873	1030	997	602	400	399	593
14	738	412	540	664	781	876	1040	987	576	397	399	594
15	728	401	546	669	785	880	1040	995	549	398	399	597
16	718	393	551	673	788	883	1050	1000	521	400	402	600
17	709	399	556	677	792	886	1060	991	497	401	404	603
18	699	405	559	681	796	889	1070	969	476	401	428	606
19	684	413	564	684	799	892	1090	946	455	400	445	607
20	673	419	569	687	803	895	1100	920	436	400	462	608
21	663	425	574	691	806	898	1110	902	434	401	483	609
22	654	431	578	696	810	902	1120	905	428	400	502	610
23	644	436	582	700	813	906	1130	908	428	400	515	611
24	635	440	586	704	817	911	1140	890	428	401	525	612
25	625	444	590	708	822	916	1150	865	428	401	530	616
26	615	448	593	712	825	920	1160	839	427	402	534	617
27	606	452	598	715	828	925	1160	813	426	403	536	619
28	596	454	601	719	832	928	1170	796	426	402	537	621
29	586	459	605	723	---	929	1180	797	426	400	538	617
30	576	466	608	727	---	933	1170	800	418	398	538	615
31	565	---	612	730	---	936	---	797	---	395	538	---
MAX	739	554	612	730	832	936	1180	1170	776	424	538	621
MIN	565	393	472	616	733	835	939	796	418	395	370	538
(†)	6790.0	6785.59	6791.89	6796.35	6799.79	6803.00	6809.35	6798.68	6783.19	6782.01	6788.86	6792.00
(‡)	-147	-99	+146	+118	+102	+104	+234	-373	-379	-23	+143	+77
CAL YR 1976	MAX	MIN	†	+612								
WTR YR 1977	MAX	1180	MIN	370	‡	-97						

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

RIO GRANDE BASIN

08294300 RIO NAMBE AT NAMBE FALLS, NEAR NAMBE, NM

LOCATION.--Lat 35°50'46", long 105°54'29", in NW¼SW¼ sec.29, T.19 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, in Nambé Indian Reservation, on left bank 800 ft (240 m) downstream from Nambé Falls, 1,100 ft (335 m) downstream from Nambé Falls Dam, 2.4 mi (3.9 km) upstream from confluence of Rio Nambé and Rio En Medio, 4.2 mi (6.8 km) southeast of Nambé Pueblo and 5.2 mi (8.4 km) south-east of Nambé.

DRAINAGE AREA.--34.2 mi² (88.6 km²), revised.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 6,513.68 ft (1,985.370 m) above mean sea level (levels by Bureau of Reclamation).

REMARKS.--Flow regulated by Nambé Falls Reservoir (station 08294200) since Feb. 22, 1976. Outlet conduits are one 6 in (0.152 m) and two 12 in (0.305 m) diameter pipes. No diversions above station.

COOPERATION.--Records furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--12 years (water years 1964-75), 10.7 ft³/s (0.303 m³/s), 7,750 acre-ft/yr (9.56 hm³/yr), prior to completion of Nambé Falls Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,090 ft³/s (30.9 m³/s) Aug. 8, 1967, gage height, about 6.0 ft (1.83 m), from floodmarks, from rating curve extended above 44 ft³/s (1.25 m³/s) on basis of field estimate of peak flow; minimum daily, 0.30 ft³/s (0.008 m³/s) Aug. 21, 22, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 24 ft³/s (0.68 m³/s) May 20, 25-27, June 1-3, gage height, 0.94 ft (0.287 m); minimum daily, 0.30 ft³/s (0.008 m³/s) Aug. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	10	1.2	1.4	1.4	1.4	1.6	16	24	6.8	6.2	6.5
2	5.8	10	1.1	1.4	1.4	1.4	1.6	16	24	6.8	6.2	7.4
3	5.8	12	1.1	1.4	1.4	1.4	1.7	16	24	6.5	6.2	7.7
4	6.1	11	1.1	1.4	1.4	1.4	1.7	16	21	6.5	5.9	7.7
5	6.1	12	1.1	1.4	1.4	1.4	1.7	18	14	6.8	5.6	8.2
6	6.1	12	1.1	1.4	1.4	1.4	1.6	20	14	6.5	5.6	7.4
7	6.1	12	1.1	1.4	1.4	1.4	1.6	20	21	5.9	5.6	7.4
8	6.1	12	1.1	1.4	1.4	1.4	1.6	22	22	5.9	5.3	7.4
9	5.8	12	1.1	1.4	1.4	1.4	1.6	19	22	5.9	5.0	7.4
10	5.5	12	1.1	1.4	1.4	1.5	1.6	17	22	5.9	5.0	7.4
11	5.2	11	1.1	1.4	1.4	1.5	1.6	20	20	5.9	5.0	7.4
12	4.9	11	1.1	1.4	1.4	1.5	1.6	23	14	5.9	2.4	7.4
13	5.2	12	1.2	1.4	1.4	1.5	1.6	22	14	5.9	1.8	7.4
14	8.8	12	1.2	1.4	1.4	1.5	1.6	18	19	5.9	4.7	7.4
15	11	12	1.2	1.4	1.4	1.5	1.6	10	20	5.9	4.7	6.1
16	10	7.8	1.3	1.4	1.4	1.6	1.6	8.9	20	5.9	4.7	5.3
17	10	1.3	1.2	1.4	1.4	1.6	1.7	19	18	5.9	4.7	5.3
18	10	1.3	1.2	1.4	1.4	1.6	1.7	22	17	5.9	3.4	5.3
19	10	1.1	1.2	1.4	1.4	1.6	1.7	22	17	5.9	2.4	5.0
20	10	.90	1.2	1.4	1.4	1.6	1.7	24	16	6.5	2.8	5.0
21	10	.90	1.2	1.4	1.4	1.6	1.7	20	9.4	6.5	.30	5.0
22	10	.90	1.2	1.4	1.4	1.6	1.7	11	7.7	6.5	.30	5.0
23	10	.90	1.1	1.4	1.4	1.6	1.7	11	7.7	6.5	2.5	5.0
24	10	1.0	1.1	1.4	1.4	1.6	1.7	22	7.7	6.2	5.6	5.0
25	10	1.2	1.1	1.4	1.4	1.6	4.3	24	7.4	6.2	6.2	5.0
26	10	1.2	1.1	1.4	1.4	1.6	7.3	24	7.1	6.2	6.2	5.0
27	10	1.2	1.2	1.4	1.4	1.6	7.3	24	7.1	6.2	6.5	5.0
28	10	1.1	1.2	1.4	1.4	1.6	7.3	21	7.1	6.2	6.5	5.5
29	10	1.1	1.2	1.4	---	1.6	8.7	12	7.1	6.2	6.5	5.9
30	10	1.2	1.2	1.4	---	1.6	14	12	6.8	6.2	6.5	5.9
31	10	---	1.2	1.4	---	1.6	---	16	---	6.2	6.5	---
TOTAL	254.3	196.10	35.8	43.4	39.2	47.2	88.4	565.9	458.1	192.2	146.80	188.4
MEAN	8.20	6.54	1.15	1.40	1.40	1.52	2.95	18.3	15.3	6.20	4.74	6.28
MAX	11	12	1.3	1.4	1.4	1.6	14	24	24	6.8	6.5	8.2
MIN	4.9	.90	1.1	1.4	1.4	1.4	1.6	8.9	6.8	5.9	.30	5.0
AC-FT	504	389	71	86	78	94	175	1120	909	381	291	374

CAL YR 1976 TOTAL 2967.15 MEAN 8.11 MAX 24 MIN .50 AC-FT 5890
WTR YR 1977 TOTAL 2255.80 MEAN 6.18 MAX 24 MIN .30 AC-FT 4470

08312600 POJOAQUE RIVER AT SAN ILDEFONSO PUEBLO, NM

LOCATION.--Lat 35°53'51", long 106°06'24", Santa Fe County, Hydrologic Unit 13020101, in San Ildefonso Pueblo Grant, on right bank 0.7 mi (1.1 km) northeast of San Ildefonso Pueblo, and 1.0 mi (1.6 km) upstream from mouth.

DRAINAGE AREA.--184 mi² (477 km²), approximately.

PERIOD OF RECORD.--May 1972 to current year (operated as a miscellaneous measurement site and high-flow station only).

GAGE.--Water-stage recorder. Altitude of gage is 5,560 ft (1,695 m), from topographic map.

REMARKS.--Records poor. Diversions for irrigation of about 4,900 acres (19.8 km²), 1973 determination, above station. Flow regulated by Nambé Falls Reservoir (station 08294200) since 1975. Mean daily discharge computed only when flow exceeds about 40 ft³/s (1.13 m³/s). Several observations of water temperature were made during the year. See table below for results of discharge measurements made during year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,100 ft³/s (173 m³/s) Aug. 19, 1972, gage height, 6.80 ft (2.073 m), from floodmarks, from rating curve extended above 110 ft³/s (3.12 m³/s) on basis of slope-area measurements at gage heights 5.12 ft (1.561 m) and 6.80 ft (2.073 m); no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 231 ft³/s (6.54 m³/s) July 8, gage height, 3.68 ft (1.122 m), no peak above base of 500 ft³/s (14 m³/s); no flow several days.

DISCHARGE MEASUREMENTS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
Oct. 12	.22	Jan. 17	3.5	May 3	e1.2	July 18	0
Nov. 2	4.2	Feb. 15	e6.2	17	e1.7	Aug. 1	0
15	2.4	Mar. 2	6.9	June 1	e .20	17	e .01
Dec. 3	e5.0	14	e4.2	July 1	.02	Sept. 6	e .01
16	e3.6	Apr. 1	1.5	11	e .03	15	e .01
Jan. 3	4.5	14	2.0				

e Estimated.

NOTE.--Mean daily discharge did not exceed 40 ft³/s (1.13 m³/s) during the water year.

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM
(National stream-quality accounting network, surveillance network,
and radiochemical network station)

LOCATION.--Lat 35°52'29", long 106°08'30", in SW¼SW¼ sec.18, T.19 N., R.8 E., Santa Fe County, Hydrologic Unit 13020101, in San Ildefonso Pueblo Grant, near right bank on downstream end of pier of former railway bridge, 400 ft (120 m) downstream from bridge on State Highway 4, 1.8 mi (2.9 km) southwest of San Ildefonso Pueblo, 2.5 mi (4.0 km) downstream from Pojoaque River, 6.8 mi (10.9 km) west of Pojoaque, and at mile 1,614.2 (2,597.2 km).

DRAINAGE AREA.--14,300 mi² (37,040 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1895 to December 1905, June 1909 to current year. Monthly discharge only for some periods, published in WSP 1312. In early reports this record was published as "at Water Tank," as "at Rio Grande," and as "near Buckman."

REVISED RECORDS.--WSP 828: Drainage area. WSP 1512: 1895-99, 1904-6, 1911-12, 1914, 1931(M), 1935. WSP 1712: 1904(M).

GAGE.--Water-stage recorder. Datum of gage is 5,488.48 ft (1,672.889 m) above mean sea level. See WSP 1312, 1732, or 1923 for history of changes prior to June 1, 1910.

REMARKS.--Water-discharge records good. Considerable regulation by Heron Reservoir (station 08284510), El Vado Reservoir (station 08285000) and Abiquiu Reservoir (station 08286900) on Rio Chama, which can contribute a major portion of the total flow. Flow affected by release of transmountain water from Heron Reservoir since May 1971. Diversions above station for irrigation of about 620,000 acres (2,500 km²) in Colorado and 75,000 acres (300 km²) in New Mexico. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft³/s (691 m³/s) May 23, 1920; maximum gage height, 14.5 ft (4.42 m) Sept. 29, 1904, present site and datum; minimum daily discharge, 60 ft³/s (1.70 m³/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.--Maximum discharge, 2,620 ft³/s (74.2 m³/s) Sept. 5, gage height, 5.87 ft (1.789 m), no peak above base of 5,200 ft³/s (150 m³/s); minimum, 168 ft³/s (4.76 m³/s) Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	445	455	400	438	467	560	580	1340	297	924	316	863
2	448	471	433	435	480	560	544	1250	1250	811	240	712
3	429	504	423	432	483	557	571	1140	328	678	203	944
4	409	502	426	434	475	559	561	949	1220	649	195	502
5	388	514	422	437	479	533	567	961	1520	688	511	504
6	378	486	435	448	481	562	519	996	1430	778	579	345
7	376	476	430	447	483	554	494	967	952	758	534	340
8	387	439	439	443	478	553	481	916	968	647	523	308
9	377	425	450	437	477	559	495	958	983	664	514	285
10	365	420	490	388	486	574	536	936	1070	713	929	264
11	362	419	486	395	507	573	532	936	1370	758	1090	256
12	369	428	448	399	530	570	491	946	1460	722	1650	253
13	375	426	451	410	531	552	487	941	1540	592	1550	285
14	380	427	455	414	525	594	504	537	1520	699	1020	284
15	370	410	489	409	521	604	480	527	1530	1260	614	270
16	602	408	523	439	514	608	463	492	1520	1270	760	290
17	588	409	582	438	521	608	396	430	1460	1280	1070	311
18	528	419	737	422	542	617	341	415	1420	1270	1260	266
19	615	436	691	420	567	693	365	384	1450	1030	1090	256
20	548	458	720	417	574	695	416	375	1390	864	532	238
21	538	450	691	431	576	671	453	372	1370	897	422	227
22	541	452	819	454	592	639	472	344	1220	1070	365	227
23	550	445	789	454	592	658	391	321	1050	1040	328	618
24	546	442	534	448	605	795	384	289	967	1040	321	833
25	554	434	463	448	597	761	364	296	960	602	283	720
26	545	451	435	453	586	675	346	343	949	1170	268	670
27	560	421	435	466	566	655	340	345	934	1130	264	700
28	572	340	439	465	502	642	371	293	896	576	256	736
29	530	325	412	471	---	627	428	279	891	607	275	771
30	466	340	417	459	---	588	1290	277	934	426	745	725
31	433	---	443	467	---	590	---	242	---	370	922	---
TOTAL	14574	13032	15807	13518	14737	18986	14662	19797	34849	25983	19629	14003
MEAN	470	434	510	436	526	612	489	639	1162	838	633	467
MAX	615	514	819	471	605	795	1290	1340	1540	1280	1850	944
MIN	362	325	400	388	467	533	340	242	297	370	195	227
AC=FT	28910	25850	31350	26810	29230	37660	29080	39270	69120	51540	38930	27770
CAL YR 1976	TOTAL	384768	MEAN	1051	MAX	3420	MIN	325	AC=FT	763200		
WTR YR 1977	TOTAL	219577	MEAN	602	MAX	1650	MIN	195	AC=FT	435500		

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.

HARDNESS: October 1946 to current year.

DISSOLVED SOLIDS: October 1946 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1947 to current year.

INSTRUMENTATION.--Continuous water-temperature recorder since April, 1954.

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, 165 micromhos June 13, 1952.

WATER TEMPERATURES: Maximum, 31.0°C Aug. 4, 5, 1954; minimum, 0.0°C on many days during winter months each year.

HARDNESS: Maximum, 702 mg/L Aug. 5, 1963; minimum, 79 mg/L Nov. 7-13, 1975.

DISSOLVED SOLIDS: Maximum, 1,030 mg/L Aug. 5, 1963; minimum, 131 mg/L May 16-31, 1975.

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, 833 micromhos Aug. 19; minimum daily, 292 micromhos Apr. 1.

WATER TEMPERATURES: Maximum, 28.5°C Aug. 2; minimum, 0.0°C on many days during winter period.

HARDNESS: Maximum, 250 mg/L Aug. 10-19; minimum 130 mg/L Mar. 2, 1-31, Apr. 5.

DISSOLVED SOLIDS: Maximum, 400 mg/L Aug. 10-19; minimum, 226 mg/L Mar. 2.

SEDIMENT CONCENTRATIONS: Maximum daily, 17,500 mg/L Aug. 13; minimum daily, 53 mg/L Apr. 26.

SEDIMENT LOADS: Maximum daily, 73,200 tons (66,400 tonnes) Aug. 13; minimum daily, 41 tons (37 tonnes) May 31.

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)
OCT												
01-15	391	429	8.0	160	17	48	8.6	28	1.0	3.6	169	0
16-31	545	380	8.1	140	16	43	8.1	24	.9	3.2	152	0
NOV												
01-30	434	407	8.1	150	8	46	8.6	28	1.0	3.5	174	0
DEC												
01-23	532	400	8.2	150	21	45	8.5	25	.9	3.0	154	0
24-31	447	380	8.2	140	11	44	7.9	24	.9	3.0	160	0
JAN												
01-31	428	384	8.0	150	15	46	8.1	24	.9	3.2	163	0
FEB												
01-28	526	369	8.0	140	19	45	7.4	24	.9	3.1	151	0
MAR												
01-31	607	353	8.0	130	13	39	7.5	25	1.0	3.5	140	0
JUL												
01-15	700	364	8.1	180	78	54	12	30	1.0	2.7	130	0
16-31	930	417	8.1	170	55	54	8.4	22	.7	3.1	140	0
AUG												
01-09	403	495	7.8	200	81	62	10	29	.9	3.9	140	0
10-19	1134	610	7.5	250	110	82	11	32	.9	4.4	170	0
20-31	444	489	7.6	190	33	62	8.2	29	.9	4.2	190	0
SEP												
01-05	718	557	7.9	220	120	73	9.8	29	.8	4.2	130	0
06-22	280	401	8.0	160	27	50	8.2	27	.9	3.3	160	0
23-30	712	488	7.9	190	78	59	11	27	.8	3.4	140	0
WTD. AVG.	--	417	8.0	164	38	51	8.8	26	.9	3.4	153	0
TIME WTD.												
AVG.	547	410	8.0	159	32	49	8.6	26	.9	3.4	155	0
TOT. LOAD (TONS)	--	--	--	--	--	20700	3550	10600	--	1370	62000	0

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT												
01-15	72	8.4	.6	23	--	277	.38	292	.22	--	--	--
16-31	65	7.2	.4	20	--	247	.34	363	.15	--	--	--
NOV												
01-30	60	8.9	.6	23	--	265	.36	311	.23	--	--	--
DEC												
01-23	64	7.9	.5	25	--	257	.35	369	.55	--	--	--
24-31	49	7.8	.6	27	--	244	.33	294	.45	--	--	--
JAN												
01-31	55	8.5	.6	27	--	255	.35	295	.58	--	--	--
FEB												
01-28	61	8.6	.5	26	--	252	.34	358	.34	--	--	--
MAR												
01-31	62	12	.5	25	--	245	.33	402	.33	--	--	--
JUL												
01-15	84	5.6	.4	17	--	270	.37	510	--	--	--	--
16-31	130	4.3	.4	15	--	306	.42	768	--	--	--	--
AUG												
01-09	120	8.1	.5	21	--	325	.44	354	.32	--	--	--
10-19	160	5.6	.4	18	--	400	.54	1220	.63	--	--	--
20-31	84	7.5	.6	23	--	314	.43	376	.39	--	--	--
SEP												
01-05	160	5.7	.5	19	--	365	.50	708	--	--	--	--
06-22	65	7.9	.7	25	--	266	.36	201	--	--	--	--
23-30	130	6.4	.5	18	--	324	.44	623	--	--	--	--
WTD. AVG.	84	7.8	.5	22	--	281	.38	--	.39	--	--	--
TIME WTD.												
AVG.	77	8.1	.5	23	--	274	.37	--	.38	--	--	--
TOT. LOAD (TONS)	34200	3150	204	8960	--	114000	--	--	117	--	--	--

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA+MG) (MG/L) (00900)
OCT										
06...	1330	380	450	7.9	22.0	14.0	20	9.8	55	160
NOV										
03...	1500	514	415	8.1	19.0	9.5	10	12.0	17	140
DEC										
02...	1300	391	420	7.9	7.0	1.0	20	12.8	26	150
JAN										
05...	1300	440	340	8.1	1.5	4.5	8	11.2	24	140
FEB										
02...	1200	483	395	7.9	3.0	3.0	9	11.6	3	140
MAR										
02...	1045	571	370	7.5	2.5	4.0	25	12.0	12	130
APR										
05...	1400	611	385	8.3	16.0	13.0	35	8.9	18	130
MAY										
11...	1000	959	400	8.1	18.0	13.0	25	12.5	71	160
JUN										
02...	1331	1500	380	8.1	28.5	17.5	120	8.7	17	160
JUL										
14...	1030	670	400	7.7	25.0	20.0	280	7.2	43	140
AUG										
11...	1045	1100	420	7.6	19.0	19.0	160	7.9	32	190
SEP										
13...	1200	286	420	8.0	20.5	16.0	1300	7.5	110	140

RIO GRANDE BASIN

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08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	NON-CAR-BONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNE-SIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD-SORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)
OCT 06...	25	49	8.5	28	1.0	3.7	161	0	70
NOV 03...	12	44	8.2	24	.9	3.6	161	0	57
DEC 02...	8	45	8.2	26	.9	3.0	168	0	51
JAN 05...	0	42	7.7	24	.9	3.1	166	0	49
FEB 02...	12	44	7.4	24	.9	3.0	157	0	56
MAR 02...	11	39	7.6	23	.9	3.1	144	0	53
APR 05...	6	39	7.6	26	1.0	3.2	150	0	55
MAY 11...	52	50	8.2	21	.7	2.7	130	0	85
JUN 02...	64	51	8.4	21	.7	2.7	120	0	89
JUL 14...	35	44	7.7	27	1.0	2.5	130	0	87
AUG 11...	87	59	9.2	21	.7	3.1	120	0	110
SEP 13...	2	44	7.6	29	1.1	3.4	170	0	62

DATE	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SI02) (MG/L) (00955)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITROGEN (N) (MG/L) (00610)	TOTAL ORGANIC NITROGEN (N) (MG/L) (00605)
OCT 06...	10	.6	21	273	270	.01	.01	.00	.35
NOV 03...	8.2	.7	21	267	246	.19	.01	.00	.26
DEC 02...	8.3	.6	23	245	250	.46	.46	.00	.35
JAN 05...	7.7	.5	27	246	244	.31	.31	.00	.18
FEB 02...	8.7	.5	27	252	250	.35	.35	.01	.24
MAR 02...	13	.4	25	226	236	.25	.24	.02	.44
APR 05...	9.5	.5	24	242	240	.20	.20	.03	.57
MAY 11...	5.3	.3	17	263	254	.00	.00	.03	.22
JUN 02...	4.6	.3	15	258	251	.01	.01	.04	1.6
JUL 14...	5.5	.4	17	258	255	.05	.04	.00	.00
AUG 11...	3.9	.2	15	285	281	.13	.12	.01	.56
SEP 13...	10	.6	23	257	264	.25	.15	.10	4.2

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDE- D ORGANIC CARBON (C) (MG/L) (00689)
OCT 06...	.36	.09	.01	60	10	--	--	2.6	.6
NOV 03...	.45	.06	.03	60	10	--	--	26	.3
DEC 02...	.81	.08	.01	50	10	20	--	3.7	.9
JAN 05...	.49	.06	.04	40	10	--	--	1.4	.3
FEB 02...	.60	.10	.06	50	10	--	--	2.1	.7
MAR 02...	.71	.12	.06	40	20	20	2.4	--	--
APR 05...	.80	.18	.06	60	30	--	--	2.7	1.7
MAY 11...	.25	.07	.02	40	20	--	--	3.7	--
JUN 02...	1.6	.19	.01	40	20	4	8.9	3.9	3.0
JUL 14...	.05	.20	.01	40	20	--	--	2.7	2.1
AUG 11...	.70	.28	.01	40	10	--	--	2.8	1.9
SEP 13...	4.6	4.0	.01	70	20	0	30	3.7	7.8

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CH) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CH) (UG/L) (01030)
OCT 06...	1330	--	--	60	--	--	--	--
NOV 03...	1500	--	--	60	--	--	--	--
DEC 02...	1300	2	1	50	<10	1	0	0
JAN 05...	1300	--	--	40	--	--	--	--
FEB 02...	1200	--	--	50	--	--	--	--
MAR 02...	1045	2	2	40	<10	1	0	0
APR 05...	1400	--	--	60	--	--	--	--
MAY 11...	1000	--	--	40	--	--	--	--
JUN 02...	1331	6	1	40	<10	0	10	0
JUL 14...	1030	--	--	40	--	--	--	--
AUG 11...	1045	--	--	40	--	--	--	--
SEP 13...	1200	25	4	70	10	3	70	0

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)
OCT 06...	--	--	--	--	--	10	--	--	--
NOV 03...	--	--	--	--	--	10	--	--	--
DEC 02...	<50	0	10	1	1800	10	<100	5	100
JAN 05...	--	--	--	--	--	10	--	--	--
FEB 02...	--	--	--	--	--	10	--	--	--
MAR 02...	<50	0	<10	28	1500	20	<100	0	80
APR 05...	--	--	--	--	--	30	--	--	--
MAY 11...	--	--	--	--	--	20	--	--	--
JUN 02...	<50	0	30	1	5000	20	<100	0	340
JUL 14...	--	--	--	--	--	20	--	--	--
AUG 11...	--	--	--	--	--	10	--	--	--
SEP 13...	50	0	60	1	51000	20	100	20	960

DATE	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL MOLYB- DENUM (MO) (UG/L) (01062)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT 06...	--	--	--	21	--	--	--	--
NOV 03...	--	--	--	10	--	--	--	--
DEC 02...	20	.1	.0	11	0	0	20	20
JAN 05...	--	--	--	8	--	--	--	--
FEB 02...	--	--	--	18	--	--	--	--
MAR 02...	20	.1	.0	15	1	1	20	0
APR 05...	--	--	--	8	--	--	--	--
MAY 11...	--	--	--	6	--	--	--	--
JUN 02...	4	.0	.0	2	1	1	50	10
JUL 14...	--	--	--	3	--	--	--	--
AUG 11...	--	--	--	2	--	--	--	--
SEP 13...	0	.1	.0	3	0	0	210	10

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDE D GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDE D GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS AS SH90 /Y90 (PC/L) (80050)	SUS- PENDE D GROSS BETA AS AS SH90 /Y90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
OCT 06...	1330	60	5.8	4.9	4.9	3.2	4.0	2.7	.60	4.2
APR 05...	1400	83	18	5.5	4.4	4.3	3.8	3.4	.09	3.4
JUL 14...	1030	870	--	--	--	--	--	--	--	--
AUG 11...	1045	258	--	--	--	--	--	--	--	--
SEP 13...	1200	3440	--	--	--	--	--	--	--	--

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- UNIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
OCT				
06...	1330	220	130	--
NOV				
03...	1500	500	180	--
DEC				
02...	1300	68	75	--
JAN				
05...	1300	100	60	--
FEB				
02...	1200	210	66	--
MAR				
02...	1045	37	--	55
APR				
05...	1400	190	--	420
MAY				
11...	1000	510	--	260
JUN				
02...	1331	2000	--	880
JUL				
14...	1030	4300	--	6900
AUG				
11...	1045	4000	--	780
SEP				
13...	1200	4400	--	1300

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

IDENTIFICATION OF PHYTOPLANKTON

DATE TIME	OCT 6,76 1330	NOV 3,76 1500	DEC 2,76 1300	JAN 5,77 1300	FEB 2,77 1200	MAR 2,77 1045
TOTAL CELLS/ML	23000	4400	1300	690	4100	4800
DIVERSITY: DIVISION	0.8	0.6	0.6	0.3	0.3	0.1
..CLASS	0.8	0.6	0.6	0.3	0.3	0.1
..ORDER	1.1	1.5	0.9	0.4	0.4	0.1
...FAMILY	1.6	3.0	2.7	2.1	2.4	2.2
....GENUS	1.8	3.2	2.8	2.1	2.4	2.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...HYDRODICTYACEAE												
....PEDIASTRUM	--	-	--	-	* 0		--	-	--	-	--	-
...MIRACTINIACEAE												
....GOLENKINIA	--	-	--	-	--	-	--	-	--	-	--	-
...MIRACTINIUM	1300	6	--	-	--	-	--	-	--	-	--	-
...OOCYSTACEAE												
....ANKISTRODESMUS	160	1	32	1	--	-	6	1	--	-	--	-
....CHODATELLA	160	1	--	-	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	640	3	--	-	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	640	3	--	-	--	-	--	-	--	-	--	-
...OOCYSTIS	--	-	--	-	--	-	--	-	--	-	--	-
....TETRAEDRON	160	1	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE												
....SCENEDESMUS	1600	7	130	3	45	4	24	3	--	-	--	-
....TETRASTRUM	640	3	--	-	--	-	--	-	--	-	--	-
...ULOTRICHIALES												
...CHAETOPHORACEAE												
...STIGEODONIUM	--	-	--	-	--	-	--	-	--	-	--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	32	1	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

IDENTIFICATION OF PHYTOPLANKTON

DATE TIME	OCT 6,76 1330	NOV 3,76 1500	DEC 2,76 1300	JAN 5,77 1300	FEB 2,77 1200	MAR 2,77 1045						
TOTAL CELLS/ML	23000	4400	1300	690	4100	4800						
DIVERSITY: DIVISION	0.8	0.6	0.6	0.3	0.3	0.1						
..CLASS	0.8	0.6	0.6	0.3	0.3	0.1						
..ORDER	1.1	1.5	0.9	0.4	0.4	0.1						
...FAMILY	1.6	3.0	2.7	2.1	2.4	2.2						
....GENUS	1.8	3.2	2.8	2.1	2.4	2.4						
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT		
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	16000#	70	1200#	27	9	1	--	--	72	2	--	--
....MELOSIRA	--	--	--	--	9	1	12	2	--	--	--	--
....STEPHANODISCUS	--	--	32	1	45	4	--	--	--	--	--	--
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	--	--	--	--	--	--	--	72	2	86	2
....COCCONEIS	320	1	64	1	9	1	6	1	140	4	86	2
....RHOICOSPHEA	--	--	32	1	*	0	--	--	--	--	43	1
...CYMBELLACEAE												
....AMPHORA	--	--	--	--	*	0	--	--	--	--	--	--
....CYMBELLA	--	--	32	1	9	1	18	3	36	1	130	3
....EPITHEMIA	--	--	32	1	*	0	6	1	36	1	86	2
....RHOPALODIA	--	--	--	--	*	0	--	--	--	--	--	--
...DIATOMACEAE												
....DIATOMA	--	--	290	6	200#	15	280#	41	250	6	220	5
...FRAGILARIACEAE												
....FRAGILARIA	--	--	670#	15	140	11	--	--	--	--	480	10
....SYNEORA	--	--	130	3	18	1	--	--	72	2	43	1
...GOMPHONEMACEAE												
....GOMPHONEMA	--	--	320	7	36	3	72	10	650#	16	260	5
...NAVICULACEAE												
....CALONEIS	--	--	--	--	--	--	--	--	--	--	43	1
....NAVICULA	320	1	510	12	410#	32	250#	35	2100#	50	2400#	50
....NEIDIUM	--	--	32	1	--	--	--	--	--	--	--	--
...PINNULARIA	160	1	--	--	--	--	--	--	--	--	--	--
...NITZSCHACEAE												
....DENTICULA	--	--	--	--	*	0	--	--	--	--	--	--
....HANTZSCHIA	--	--	--	--	--	--	--	--	--	--	--	--
....NITZSCHIA	960	4	570	13	270#	21	24	3	430	11	910#	19
...SURIPELLACEAE												
....CYMATOPLEURA	--	--	--	--	*	0	--	--	--	--	--	--
....SURIPELLA	--	--	--	--	--	--	--	--	72	2	--	--
...TABELLARIACEAE												
....TABELLARIA	--	--	--	--	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROCCOCCALES												
....CHROCCOCCAEAE												
....ANACYSTIS	--	--	--	--	*	0	--	--	--	--	--	--
...HORMOGONALES												
...OSCILLATORIACEAE												
....OSCILLATORIA	--	--	320	7	91	7	--	--	220	5	--	--
...CHROCCOCCALES												
....CHROCCOCCAEAE	--	--	--	--	--	--	--	--	--	--	--	--
...GOMPHOSPHERIA												
EUGLENOPHYTA (EUGLENOIDS)												
..CRYPTOPHYCEAE												
...CRYPTOMONIDALES												
....CRYPTOMONADACEAE												
....CRYPTOMONAS	--	--	--	--	--	--	--	--	--	--	--	--
...EUGLENOPHYCEAE												
....EUGLENALES												
....EUGLENACEAE	--	--	--	--	--	--	--	--	--	--	43	1
....TRACHELOMONAS	--	--	--	--	--	--	--	--	--	--	--	--

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

IDENTIFICATION OF PHYTOPLANKTON

DATE TIME	MAY 11,77 1000	JUN 2,77 1331	JUL 14,77 1030	AUG 11,77 1045	SEP 13,77 1200					
TOTAL CELLS/ML	1200	2500	15000	3800	23000					
DIVERSITY: DIVISION	0.9	1.1	1.1	1.0	0.5					
..CLASS	0.9	1.1	1.1	1.0	0.5					
..ORDER	1.5	1.2	1.4	1.0	1.1					
...FAMILY	2.8	3.0	1.6	2.1	2.4					
....GENUS	3.0	3.3	1.6	2.1	2.4					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	--	-	--	-	--	-
....MICRACTINIACEAE										
....GOLENKINIA	15	1	--	-	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	--	-	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	190	8	--	-	--	-	--	-
....CHODATELLA	15	1	--	-	--	-	--	-	--	-
....DICTYOSPHERIUM	--	-	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	680	5	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-	--	-	2900	13
...SCENEDESMACEAE										
....SCENEDESMUS	200#	17	--	-	1900	13	--	-	--	-
....TETRASTRUM	62	5	--	-	--	-	--	-	--	-
..ULOTRICHALES										
...CHAETOPHORACEAE										
....STIGEOCLONIUM	--	-	--	-	1400	9	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	--	-
CHRYCOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCONODISCACEAE										
....CYCLOTETRA	220#	18	19	1	--	-	--	-	2900	13
....MELOSIRA	--	-	--	-	--	-	--	-	--	-
....STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	8	1	39	2	--	-	--	-	--	-
....COCCONEIS	330#	28	420#	17	140	1	110	3	--	-
....RHOICOSPHEMIA	--	-	19	1	--	-	--	-	2900	13
...CYMBELLACEAE										
....AMPHORA	--	-	--	-	--	-	--	-	--	-
....CYMBELLA	8	1	39	2	--	-	--	-	1400	6
....EPITHEMIA	23	2	77	3	--	-	--	-	--	-
....RHOPALODIA	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

IDENTIFICATION OF PHYTOPLANKTON

DATE TIME	MAY 11,77 1000	JUN 2,77 1331	JUL 14,77 1030	AUG 11,77 1045	SEP 13,77 1200
TOTAL CELLS/ML	1200	2500	15000	3800	23000
DIVERSITY: DIVISION	0.9	1.1	1.1	1.0	0.5
..CLASS	0.9	1.1	1.1	1.0	0.5
..ORDER	1.5	1.2	1.4	1.0	1.1
...FAMILY	2.8	3.0	1.6	2.1	2.4
....GENUS	3.0	3.3	1.6	2.1	2.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
...DIATOMACEAE										
....DIATOMA	15	1	150	6	140	1	--	--	--	--
...FRAGILARIACEAE										
....FRAGILARIA	120	11	150	6	--	--	--	--	--	--
...SYNEDRA	--	--	19	1	410	3	340	9	--	--
...GOMPHONEMACEAE										
....GOMPHONEMA	--	--	96	4	--	--	--	--	--	--
...NAVICULACEAE										
....CALONEIS	--	--	--	--	--	--	--	--	--	--
...NAVICULA	77	7	560#	22	270	2	800#	21	7200#	31
...NEIDIUM	--	--	--	--	--	--	--	--	--	--
...PINNULARIA	--	--	--	--	--	--	--	--	--	--
...NITZSCHACEAE										
....DENTICULA	--	--	19	1	--	--	--	--	--	--
...HANTZSCHIA	--	--	19	1	--	--	--	--	--	--
...NITZSCHIA	46	4	250	10	--	--	230	6	5700#	25
...SURIRELLACEAE										
....CYMATOPLEURA	--	--	--	--	--	--	--	--	--	--
...SURIRELLA	23	2	--	--	--	--	--	--	--	--
...TABELLARIACEAE										
....TABELLARIA	--	--	--	--	--	--	460	12	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROCCOCCALES										
....CHROCCOCCAEAE										
....ANACYSTIS	--	--	--	--	--	--	1800#	48	--	--
...HORMOGONALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	--	--	440#	17	--	--	--	--	--	--
...CHROCCOCCALES										
....CHROCCOCCAEAE										
....GOMPHOSPHAERIA	--	--	--	--	10000#	68	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
....CRYPTOMONODACEAE										
....CRYPTOMONAS	8	1	19	1	--	--	--	--	--	--
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
....TRACHELOMONAS	--	--	--	--	--	--	--	--	--	--

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

DATE	TIME	LENGTH OF EXPO- SURE (DAYS)	CHLOR-A PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) (70955)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-B PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) (70956)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70958)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS) (70950)	SAMPLING METHOD
NOV 03...	1500	22	1.58	--	.167	--	4673	Polyethylene strip
JUN 02...	1331	23	--	.053	--	.004	52080	"

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)
OCT										
15...	1735	371	15.0	342	343	--	--	--	--	--
NOV										
01...	1705	460	11.0	281	349	--	--	--	--	--
15...	1700	412	7.0	230	256	--	--	--	--	--
DEC										
01...	1810	400	1.0	67	72	--	--	--	--	--
02...	1300	391	1.0	43	45	--	--	--	--	--
JAN										
05...	1300	440	4.5	264	314	--	--	--	--	--
FEB										
02...	1200	483	3.0	476	621	--	--	--	--	--
MAR										
02...	1045	571	4.0	505	779	--	--	--	--	--
APR										
05...	1400	611	13.0	104	172	--	--	--	--	--
MAY										
11...	1000	959	13.0	371	961	--	--	--	--	--
JUN										
02...	1331	1500	17.5	1060	4290	--	--	--	--	--
15...	0700	1530	15.0	1140	4710	--	--	--	19	34
JUL										
01...	0830	932	18.0	815	2050	--	--	--	6	15
10...	0915	697	20.0	3670	6910	50	68	81	84	90
14...	1030	670	20.0	1170	2120	45	54	68	74	80
22...	0655	872	17.0	20200	47600	55	62	83	95	97
26...	0655	1130	20.0	10900	33300	55	69	83	90	94
AUG										
10...	0930	917	21.0	13500	33400	41	51	81	94	96
11...	1045	1100	19.0	1680	4990	10	13	15	36	53
12...	1610	1670	21.0	7520	33900	36	48	66	83	93
24...	0700	368	20.0	22000	21900	49	60	84	98	98
30...	0700	360	16.0	45300	44000	54	62	90	98	99
SEP										
13...	1200	286	16.0	3940	3040	57	65	83	89	94
DATE		SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70345)	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM (70346)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70332)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70333)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70334)	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM (70335)	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM (70336)
OCT										
15...		--	--	--	16	41	92	100	--	--
NOV										
01...		--	--	--	18	42	92	99	100	--
15...		--	--	--	16	27	82	96	99	100
DEC										
01...		--	--	--	75	93	97	99	100	--
02...		--	--	--	99	--	--	--	--	--
JAN										
05...		--	--	--	25	--	--	--	--	--
FEB										
02...		--	--	--	18	--	--	--	--	--
MAR										
02...		--	--	--	58	--	--	--	--	--
APR										
05...		--	--	--	89	--	--	--	--	--
MAY										
11...		--	--	--	27	--	--	--	--	--
JUN										
02...		--	--	--	40	--	--	--	--	--
15...		88	100	--	--	--	--	--	--	--
JUL										
01...		93	100	--	--	--	--	--	--	--
10...		99	100	--	--	--	--	--	--	--
14...		99	100	--	--	--	--	--	--	--
22...		100	--	--	--	--	--	--	--	--
26...		99	100	--	--	--	--	--	--	--
AUG										
10...		99	100	--	--	--	--	--	--	--
11...		81	97	100	--	--	--	--	--	--
12...		99	100	--	--	--	--	--	--	--
24...		100	--	--	--	--	--	--	--	--
30...		100	--	--	--	--	--	--	--	--
SEP										
13...		96	98	100	--	--	--	--	--	--

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	418	395	412	381	384	369	292	358	420	323	500	627
2	422	432	388	384	376	369	307	398	410	326	480	592
3	437	392	398	387	379	384	306	391	400	353	436	605
4	473	389	432	381	377	376	314	384	420	357	429	486
5	459	387	411	374	361	362	356	369	454	372	535	413
6	438	389	412	365	361	373	330	374	325	357	518	423
7	436	370	401	367	357	387	368	372	347	352	506	420
8	410	394	418	384	351	356	353	365	338	369	486	400
9	413	406	392	391	358	378	343	359	350	361	485	408
10	416	401	399	369	354	378	321	358	354	418	657	402
11	---	401	400	391	373	377	345	378	336	358	464	410
12	438	418	392	394	369	357	354	367	318	374	450	402
13	430	419	393	397	375	367	384	368	308	383	720	396
14	415	415	384	395	359	378	368	355	306	401	586	383
15	403	415	395	386	362	374	358	368	306	380	554	395
16	452	418	400	408	367	362	377	374	304	371	575	403
17	367	415	433	401	368	359	371	382	304	352	665	440
18	367	419	388	372	371	345	411	405	306	349	568	394
19	368	419	403	366	374	379	383	382	306	341	833	387
20	381	414	401	366	383	355	382	395	304	367	522	386
21	375	413	395	372	388	339	387	411	306	352	438	389
22	375	402	396	381	384	328	411	419	304	523	449	344
23	375	411	387	383	381	311	415	431	302	415	467	425
24	366	413	384	391	374	361	423	419	320	375	551	493
25	366	405	384	399	358	317	432	405	320	392	482	499
26	375	414	374	398	359	317	434	418	316	681	493	494
27	366	401	382	376	349	324	430	421	320	456	478	490
28	375	401	377	391	363	326	426	403	322	440	455	501
29	379	424	378	398	---	330	412	407	316	515	431	498
30	391	457	368	393	---	329	426	419	320	583	480	489
31	408	---	396	381	---	318	---	421	---	381	592	---
MEAN	403	408	396	385	368	354	374	390	335	399	525	446
WTR YR 1977	MEAN	399	MAX	833	MIN	292						

WATER TEMPERATURE (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	17.5	13.0	15.0	11.5	5.5	8.5	1.0	.0	.5	4.5	1.5	3.0
2	19.5	14.0	17.0	12.0	6.0	9.0	2.0	.0	1.0	4.0	.5	2.0
3	19.5	13.5	16.5	11.0	7.0	9.0	1.0	.0	.5	2.0	.5	1.0
4	17.0	13.0	15.0	11.0	6.0	8.5	1.0	.0	.5	2.5	.0	.0
5	18.0	12.0	15.0	11.0	5.5	8.0	1.0	.0	.5	1.0	.0	.5
6	17.5	12.0	15.0	11.0	5.5	8.0	1.0	.5	1.0	2.5	.0	1.0
7	15.5	10.0	13.0	10.5	6.0	8.0	2.0	.0	1.0	1.0	.0	.5
8	15.0	8.0	11.5	11.0	5.5	8.0	2.0	.0	1.0	.0	.0	.0
9	16.5	9.0	13.0	11.0	5.5	8.0	2.0	.0	1.0	.5	.0	.0
10	16.5	9.5	13.0	10.5	4.5	7.5	1.5	.0	1.0	1.5	.0	1.0
11	17.0	9.5	13.0	9.0	5.0	7.0	2.0	.0	1.0	2.0	.5	1.0
12	17.0	10.0	13.5	6.0	3.0	4.5	3.5	.0	2.0	1.5	.5	1.0
13	17.0	11.0	14.0	6.0	1.5	4.0	3.0	1.0	2.0	1.5	.5	1.0
14	17.0	11.0	14.0	8.0	2.0	5.0	3.5	1.0	2.0	2.0	.0	1.0
15	15.5	11.0	13.0	8.0	3.0	5.5	3.0	1.0	2.0	1.5	.5	1.0
16	14.0	9.0	11.5	7.5	2.5	5.0	3.0	1.0	2.0	1.5	.0	1.0
17	13.0	9.5	11.0	7.0	1.5	4.0	2.5	1.0	2.0	2.0	.5	.5
18	13.5	9.5	11.5	8.0	2.0	5.0	2.5	1.0	2.0	2.0	.5	1.0
19	13.0	7.0	10.5	8.0	3.0	5.5	1.0	.0	.5	1.5	.0	.0
20	11.5	6.5	9.0	8.0	3.0	5.5	2.0	.0	1.0	1.5	.0	.0
21	10.5	6.0	8.0	7.5	3.5	5.5	1.0	.0	.5	2.0	.0	.0
22	12.0	8.5	10.0	8.0	3.0	5.5	1.0	.0	.5	4.0	.5	.5
23	13.0	9.5	11.0	8.0	3.0	5.5	1.0	.0	.5	5.0	1.5	3.0
24	13.0	9.0	11.0	7.0	2.0	4.5	1.0	.0	.5	6.0	2.0	2.0
25	13.0	7.5	10.0	6.5	1.0	4.0	1.5	.0	1.0	4.0	1.0	1.0
26	12.0	8.5	10.0	4.5	1.5	3.0	1.5	1.0	1.0	4.0	.0	2.0
27	10.0	6.0	8.0	4.0	.5	2.0	2.0	.0	1.0	4.0	.0	2.0
28	8.0	6.5	7.0	1.0	.5	1.0	2.0	.5	1.0	4.0	.0	.0
29	10.5	5.5	8.0	1.5	.0	1.0	1.5	.0	1.0	3.0	.0	1.5
30	10.0	5.0	7.5	1.0	.0	.5	2.5	.0	1.0	4.5	.0	2.0
31	11.0	5.5	8.0	---	---	---	3.0	.5	2.0	5.0	.5	3.0
MONTH	19.5	5.0	11.5	12.0	.0	5.5	3.5	.0	1.0	6.0	.0	1.0

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)	
	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	
OCTOBER												
1	865	1040	338	415	90	97	303	358	402	507	397	600
2	623	754	389	495	220	257	405	476	436	565	448	677
3	524	607	543	739	442	505	312	364	328	428	273	411
4	399	441	402	545	308	354	250	293	299	383	213	321
5	408	427	432	600	235	268	295	348	207	268	233	335
6	307	313	495	650	369	433	267	323	256	332	243	369
7	473	480	392	504	440	511	276	333	279	364	253	378
8	527	551	285	338	566	671	320	383	367	474	277	414
9	428	436	256	294	423	514	411	485	387	498	261	394
10	457	450	366	415	504	667	340	356	316	415	241	374
11	553	541	620	701	595	781	361	385	290	397	206	319
12	537	535	848	980	479	579	421	454	339	485	254	391
13	367	372	335	385	382	465	312	345	281	403	280	417
14	336	345	348	401	409	502	308	344	228	323	269	431
15	351	351	252	279	415	548	248	274	253	356	259	422
16	984	1710	408	449	343	484	219	260	295	409	297	488
17	690	1100	321	354	463	728	416	492	252	354	346	568
18	650	927	263	298	624	1240	405	461	266	389	331	551
19	752	1250	341	401	1230	2290	439	498	356	545	394	737
20	731	1080	470	581	920	1790	390	439	358	555	370	694
21	732	1060	365	443	717	1340	436	507	278	432	352	638
22	632	923	324	395	1060	2340	312	382	374	598	371	640
23	636	944	497	597	1050	2240	268	329	313	500	370	657
24	749	1100	303	362	668	963	253	306	250	408	501	1080
25	733	1100	303	355	607	759	325	393	236	380	500	1030
26	649	955	387	471	457	537	324	396	251	397	395	720
27	618	934	152	173	480	564	337	424	242	370	296	523
28	632	976	218	200	463	549	483	606	240	325	250	433
29	489	700	147	129	617	686	255	324	---	---	238	403
30	533	671	160	147	522	588	236	292	---	---	232	368
31	480	561	---	---	350	419	485	612	---	---	198	315
TOTAL	---	23634	---	13096	---	24669	---	12242	---	11860	---	16098
APRIL												
1	184	288	1130	4090	88	85	615	1530	623	532	2450	5710
2	202	297	882	2980	734	2580	513	1120	542	351	1770	3400
3	403	621	800	2460	189	167	612	1120	560	307	2180	5560
4	238	360	571	1460	1450	5550	590	1030	427	225	1970	3020
5	236	361	1000	2590	1480	6070	898	1670	1220	1830	4720	7850
6	218	305	765	2060	1340	5170	650	1370	1040	1630	1360	1270
7	201	268	710	1850	954	2450	593	1210	810	1170	1460	1340
8	132	171	611	1510	930	2430	672	1170	785	1110	1180	981
9	159	213	782	2020	840	2230	2250	4030	785	1090	985	758
10	336	486	689	1740	986	2850	3000	5780	10900	27300	827	589
11	358	514	630	1590	1100	4070	1000	2050	2100	6180	690	477
12	255	338	677	1730	1350	5320	710	1380	8110	40800	508	347
13	197	259	811	2060	1110	4620	525	839	17500	73200	2220	1710
14	137	186	465	674	1860	7630	976	1840	14500	39900	1220	935
15	128	166	356	507	1020	4210	1300	4420	1800	2980	634	462
16	102	128	244	324	1160	4760	1220	4180	8500	17400	772	604
17	97	104	189	219	924	3640	1120	3870	9050	26100	860	722
18	80	74	140	157	661	2530	1010	3460	3540	12000	541	389
19	117	115	153	159	740	2900	810	2250	9200	27100	458	317
20	285	320	163	165	841	3160	918	2140	3650	5240	408	262
21	247	302	137	138	872	3230	785	1900	2500	2850	335	205
22	565	720	110	102	937	3090	14800	44000	1800	1770	305	187
23	66	70	101	88	935	2650	3750	10500	611	541	4750	9090
24	77	80	70	55	733	1910	1700	4770	4100	3550	3450	7760
25	73	72	92	74	668	1730	1220	1980	476	364	2280	4430
26	53	50	120	111	888	2280	7790	24600	414	300	1860	3360
27	183	168	120	112	712	1800	3100	9460	270	192	1560	2950
28	145	145	74	59	776	1880	1470	2290	230	159	1580	3140
29	84	97	66	50	802	1930	1060	1740	3280	11200	1830	3810
30	1320	4600	72	54	785	1980	880	1010	41000	85200	1250	2450
31	---	---	62	41	---	---	852	851	16500	41100	---	---
TOTAL	---	11878	---	31229	---	94902	---	149560	---	433671	---	74085
TOTAL LOAD FOR YEAR: 896924 TONS.												

Q8313350 RITO DE LOS FRIJoles IN BANDELIER NATIONAL MONUMENT, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1977 to current year.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)
JUL							
05...	1600	--	710	--	73500	--	--
27...	1600	128	1200	--	98600	34100	15
AUG							
11...	1430	.81	230	--	175	.3	--
12...	0745	146	346	--	39600	15600	--
12...	1115	17	1530	--	11200	514	--
12...	1610	6.5	186	--	4930	87	--
12...	1720	3.7	221	--	1310	13	--
12...	1805	2.9	218	14.5	1250	9.8	--
12...	2015	2.4	256	14.0	558	3.6	--
13...	0645	1.7	268	12.0	229	1.1	--
13...	1800	1.1	251	17.0	104	.3	--
13...	1830	1.2	250	16.0	103	.3	--
14...	1200	.88	253	15.0	47	.1	--
15...	1215	.70	251	17.0	34	.0	--
18...	1440	2.4	200	17.0	419	2.7	--
18...	1655	12	175	17.0	8660	281	--
18...	1730	9.8	228	17.0	8150	216	--
18...	1825	6.1	228	17.0	6430	106	--
18...	1925	5.1	202	17.0	3950	54	--
19...	0645	2.8	198	14.5	536	4.1	--
20...	1045	3.9	200	16.0	635	6.7	--
20...	1315	3.8	185	18.5	645	6.6	--
20...	1420	3.8	185	17.5	784	8.0	--
20...	1520	433	580	12.5	98800	116000	15
20...	1550	313	510	14.0	94600	79900	--
20...	1625	194	482	14.0	54100	28300	--
20...	1730	69	303	14.5	29600	5510	--
20...	1900	30	249	15.0	12600	1020	--
20...	1930	25	249	15.0	8820	595	--
20...	2000	22	240	15.5	7120	423	--
20...	2145	264	260	15.5	33600	24000	--
21...	0700	6.5	221	13.5	1090	19	--
21...	0830	5.1	223	13.5	926	13	--
21...	1235	4.8	225	11.0	625	8.1	--
21...	1630	4.4	255	17.5	508	6.0	--
22...	1215	4.0	252	17.5	397	4.3	--
22...	1600	358	273	17.0	64600	62400	--
22...	1630	248	283	16.0	52600	35200	--
24...	0730	3.7	261	14.5	647	6.5	--
27...	1430	2.2	243	17.5	340	2.0	--
SEP							
02...	1220	1.5	242	18.0	161	.65	--
03...	1505	35	237	18.0	33200	3140	--
03...	1550	20	203	18.0	16500	891	--
12...	1130	1.5	229	20.0	9440	38	--
13...	1545	1.4	227	14.5	361	1.4	--
22...	1430	1.4	220	13.0	101	.38	--
22...	1500	3.9	224	17.0	500	5.3	--
22...	1530	3.9	286	17.0	54000	569	5
23...	1000	E3.8	177	12.0	140	E1.4	--

RIO GRANDE BASIN

08313350 RITO DE LOS FRIJOLES IN BANDELIER NATIONAL MONUMENT, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS. SED. FALL DIAM. % FINER THAN (70338)	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. SIEVE DIAM. % FINER THAN (70331)	SUS. SED. SIEVE DIAM. % FINER THAN (70332)	SUS. SED. SIEVE DIAM. % FINER THAN (70333)	SUS. SED. SIEVE DIAM. % FINER THAN (70334)	SUS. SED. SIEVE DIAM. % FINER THAN (70335)
JUL							
05...	--	--	--	--	--	--	--
27...	22	48	93	98	99	100	
AUG							
11...	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--
20...	20	43	88	95	99	100	
20...	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--
	SUS. SED. FALL DIAM. % FINER THAN (70338)	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. SIEVE DIAM. % FINER THAN (70331)	SUS. SED. SIEVE DIAM. % FINER THAN (70332)	SUS. SED. SIEVE DIAM. % FINER THAN (70333)	SUS. SED. SIEVE DIAM. % FINER THAN (70334)	SUS. SED. SIEVE DIAM. % FINER THAN (70335)
AUG							
27...	--	--	--	--	--	--	--
SEP							
02...	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--
22...	8	17	58	82	94	98	100
23...	--	--	--	--	--	--	--

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, on outlet tower at McClure Dam on Santa Fe River, 2.1 mi (3.4 km) upstream from Nichols Reservoir, 5.8 mi (9.3 km) east of Santa Fe, and at mile 34.0 (54.7 km).

DRAINAGE AREA.--17.4 mi² (45.1 km²).

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.

GAGE.--Water-stage recorder. Altitude of gage is 7,788 ft (2,374 m), from topographic map. Prior to Oct. 1, 1947, nonrecording gages at same site and various datums all referred to the Public Service Co. of New Mexico assumed datum, 165.9 ft (50.57 m) lower.

REMARKS.--Reservoir is formed by earthfill dam, completed in 1926, capacity, 561 acre-ft (692,000 m³), raised 3 ft (0.9 m) in 1935, capacity, 650 acre-ft (801,000 m³), and raised 36.5 ft (11.13 m) more in 1947, capacity, 2,615 acre-ft (3.22 hm³) at gage height 96.6 ft (29.44 m), crest of concrete spillway. Between October 1947 and May 1953 varying amounts of sandbag bulkheads were placed on crest of spillway to increase capacity. Between May 1953 and December 1971 spillway was equipped with radial gates that opened automatically thereby increasing capacity to over 3,000 acre-ft (3.70 hm³). Radial gates were removed during 1972, capacity, 2,615 acre-ft (3.22 hm³). No dead storage. Water is for municipal use of city of Santa Fe.

COOPERATION.--Supplementary stage readings and capacity table furnished by Public Service Co. of New Mexico.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,140 acre-ft (3.87 hm³) June 25, 1960, gage height, 103.7 ft (31.61 m); no contents Jan. 25 to May 8, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,560 acre-ft (3.16 hm³) May 25 to June 10; maximum gage height, 95.9 ft (29.23 m) May 31 to June 9; minimum contents, 2,050 acre-ft (2.53 hm³) Aug. 13-15, gage height, 88.3 ft (26.91 m).

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Public Service Co. of New Mexico in 1947)

88	2030
90	2160
95	2500
100	2860

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2250	2260	2250	2240	2240	2230	2250	2390	2560	2370	2090	2310
2	2250	2260	2250	2240	2240	2230	2250	2400	2560	2360	2080	2320
3	2250	2260	2250	2240	2240	2230	2250	2410	2560	2350	2080	2330
4	2250	2250	2250	2240	2240	2230	2250	2410	2560	2340	2080	2340
5	2250	2240	2250	2240	2240	2230	2250	2420	2560	2340	2080	2350
6	2250	2240	2250	2240	2240	2230	2250	2420	2560	2330	2070	2360
7	2250	2240	2250	2240	2240	2230	2250	2430	2560	2320	2070	2360
8	2250	2240	2250	2240	2240	2230	2250	2440	2560	2310	2070	2370
9	2250	2240	2250	2240	2240	2230	2260	2450	2560	2300	2060	2380
10	2250	2240	2250	2240	2240	2230	2260	2460	2560	2290	2060	2390
11	2250	2240	2250	2240	2240	2230	2270	2470	2550	2280	2060	2400
12	2250	2240	2250	2240	2240	2230	2270	2480	2550	2270	2060	2400
13	2250	2240	2250	2240	2240	2230	2280	2490	2540	2260	2050	2400
14	2250	2240	2250	2240	2240	2230	2290	2500	2540	2250	2050	2400
15	2250	2240	2250	2240	2240	2230	2290	2510	2540	2240	2070	2400
16	2250	2250	2250	2240	2240	2240	2300	2520	2530	2230	2100	2400
17	2250	2250	2250	2240	2240	2240	2310	2520	2520	2220	2120	2390
18	2250	2250	2250	2240	2240	2240	2310	2530	2500	2210	2140	2390
19	2250	2250	2250	2240	2240	2240	2330	2540	2490	2190	2150	2380
20	2250	2250	2250	2240	2240	2240	2340	2540	2480	2190	2170	2380
21	2250	2250	2250	2240	2240	2240	2340	2540	2470	2180	2190	2380
22	2250	2250	2250	2240	2230	2240	2350	2550	2460	2170	2210	2380
23	2250	2250	2250	2240	2230	2240	2350	2550	2450	2160	2220	2380
24	2250	2250	2250	2240	2230	2240	2360	2550	2440	2150	2230	2380
25	2250	2250	2250	2240	2230	2240	2360	2560	2430	2150	2250	2370
26	2250	2250	2250	2240	2230	2240	2360	2560	2420	2140	2260	2370
27	2250	2250	2250	2240	2230	2240	2370	2560	2410	2130	2270	2370
28	2250	2250	2250	2240	2230	2250	2370	2560	2400	2120	2280	2370
29	2250	2250	2250	2240	---	2250	2380	2560	2400	2110	2290	2360
30	2260	2250	2250	2240	---	2250	2380	2560	2380	2100	2300	2360
31	2260	---	2250	2240	---	2250	---	2560	---	2090	2300	---
MAX	2260	2260	2250	2240	2240	2250	2380	2560	2560	2370	2300	2400
MIN	2250	2240	2250	2240	2230	2230	2250	2390	2380	2090	2050	2310
(†)	91.5	91.3	-	91.2	91.1	91.3	93.3	95.9	93.3	-	-	-
(‡)	+20	-10	0	-10	-10	+20	+130	+180	-180	-290	+210	+60
CAL YR 1976	MAX 2640	MIN 2230	† -370									
WTR YR 1977	MAX 2560	MIN 2050	† +120									

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

‡ Change in contents, in acre-feet.

NOTE.--Monthend contents estimated Dec. 31, July 31, Aug. 31, Sept. 30. No gage-height record Aug. 13 to Sept. 30.

RIO GRANDE BASIN

08316000 SANTA FE RIVER NEAR SANTA FE, NM

LOCATION.--Lat 35°41'12", long 105°50'35", in NE¼SE¼ sec.23, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, on left bank 0.4 mi (0.6 km) downstream from McClure Dam, 5.3 mi (8.5 km) east of Santa Fe, and at mile 33.6 (54.1 km).

DRAINAGE AREA.--18.2 mi² (47.1 km²).

PERIOD OF RECORD.--June 1910, January 1913 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1953, published as Santa Fe Creek near Santa Fe.

REVISED RECORDS.--WSP 1512: 1933, 1936-37(M), 1942, drainage area. WSP 1732: 1923, 1925. WDR NM-75-1: 1927.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,718 ft (2,352 m), from topographic map. See WSP 1312 for history of changes prior to Oct. 1, 1947.

REMARKS.--Records good. Flow regulated by McClure Reservoir (station 08315500), completed in 1926, raised in 1935 and again in 1947. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--64 years, 7.86 ft³/s (0.223 m³/s), 5,690 acre-ft/yr (7.02 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,500 ft³/s (42.5 m³/s) Aug. 14, 1921, gage height, 5.17 ft (1.576 m), site and datum then in use, from rating curve extended above 150 ft³/s (4.2 m³/s); minimum, 0.08 ft³/s (0.002 m³/s) July 31, Aug. 1, 1951.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks which probably exceeded 1,000 ft³/s (28 m³/s) occurred Aug. 19, 1872, and Sept. 29 or 30, 1904. Without regulation the flood of Sept. 23, 1929, might have exceeded 1,500 ft³/s (42 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11 ft³/s (0.31 m³/s) Nov. 4,5, gage height, 2.01 ft (0.613 m); minimum, 0.88 ft³/s (0.025 m³/s) many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.96	.96	.88	1.1	.99	.94	.91	5.1	5.4	6.8	4.4	.96
2	.96	.96	.88	1.0	1.0	.90	.93	5.1	5.5	6.8	2.6	.97
3	.96	.96	.88	1.0	1.0	.88	.96	5.3	5.5	6.8	2.6	.96
4	.97	6.1	.88	1.0	1.0	.91	.93	5.3	5.5	6.5	2.6	.96
5	.96	7.0	.88	1.0	1.0	.96	.92	5.3	5.5	6.5	2.6	.96
6	.96	.96	.88	1.0	1.0	.96	.96	5.3	5.5	6.5	2.6	.96
7	.96	.96	.88	1.1	1.0	.96	.96	5.3	5.5	6.5	2.6	.96
8	.96	.96	.88	1.0	1.0	.96	.95	5.3	5.5	6.5	2.6	.96
9	.96	.96	.88	1.0	1.0	.96	.95	5.3	5.4	6.5	2.6	.96
10	.96	.96	.91	1.0	1.0	.96	.96	5.3	5.4	6.5	2.6	.96
11	.96	.96	.92	1.0	1.0	.96	.96	5.3	5.4	6.5	2.6	.96
12	.96	.96	.96	1.0	1.0	.96	.92	5.3	5.4	6.5	2.6	1.7
13	1.0	.96	.96	1.0	1.0	.99	.96	5.3	5.4	6.5	2.6	3.1
14	1.0	.96	.96	1.0	1.0	.98	.96	5.3	5.4	6.5	2.6	3.1
15	1.0	.96	.96	1.0	1.0	.96	.96	5.3	5.4	6.5	1.8	3.1
16	1.0	.96	.98	1.0	1.0	.96	.96	5.3	6.0	6.5	1.0	3.1
17	1.0	.96	.98	1.0	1.0	.96	.93	5.3	6.9	6.5	.98	3.1
18	1.0	.96	.97	1.0	1.0	.96	.88	5.3	6.9	6.5	.96	3.1
19	1.0	.96	.97	1.0	1.0	.96	.91	5.3	6.9	6.5	.96	3.1
20	1.0	.96	.99	1.0	1.0	.96	.94	5.3	6.9	6.5	.97	3.1
21	1.0	.96	.92	1.0	1.0	.96	2.9	5.3	6.9	6.5	.96	3.1
22	1.0	.96	.96	1.0	1.0	.96	5.1	5.3	6.8	6.5	.96	3.1
23	1.0	.96	.96	1.0	.99	.96	5.1	5.3	6.8	6.2	.97	3.1
24	1.0	.88	.97	1.1	.96	.96	5.1	5.3	6.8	6.2	.96	3.1
25	1.0	.88	.98	.96	.96	.96	5.1	5.3	6.8	6.2	.96	3.1
26	.96	.88	.97	.96	.96	.96	5.1	5.4	6.8	6.2	.96	3.1
27	.96	.92	.96	.96	.96	.96	5.1	5.3	6.8	6.2	.96	3.2
28	.98	.93	.96	.96	.92	.96	5.1	5.4	6.8	6.2	.96	3.3
29	.96	.96	1.0	.96	---	.96	5.1	5.4	6.8	6.2	.96	3.2
30	.96	.94	1.1	.96	---	.93	5.1	5.4	6.8	6.2	.96	4.2
31	.96	---	1.1	.99	---	.93	---	5.4	---	6.2	.96	---
TOTAL	30.31	39.65	29.36	31.05	27.74	29.54	67.61	164.4	183.4	199.7	55.44	69.57
MEAN	.98	1.32	.95	1.00	.99	.95	2.25	5.30	6.11	6.44	1.79	2.32
MAX	1.0	7.0	1.1	1.1	1.0	.99	5.1	5.4	6.9	6.8	4.4	4.2
MIN	.96	.88	.88	.96	.92	.88	.88	5.1	5.4	6.2	.96	.96
AC-FT	60	79	58	62	55	59	134	326	364	396	110	138

CAL YR 1976 TOTAL 1484.40 MEAN 4.06 MAX 20 MIN .80 AC-FT 2940
WTR YR 1977 TOTAL 927.77 MEAN 2.54 MAX 7.0 MIN .88 AC-FT 1840

NOTE.--No gage-height record June 23 to Aug. 12.

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, on outlet tower at Nichols Dam on Santa Fe River, 0.6 mi (1.0 km) east of Twomile Reservoir, 3.3 mi (5.3 km) east of Santa Fe, and at mile 31.0 (49.9 km).

DRAINAGE AREA.--22.8 mi² (59.1 km²).

PERIOD OF RECORD.--March 1943 to September 1965 (monthend contents only), October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 7,313.2 ft (2,229.06 m) above mean sea level.

REMARKS.--Reservoir is formed by earthfill dam. No contents prior to Mar. 16, 1943. Capacity, 685 acre-ft (845,000 m³) between gage heights 121.2 ft (36.94 m), bottom of lower operational gate and 167.0 ft (50.90 m), crest of spillway. Dead storage, 14 acre-ft (17,300 m³). Water is for municipal use of city of Santa Fe.

COOPERATION.--Supplementary stage readings and survey to compute capacity table furnished by Public Service Co. of New Mexico.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 836 acre-ft (1.03 hm³) June 8, 1952, gage height, 171.8 ft (52.36 m); minimum, 16 acre-ft (19,700 m³) Feb. 11 to Mar. 10, 1944, Feb. 1-19, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 265 acre-ft (327,000 m³) Feb. 28 to Mar. 10, gage height, 149.1 ft (45.45 m); minimum, 124 acre-ft (153,000 m³) Sept. 27, gage height 138.5 ft (42.21 m).

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Public Service Co. of New Mexico in 1943)

138	119
140	139
150	279

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226	194	233	239	256	265	257	209	226	214	237	187
2	223	195	233	239	256	265	257	209	226	216	234	185
3	223	195	233	239	256	265	259	211	226	216	222	183
4	225	205	233	239	257	265	259	211	226	214	216	182
5	225	223	233	239	257	265	257	212	225	212	216	180
6	226	225	233	239	257	265	256	212	219	211	214	179
7	223	225	233	239	257	265	254	212	212	209	211	177
8	223	226	234	240	257	265	253	214	208	208	208	173
9	223	226	234	240	257	265	251	219	202	206	198	162
10	223	228	234	240	257	265	248	222	198	206	194	153
11	220	229	234	240	257	263	245	225	193	205	197	147
12	214	229	234	240	257	262	240	229	190	203	200	144
13	211	229	234	240	257	260	236	233	192	203	206	142
14	208	231	233	240	257	259	234	236	193	202	212	139
15	206	233	233	240	259	257	226	236	193	202	214	137
16	205	233	233	240	259	257	214	234	194	202	216	135
17	203	233	233	240	260	256	208	233	198	200	219	134
18	202	234	233	240	260	254	208	231	203	199	220	133
19	200	234	233	242	260	253	208	231	208	198	220	132
20	199	236	233	243	262	251	209	233	208	197	222	131
21	197	236	233	245	262	250	209	234	208	195	222	130
22	197	236	233	246	263	248	209	236	208	195	216	128
23	197	236	233	248	263	248	209	236	209	195	211	127
24	197	234	233	250	263	248	209	236	209	200	206	126
25	195	234	234	251	263	250	209	236	209	209	203	125
26	195	233	236	253	263	251	209	236	209	216	200	125
27	195	233	236	254	263	253	209	236	211	222	198	124
28	194	233	237	257	265	254	209	236	212	228	195	125
29	195	233	237	259	---	254	209	233	212	234	193	127
30	197	233	237	257	---	256	209	228	214	236	190	127
31	197	---	237	256	---	256	---	226	---	237	188	---
MAX	226	236	237	259	265	265	259	236	226	237	237	187
MIN	194	194	233	239	256	248	208	209	190	195	188	124
(†)	144.6	147.0	147.3	148.5	149.1	148.5	-	-	-	147.3	143.9	138.8
(‡)	-29	+36	+4	+19	+9	-9	-47	+17	-12	+23	-49	-61
CAL YR 1976	MAX 558	MIN 194	† -326									
WTR YR 1977	MAX 265	MIN 124	† -99									

NOTE.--No gage-height record Apr. 15 to July 13.

08317200 SANTA FE RIVER ABOVE COCHITI LAKE, NM

LOCATION.--Lat 35°32'49", long 106°13'41", in NW¼ sec. 8, T.15 N., R.7 E., Santa Fe County, Hydrologic Unit 13020201, in Mesita de Juana Lopez Grant, on right bank at foot of La Bajada Hill, 5.0 mi (8.0 km) upstream from Cochiti Dam, 6.3 mi (10.1 km) east of Pena Blanca, and at mile 8.2 (13.2 km).

DRAINAGE AREA.--231 mi² (598 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 5,505 ft (1,678 m), from topographic map.

REMARKS.--Records good. Surface and ground-water diversions and returns for municipal supply of city of Santa Fe in upper part of basin.

Diversions for irrigation of about 400 acres (1.6 km²) above station. Several observations of water temperature were made during the year. See tabulation below for the results of discharge measurements made during year at point adjacent to gage of an unnamed ditch on right bank which diverts water 0.4 mi (0.6 km) upstream and bypasses gage; ditch flow not included in record.

AVERAGE DISCHARGE.--7 years, 8.05 ft³/s (0.228 m³/s), 5,830 acre-ft/yr (7.19 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s (323 m³/s) July 26, 1971, gage height, 9.58 ft (2.920 m), from rating curve extended above 160 ft³/s (4.5 m³/s) on basis of slope-area measurements at gage heights 5.69 ft (1.734 m) and 9.58 ft (2.920 m); no flow July 16-18, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 8	2230	*2760 78.2	5.70 1.737	Aug. 10	2145	600 17.0	3.31 1.009
25	2215	642 18.2	3.39 1.033	17	2200	831 23.5	3.70 1.128

Minimum discharge, 0.33 ft³/s (0.009 m³/s) July 20.

DISCHARGE MEASUREMENTS, IN CUBIC FEET PER SECOND, OF DITCH, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
Oct. 14	.13	Mar. 7	0	June 23	.69	Aug. 15	0
Dec. 13	0	30	0	July 19	0	Sept. 16	0
Jan. 7	0	Apr. 27	.60	26	0		
Feb. 2	0	May 26	.94	Aug. 12	e1.7		

e Estimated.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	5.8	5.5	9.7	10	9.2	6.4	3.7	2.9	1.9	2.5	3.0
2	4.8	5.5	7.0	8.6	9.9	8.8	7.0	3.5	2.9	1.8	1.3	25
3	5.3	6.4	8.0	9.6	9.3	7.9	8.1	2.7	2.3	2.2	1.3	6.0
4	4.9	7.3	8.0	9.5	8.8	8.8	7.3	2.2	2.1	6.5	1.6	5.0
5	5.3	8.1	8.5	9.0	9.1	8.7	6.4	2.4	2.6	2.5	1.9	4.5
6	5.1	8.6	8.5	8.9	9.3	8.6	7.0	2.7	2.4	2.5	2.0	4.0
7	5.7	8.2	8.0	8.3	9.3	9.0	6.4	2.6	2.6	2.0	1.7	4.0
8	6.1	7.8	8.5	8.0	9.3	8.4	5.9	2.6	2.5	165	1.4	4.0
9	6.2	6.7	9.0	7.5	9.1	8.6	6.0	2.3	2.2	45	1.7	4.0
10	5.9	7.4	9.2	7.0	9.0	8.7	6.3	2.1	2.2	3.0	37	4.0
11	5.1	8.1	8.9	7.0	9.5	9.1	5.9	2.2	2.5	2.0	29	4.0
12	4.8	8.6	8.9	7.0	9.7	9.2	4.8	2.5	2.9	2.2	29	4.0
13	4.6	8.9	9.8	7.0	9.6	9.5	4.6	3.2	1.9	2.2	21	4.0
14	5.0	9.3	9.8	6.5	9.7	8.5	5.3	3.8	1.8	2.5	20	4.0
15	5.3	9.2	9.8	7.0	9.3	8.4	3.9	3.9	1.5	4.2	6.3	4.0
16	5.3	7.6	9.1	7.5	9.0	8.9	4.8	4.1	1.5	2.7	11	4.0
17	5.4	8.6	9.3	7.0	9.2	8.8	5.1	3.8	1.7	2.9	82	4.4
18	5.5	8.7	9.5	8.5	9.0	8.7	4.1	3.2	1.5	1.4	20	4.0
19	4.6	9.0	11	9.5	9.0	8.4	4.2	3.1	1.8	.81	10	4.2
20	5.3	11	9.3	10	8.8	8.6	5.1	3.6	1.8	.47	10	3.3
21	5.9	9.6	9.1	11	8.7	8.1	5.4	3.3	2.0	1.4	3.0	2.6
22	6.6	10	9.0	12	8.8	7.8	5.0	3.2	1.9	2.5	2.5	3.8
23	6.8	9.2	9.4	12	7.6	6.3	4.4	3.2	1.7	3.0	2.5	3.1
24	6.6	9.1	10	11	7.2	6.7	3.9	3.3	2.5	3.0	3.0	2.8
25	6.2	8.8	10	11	8.0	6.1	3.4	3.6	2.1	40	2.5	3.4
26	6.1	8.5	10	10	8.5	6.6	3.3	3.7	2.2	27	2.5	3.2
27	6.3	6.0	12	10	9.0	8.1	3.2	3.1	1.8	9.4	2.5	4.2
28	6.7	4.0	11	10	8.6	7.8	3.1	3.1	1.6	8.4	3.0	5.4
29	6.9	4.5	9.3	9.8	---	6.9	3.3	3.4	1.6	5.0	3.0	5.3
30	7.0	5.0	9.9	9.9	---	7.1	3.4	2.7	2.2	4.7	3.0	4.5
31	6.3	---	9.8	9.8	---	6.9	---	2.4	---	3.8	3.0	---
TOTAL	176.7	235.5	285.1	279.6	252.3	253.2	153.0	95.2	63.2	361.98	321.2	141.7
MEAN	5.70	7.85	9.20	9.02	9.01	8.17	5.10	3.07	2.11	11.7	10.4	4.72
MAX	7.0	11	12	12	10	9.5	8.1	4.1	2.9	165	82	25
MIN	4.6	4.0	5.5	6.5	7.2	6.1	3.1	2.1	1.5	.47	1.3	2.6
AC-FT	350	467	565	555	500	502	303	189	125	718	637	281

CAL YR 1976 TOTAL 2294.62 MEAN 6.27 MAX 36 MIN .82 AC-FT 4550
WTR YR 1977 TOTAL 2618.68 MEAN 7.17 MAX 165 MIN .47 AC-FT 5190

08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM

LOCATION.--Lat 35°37'01", long 106°18'58", in NW¼SW¼ sec.16, T.16 N., R.6 E., Sandoval County, Hydrologic Unit 13020201, in Pueblo de Cochiti Grant, in control tower at Cochiti Dam, 1.7 mi (2.7 km) northeast of Cochiti Pueblo, and at mile 1,588.1 (2,555.3 km).

DRAINAGE AREA.--14,900 mi² (38,600 km²), approximately, including 2,940 mi² (7,610 km²), in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--November 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Prior to Apr. 15, 1975, at site 1.3 mi (2.1 km) upstream at same datum.

REMARKS.--Lake is formed by an earthfill dam on Rio Grande and Santa Fe River. Storage began on Nov. 12, 1973. Capacity 498,100 acre-ft (614 hm³) between elevations 5,190.0 ft (1,581.91 m) and 5,450.0 ft (1,661.16 m), crest of service spillway. Dead storage 2,220 acre-ft (2.74 hm³) below elevation 5,255.0 ft (1,601.72 m), invert of outlet structure. Lake was created primarily for flood and sediment control. A 50,000 acre-ft (62 hm³) permanent pool is authorized for recreational purposes.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 60,950 acre-ft (75.2 hm³) Jan. 9, 1976, elevation, 5,331.60 ft (1,625.072 m); no storage prior to Nov. 12, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 49,480 acre-ft (61.0 hm³) June 3, elevation, 5,322.88 ft (1,622.414 m); minimum, 47,030 acre-ft (58.0 hm³) Dec. 25, elevation, 5,320.86 ft (1,621.798 m).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Corps of Engineers in 1972)

5,320	46,010
5,330	58,730

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47630	47530	47540	47610	47530	47630	47440	47750	47440	47490	47510	47510
2	47670	47570	47560	47560	47600	47630	47470	47550	48700	47500	47500	47510
3	47620	47590	47560	47500	47590	47550	47550	47420	49190	47450	47450	48040
4	47550	47530	47530	47480	47510	47570	47550	47370	47890	47450	47450	47630
5	47540	47490	47530	47500	47390	47500	47550	47480	47810	47630	47610	47430
6	47550	47510	47550	47500	47440	47500	47510	47550	47800	47650	47540	47430
7	47540	47410	47490	47490	47480	47500	47480	47530	47430	47650	47480	47490
8	47650	47450	47500	47550	47500	47510	47490	47480	47420	47810	47480	47430
9	47660	47540	47610	47470	47510	47530	47510	47570	47480	47910	47470	47450
10	47620	47500	47610	47390	47540	47540	47590	47510	47570	47650	47660	47510
11	47560	47470	47670	47360	47560	47560	47590	47530	47740	47650	47620	47530
12	47500	47490	47530	47450	47600	47540	47490	47600	47570	47630	48100	47510
13	47490	47540	47450	47540	47590	47480	47450	47710	47590	47470	48400	47500
14	47450	47570	47510	47560	47570	47480	47570	47480	47560	47450	48090	47510
15	47480	47600	47540	47480	47650	47510	47590	47470	47550	47600	47990	47490
16	47630	47560	47600	47500	47480	47550	47560	47430	47510	47490	47850	47490
17	47620	47550	47490	47550	47490	47530	47470	47410	47480	47430	47990	47570
18	47500	47570	47600	47480	47560	47490	47410	47430	47490	47490	47920	47490
19	47630	47570	47570	47420	47570	47540	47490	47470	47570	47500	47720	47440
20	47620	47590	47560	47410	47510	47630	47590	47490	47590	47490	47570	47430
21	47500	47500	47420	47470	47440	47550	47610	47470	47500	47590	47410	47430
22	47480	47490	47440	47560	47540	47450	47630	47470	47450	47840	47480	47390
23	47510	47490	47600	47600	47600	47470	47420	47440	47410	47810	47530	47750
24	47540	47490	47390	47540	47600	47620	47390	47390	47470	47550	47510	48110
25	47590	47470	47080	47500	47550	47670	47440	47420	47500	47060	47450	47850
26	47550	47440	47260	47490	47470	47530	47450	47480	47540	47770	47450	47450
27	47540	47360	47450	47470	47410	47570	47430	47540	47530	47940	47430	47480
28	47570	47230	47480	47480	47420	47490	47430	47440	47430	47470	47390	47590
29	47560	47260	47390	47550	---	47380	47490	47420	47490	47540	47550	47610
30	47360	47540	47410	47500	---	47360	47890	47410	47540	47410	47790	47530
31	47310	---	47560	47470	---	47390	---	47410	---	47420	47730	---
MAX	47670	47600	47670	47610	47650	47670	47890	47750	49190	47940	48400	48110
MIN	47310	47230	47080	47360	47390	47360	47390	47370	47410	47060	47390	47390
(†)	5321.10	5321.29	5321.31	5321.23	5321.19	5321.17	5321.58	5321.18	5321.29	5321.19	5321.45	5321.28
(‡)	-240	+230	+20	-90	-50	-30	+500	-480	+130	-120	+310	-200

CAL YR 1976 MAX 60950 MIN 47080 ‡ -8660

WTR YR 1977 MAX 49190 MIN 47060 ‡ -20

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

RIO GRANDE BASIN

08317400 RIO GRANDE BELOW COCHITI DAM, NM

LOCATION.--Lat 35°37'05", long 106°19'24", in SW 1/4 sec.17, T.16 N., R.6 E., Sandoval County, Hydrologic Unit 13020201, in Pueblo de Cochiti Grant, on right bank 320 ft (98 m) upstream from bridge on State Highway 22, 700 ft (210 m) downstream from Cochiti Dam, 1.4 mi (2.3 km) northeast of Cochiti Pueblo, and at mile 1,587.6 (2,554.4 km).

DRAINAGE AREA.--14,900 mi² (38,590 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 5,226.08 ft (1,592.909 m) above mean sea level (Corps of Engineers bench mark). Prior to Nov. 14, 1973, at site 2.4 mi (3.9 km) downstream at altitude 5,210 ft (1,588 m), from topographic map. Nov. 14, 1973 to Jan. 8, 1976, at site 320 ft (98 m) downstream at datum 1.79 ft (0.546 m) lower.

REMARKS.--Water-discharge records good. Discharges include flow of Santa Fe River which is intercepted by Cochiti Dam and released through the combined outlet works. Flow regulated by Cochiti Dam since Nov. 12, 1973. Diversions above station for irrigation of about 620,000 acres (2,500 km²) in Colorado and about 81,000 acres (330 km²) in New Mexico. Cochiti eastside main canal, on left bank, and Sili main canal, on right bank, head at Cochiti Dam and bypass gage for irrigation of about 6,000 acres (24 km²) below station; see tabulation below for monthly and yearly diversion, as furnished by Middle Rio Grande Conservancy District.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 10,300 ft³/s (292 m³/s) July 26, 1971 (gage height, 7.90 ft or 2.408 m), site and datum then in use, from rating curve extended above 2,600 ft³/s (74 m³/s); minimum, 0.51 ft³/s (0.014 m³/s) Aug. 3-5, 1977, result of regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 15, 1941, reached a discharge of 23,400 ft³/s (663 m³/s) at a nearby site upstream from mouth of Santa Fe River. The flood of May 23, 1920, probably exceeded 23,400 ft³/s (663 m³/s), and is likely the highest since 1905.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,390 ft³/s (39.4 m³/s) Aug. 12, gage height, 3.56 ft (1.085 m); minimum, 0.51 ft³/s (0.014 m³/s) Aug. 3-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	321	282	442	466	398	356	1110	5.1	629	59	721
2	212	402	369	474	472	457	334	1140	6.5	517	42	519
3	227	466	396	474	517	466	336	992	139	398	25	510
4	218	502	413	450	524	432	384	750	1310	311	.51	553
5	164	493	415	437	525	412	355	665	1290	300	118	480
6	145	485	417	437	459	401	345	707	1220	432	390	151
7	129	494	415	399	459	401	328	751	902	424	328	103
8	108	395	404	382	459	400	280	709	691	413	298	130
9	146	367	403	408	459	394	286	691	662	670	303	70
10	167	414	452	390	466	390	297	733	699	623	535	42
11	170	416	474	315	474	390	334	702	960	553	892	40
12	170	388	515	291	507	406	348	699	1250	553	1220	51
13	158	380	466	291	528	407	280	714	1250	506	1290	70
14	152	381	412	345	523	408	259	521	1260	479	1110	65
15	152	390	437	387	528	407	281	340	1260	860	721	61
16	241	387	500	357	523	404	291	307	1250	1100	835	44
17	432	387	583	384	493	440	277	253	1200	987	1070	58
18	387	390	645	441	482	449	201	205	1120	919	1260	78
19	341	411	706	444	543	451	137	163	1090	755	1090	48
20	388	442	704	421	587	488	192	153	1160	591	572	20
21	415	472	741	404	586	521	235	170	1160	570	353	14
22	371	443	727	431	540	504	279	147	1050	708	205	11
23	347	428	677	486	546	437	312	122	829	826	150	63
24	347	423	747	543	579	459	213	89	702	950	144	360
25	347	425	480	521	603	574	161	124	658	692	132	602
26	348	430	300	505	613	534	165	105	649	510	89	555
27	354	430	316	497	585	428	165	104	643	925	70	411
28	354	360	398	481	489	479	165	102	613	666	26	418
29	354	236	401	459	---	460	168	56	553	347	1.0	462
30	396	184	350	489	---	401	661	42	585	310	264	505
31	395	---	356	491	---	369	---	26	---	146	826	---
TOTAL	8318	12142	14901	13276	14535	13567	8425	13392	26166.6	18670	14418.51	7215
MEAN	268	405	481	428	519	438	281	432	872	602	465	241
MAX	432	502	747	543	613	574	661	1140	1310	1100	1290	721
MIN	108	184	282	291	459	369	137	26	5.1	146	.51	11
AC-FT	16500	24080	29560	26330	28830	26910	16710	26560	51900	37030	28600	14310
(†)	7650	0	0	0	0	7010	7620	8550	8580	6220	8110	7430
(‡)	3780	0	0	0	0	2960	3780	4280	4550	4450	4010	4080
CAL YR 1976 TOTAL	328689.00			MEAN 898	MAX 3100	MIN 108	AC-FT 652000	† 66230	‡ 27030			
WTR YR 1977 TOTAL	165026.11			MEAN 452	MAX 1310	MIN .51	AC-FT 327300	† 61000	‡ 32650			

† Diversion, in acre-feet, by Cochiti eastside main canal at head.

‡ Diversion, in acre-feet, by Sili main canal at head.

08317400 RIO GRANDE BELOW COCHITI DAM, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to current year.

WATER TEMPERATURES: July 1971 to current year.

SUSPENDED SEDIMENT DISCHARGE: July 1974 to current year.

INSTRUMENTATION.--Continuous water-temperature recorder and automatic pumping sediment sampler.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 585 micromhos Mar. 9, 1976; minimum daily, 185 micromhos May 9, 1975.

WATER TEMPERATURES: Maximum, 35.5°C Aug. 4, 1977; minimum, 0.0°C on several days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 343 mg/L June 16, 1975; minimum daily, 1 mg/L Jan. 7-8, Feb. 10, Mar. 28, 1977.

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, 538 micromhos Mar. 5; minimum daily, 323 micromhos Oct. 5.

WATER TEMPERATURES: Maximum, 35.5°C Aug. 4; minimum, 1.0°C on several days during February.

SEDIMENT CONCENTRATIONS: Maximum daily, 74 mg/L Aug. 15; minimum daily, 1 mg/L Jan. 7-8, Feb. 10, Mar. 28.

SEDIMENT LOADS: Maximum daily, 175 tons (159 tonnes) Aug. 12; minimum daily, 0.02 tons (0.02 tonnes) Aug. 4.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	385	366	408	378	380	402	408	386	---	490
2	---	364	---	385	424	374	381	397	---	394	---	490
3	---	---	---	390	423	369	---	397	---	383	---	520
4	---	---	---	385	419	443	---	399	---	373	---	500
5	323	343	---	387	424	538	---	384	---	370	---	500
6	---	---	---	427	424	475	---	399	---	373	420	500
7	---	---	---	434	421	445	---	408	---	370	---	498
8	---	---	---	---	402	438	---	404	---	363	---	500
9	---	---	---	---	422	430	---	402	---	363	---	490
10	---	---	---	---	416	420	---	403	---	365	---	495
11	---	---	---	---	416	428	---	404	---	359	---	490
12	---	---	---	---	416	430	378	---	---	354	388	500
13	---	---	---	---	395	422	395	404	---	357	400	475
14	---	---	---	---	406	424	406	422	405	---	410	450
15	---	---	---	---	387	415	399	436	411	410	455	465
16	---	---	---	---	394	414	401	426	406	380	445	450
17	---	---	---	---	403	415	400	428	398	400	440	450
18	---	---	---	---	404	414	397	429	445	385	445	450
19	---	---	---	---	404	413	---	423	---	385	455	---
20	---	---	---	---	405	419	400	422	430	400	480	---
21	---	---	---	---	400	401	---	431	428	390	450	520
22	---	---	---	---	402	405	---	421	433	425	478	470
23	---	---	---	---	400	411	---	423	423	395	475	470
24	---	---	---	---	368	408	---	421	420	390	480	470
25	---	---	---	---	381	407	---	420	411	393	470	450
26	---	---	---	---	386	414	---	414	413	390	485	448
27	---	---	---	---	382	405	---	415	404	384	495	444
28	---	---	---	---	376	403	---	415	396	---	520	440
29	---	---	---	---	---	406	379	414	390	---	500	443
30	---	---	---	---	---	413	414	424	390	---	490	---
31	---	---	---	---	---	---	---	417	---	---	490	---
MEAN	323	354	385	396	404	419	394	413	412	382	461	477
WTR YR 1977	MEAN	419	MAX	538	MIN	323						

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

RIO GRANDE BASIN

08317400 RIO GRANDE BELOW COCHITI DAM, NM -- Continued

WATER TEMPERATURE (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	17.5	17.0	17.0	11.0	10.5	10.5	5.5	5.0	5.0	2.5	2.5	2.5
2	17.5	16.5	17.0	11.0	10.5	10.5	5.5	5.0	5.0	2.5	2.5	2.5
3	17.5	16.5	17.0	11.0	10.0	10.5	5.0	4.5	5.0	2.5	2.0	2.5
4	17.5	16.5	17.0	10.5	10.5	10.5	5.0	4.5	5.0	2.5	2.5	2.5
5	17.5	16.0	16.5	10.5	10.0	10.5	5.0	4.5	5.0	2.5	2.5	2.5
6	17.0	16.0	16.5	10.5	10.0	10.0	5.0	4.5	4.5	2.5	2.5	2.5
7	17.0	16.0	16.5	10.5	10.0	10.0	4.5	4.5	4.5	2.5	2.5	2.5
8	17.0	15.5	16.0	10.0	9.5	10.0	4.5	4.0	4.5	2.5	2.5	2.5
9	16.5	15.5	16.0	10.0	9.5	9.5	4.5	4.0	4.5	2.5	2.0	2.5
10	16.5	15.5	16.0	10.0	9.5	9.5	4.5	4.0	4.5	2.5	2.0	2.5
11	16.0	15.5	15.5	10.0	9.5	9.5	4.5	4.0	4.0	3.0	2.5	2.5
12	16.0	15.0	15.5	9.5	9.0	9.5	4.0	4.0	4.0	3.0	2.5	2.5
13	16.0	15.0	15.5	9.5	8.5	9.0	4.0	3.5	3.5	3.0	2.5	2.5
14	15.5	15.0	15.0	9.0	8.5	8.5	4.0	3.5	3.5	2.5	2.5	2.5
15	15.5	14.5	15.0	9.0	8.5	8.5	3.5	3.0	3.5	2.5	2.0	2.5
16	15.5	14.5	15.0	9.0	8.5	8.5	3.5	2.5	3.0	3.0	2.0	2.5
17	15.0	14.5	15.0	8.5	8.5	8.5	3.5	3.0	3.0	2.5	2.0	2.5
18	15.0	14.0	14.5	8.5	8.0	8.0	3.0	2.5	3.0	2.5	2.0	2.0
19	14.5	14.0	14.0	8.0	8.0	8.0	3.0	2.5	2.5	2.5	2.0	2.0
20	14.5	14.0	14.0	8.0	8.0	8.0	3.0	2.0	2.5	2.5	2.0	2.0
21	14.0	13.5	13.5	8.0	7.5	7.5	2.5	2.0	2.5	2.5	2.0	2.0
22	13.5	13.0	13.5	7.5	7.5	7.5	2.5	2.0	2.5	2.5	2.0	2.0
23	13.5	13.0	13.0	7.5	7.0	7.5	2.5	2.0	2.5	2.0	1.5	2.0
24	13.0	12.5	13.0	7.5	7.0	7.0	2.5	2.0	2.0	2.0	1.5	1.5
25	13.0	12.5	13.0	7.5	7.0	7.0	2.5	2.0	2.0	2.0	1.5	1.5
26	13.0	12.5	12.5	7.0	6.5	7.0	2.5	2.0	2.5	2.0	1.5	1.5
27	13.0	12.0	12.5	7.0	6.0	6.5	3.0	2.5	2.5	2.0	1.5	1.5
28	12.0	12.0	12.0	6.0	5.5	6.0	2.5	2.0	2.5	2.0	1.5	1.5
29	12.0	11.5	12.0	6.0	5.5	5.5	2.5	2.5	2.5	2.0	1.5	1.5
30	12.0	11.5	11.5	5.5	5.0	5.5	2.5	2.0	2.5	2.0	1.5	1.5
31	11.5	11.0	11.0	---	---	---	2.5	2.5	2.5	2.0	1.5	1.5
MONTH	17.5	11.0	14.5	11.0	5.0	8.5	5.5	2.0	3.5	3.0	1.5	2.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2.0	1.5	1.5	3.0	3.0	3.0	7.0	6.5	7.0	10.0	8.5	9.0
2	1.5	1.5	1.5	3.0	3.0	3.0	7.0	6.0	6.5	10.5	8.5	9.5
3	2.0	1.5	1.5	3.5	3.0	3.0	7.0	6.5	6.5	10.5	9.0	9.5
4	1.5	1.0	1.0	3.5	3.0	3.5	7.5	6.5	6.5	14.5	9.0	10.0
5	---	---	---	4.0	3.5	3.5	7.0	6.5	7.0	14.5	13.5	14.0
6	---	---	---	4.0	3.5	3.5	7.0	6.5	7.0	---	---	---
7	---	---	---	4.0	3.5	3.5	7.5	6.5	7.0	---	---	---
8	---	---	---	4.0	3.5	3.5	7.5	7.0	7.0	---	---	---
9	2.5	1.0	1.5	4.0	3.5	3.5	8.0	7.0	7.0	---	---	---
10	1.5	1.0	1.5	4.0	3.5	3.5	8.0	7.0	7.5	14.5	14.0	14.5
11	1.5	1.5	1.5	4.0	3.5	3.5	8.0	7.5	7.5	15.0	14.0	14.5
12	1.5	1.0	1.5	4.5	3.5	4.0	8.5	7.5	8.0	14.5	14.0	14.5
13	1.5	1.0	1.5	4.5	3.5	4.0	8.0	7.5	7.5	15.0	14.0	14.5
14	1.5	1.0	1.5	5.0	4.0	4.0	8.5	7.0	7.5	15.0	13.5	14.0
15	1.5	1.5	1.5	4.5	3.5	4.0	8.0	7.0	7.5	14.5	13.5	14.0
16	2.0	1.5	1.5	4.5	4.0	4.5	8.5	7.5	8.0	14.5	13.0	14.0
17	2.0	1.5	1.5	4.5	4.0	4.5	8.5	8.0	8.5	14.5	13.0	14.0
18	2.0	1.5	1.5	5.0	4.0	4.5	9.0	7.5	8.0	14.5	13.0	14.0
19	2.0	1.5	2.0	5.0	4.0	4.5	9.0	8.0	8.5	15.5	13.0	14.0
20	2.0	2.0	2.0	5.0	4.0	4.5	9.0	8.0	8.5	15.0	13.5	14.0
21	2.5	2.0	2.0	5.0	4.5	5.0	9.5	8.0	8.5	15.0	13.5	14.0
22	2.5	2.0	2.0	5.5	4.5	5.0	9.5	8.0	8.5	15.5	13.5	14.0
23	2.5	2.0	2.5	5.5	5.0	5.0	10.0	8.0	8.5	15.5	13.0	14.0
24	3.0	2.5	2.5	5.5	5.0	5.0	9.5	8.0	8.5	15.0	13.0	14.0
25	3.0	2.5	2.5	6.0	5.0	5.5	9.0	8.0	8.5	15.0	13.5	14.0
26	3.0	2.5	3.0	6.0	5.0	5.5	9.5	8.5	9.0	15.5	13.5	14.5
27	3.0	3.0	3.0	6.5	5.5	6.0	9.5	8.5	9.0	15.5	13.5	14.5
28	3.0	3.0	3.0	7.0	5.5	6.5	10.0	8.5	9.0	16.0	14.0	15.0
29	---	---	---	7.0	6.0	6.5	10.0	8.5	9.5	16.0	14.0	15.0
30	---	---	---	7.0	5.5	6.5	10.0	8.5	9.0	17.0	14.0	15.0
31	---	---	---	7.0	5.5	6.5	---	---	---	17.0	14.0	15.0
MONTH	3.0	1.0	2.0	7.0	3.0	4.5	10.0	6.0	8.0	17.0	8.5	13.5

RIO GRANDE BASIN

08317400 RIO GRANDE BELOW COCHITI DAM, NM -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	10	4.9	10	8.7	8	6.1	9	11	5	6.3	10	11
2	6	3.4	8	8.7	6	6.0	11	14	4	5.1	4	4.9
3	8	4.9	10	13	9	9.6	30	38	7	9.8	5	6.3
4	17	10	11	15	11	12	6	7.3	7	9.9	14	16
5	11	4.9	14	19	12	13	5	5.9	2	2.8	22	24
6	16	6.3	13	17	9	10	4	4.7	7	8.7	39	42
7	35	12	22	29	5	5.6	1	1.1	3	3.7	7	7.6
8	40	12	12	13	4	4.4	1	1.0	4	5.0	5	5.4
9	53	21	13	13	7	7.6	2	2.2	2	2.5	5	5.3
10	11	5.0	16	18	4	4.9	4	4.2	1	1.3	4	4.2
11	8	3.7	13	15	8	10	3	2.6	3	3.8	7	7.4
12	15	6.9	12	13	2	2.8	3	2.4	2	2.7	6	6.6
13	8	3.4	14	14	5	6.3	2	1.6	2	2.9	6	6.6
14	11	4.5	12	12	5	5.6	5	4.7	3	4.2	7	7.7
15	11	4.5	12	13	8	9.4	5	5.2	5	7.1	7	7.7
16	9	5.9	15	16	8	11	4	3.9	6	8.5	6	6.5
17	8	9.3	13	14	5	7.9	5	5.2	4	5.3	9	11
18	10	10	14	15	4	7.0	4	4.8	3	3.9	7	8.5
19	8	7.4	12	13	2	3.8	4	4.8	21	31	3	3.7
20	9	9.4	8	9.5	7	13	3	3.4	22	35	7	9.2
21	9	10	6	7.6	9	18	3	3.3	20	32	6	8.4
22	9	9.0	7	8.4	5	9.8	3	3.5	18	26	5	6.8
23	8	7.5	9	10	4	7.3	4	5.2	17	25	2	2.4
24	8	7.5	7	8.0	7	14	9	13	25	39	3	3.7
25	10	9.4	14	16	10	13	8	11	18	29	4	6.2
26	10	9.4	6	7.0	10	8.1	5	6.8	17	28	2	2.9
27	11	11	7	8.1	10	8.5	4	5.4	10	16	2	2.3
28	10	9.6	7	6.8	12	13	4	5.2	14	18	1	1.3
29	12	11	6	3.8	9	9.7	3	3.7	---	---	5	6.2
30	12	13	7	3.5	9	8.5	6	7.9	---	---	6	6.5
31	15	16	---	---	12	12	6	8.0	---	---	8	8.0
TOTAL	---	262.8	---	368.1	---	277.9	---	201.0	---	372.5	---	256.3

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)	
	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13	12	5	15	22	.30	23	39	5	.80	33	64
2	6	5.4	3	9.2	20	.35	26	36	4	.45	27	38
3	6	5.4	4	11	20	7.5	23	25	4	.27	34	47
4	8	8.3	5	10	18	64	20	17	3	.02	31	46
5	7	6.7	4	7.2	19	66	18	15	25	8.0	28	36
6	6	5.6	6	11	18	59	24	28	63	66	31	13
7	6	5.3	6	12	16	39	14	16	30	27	23	6.4
8	6	4.5	4	7.7	16	30	15	17	25	20	26	9.1
9	6	4.6	8	15	14	25	48	87	25	20	25	4.7
10	5	4.0	20	40	14	26	47	79	40	58	24	2.7
11	7	6.3	9	17	16	41	26	39	45	108	30	3.2
12	4	3.8	10	19	13	44	23	34	53	175	26	3.6
13	8	6.0	12	23	12	40	16	22	46	160	29	5.5
14	5	3.5	23	32	10	34	30	39	48	144	18	3.2
15	6	4.6	39	36	14	48	45	104	74	144	18	3.0
16	5	3.9	25	21	17	57	36	107	27	61	21	2.5
17	7	5.2	17	12	17	55	57	152	26	75	33	5.2
18	6	3.3	23	13	29	88	38	94	29	99	25	5.3
19	5	1.8	20	8.8	34	100	30	61	30	88	25	3.2
20	5	2.6	40	17	40	125	52	83	34	53	25	1.4
21	6	3.8	30	14	38	119	40	62	27	26	25	.94
22	6	4.5	39	15	22	62	54	103	30	17	20	.59
23	5	4.2	22	7.2	25	56	29	65	24	9.7	20	3.4
24	5	2.9	24	5.8	33	63	32	82	25	9.7	17	17
25	3	1.3	25	8.4	27	48	31	58	25	8.9	12	20
26	3	1.3	27	7.7	24	42	30	41	36	8.7	23	34
27	3	1.3	18	5.1	21	36	33	82	31	5.9	34	38
28	4	1.8	18	5.0	29	48	25	45	32	2.2	12	14
29	6	2.7	18	2.7	23	34	20	19	38	.28	13	16
30	3	5.4	39	4.4	24	38	16	13	29	21	13	18
31	---	---	43	3.0	---	---	11	4.3	27	60	---	---
TOTAL	---	132.0	---	415.2	---	1495.15	---	1668.3	---	1476.92	---	464.93
TOTAL LOAD FOR YEAR:		7391.10		TONS.								

RIO GRANDE BASIN

08317900 GALISTEO RESERVOIR NEAR CERRILLOS, NM

LOCATION.--Lat 35°27'44", long 106°12'30", in NW¼ sec.9, T.14 N., R.7 E., Santa Fe County, Hydrologic Unit 13020201, in Mesita de Juana Lopez Grant, at Galisteo Dam on Galisteo Creek, 5.0 mi (8.0 km) northwest of Cerrillos, and at mile 11.8 (19.0 km).

DRAINAGE AREA.--596 mi² (1,544 km²).

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

GAGE.--Water-stage recorder above elevation 5,500.3 ft (1,676.49 m), nonrecording below. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by an earthfill dam, completed Oct. 11, 1970. Capacity 88,990 acre-ft (110 hm³) between elevations 5,496.0 ft (1,675.18 m), sill of ungated outlet conduit, and 5,608.0 ft (1,709.32 m), crest of uncontrolled spillway. No dead storage. Reservoir is used for flood control.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,510 acre-ft (3.09 hm³) July 26, 1971, elevation, 5,517.00 ft (1,681.582 m); no storage most of time.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 350 acre-ft (432,000 m³) Aug. 11, elevation, 5,509.05 ft (1,679.158 m); no storage most of time.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Corps of Engineers in 1972)

5,500	0	5,503	21	5,506	109
5,501	2	5,504	41	5,508	244
5,502	9	5,505	69	5,510	468

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

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	1.0
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	240	.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	---
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	240	1.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(†)	-	-	-	-	-	-	-	-	-	-	-	-
(‡)	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR 1976 MAX 153 MIN .00 ‡ 0
WTR YR 1977 MAX 240 MIN .00 ‡ 0

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

08317950 GALISTEO CREEK BELOW GALISTEO DAM, NM

LOCATION.--Lat 35°27'56", long 106°12'57", in SE¼SE¼ sec.5, T.14 N., R.7 E., Santa Fe County, Hydrologic Unit 13020201, in Mesita de Juana Lopez Grant, on right bank 0.6 mi (1.0 km) downstream from Galisteo Dam, 5.5 mi (8.8 km) northwest of Cerrillos, and at mile 11.2 (18.0 km).

DRAINAGE AREA.--597 mi² (1,546 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 5,450 ft (1,661 m), from topographic map

REMARKS.--Water-discharge records poor. Flow regulated by Galisteo Reservoir 0.6 mi (1.0 km) upstream. Diversions for irrigation of about 50 acres (20 hm²) above station.

AVERAGE DISCHARGE.--7 years, 7.60 ft³/s (0.215 m³/s), 5,510 acre-ft/yr (6.79 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft³/s (56.6 m³/s) July 27, 1971, gage height, 7.00 ft (2.134 m); maximum gage height, 7.33 ft (2.234 m) July 20, 1971; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,550 ft³/s (43.9 m³/s) Aug. 11, gage height, 7.06 ft (2.152 m); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.20	.10	.30	1.0	1.3	.00	.00	.00	.00	.00	.62
2	.00	.20	.20	.30	2.0	1.3	.04	.00	.00	.00	.00	66
3	.00	.20	.40	.30	1.5	.94	.67	.00	.00	.00	.00	19
4	.00	.26	.35	.30	1.6	1.2	.39	.00	.00	.00	.00	38
5	.00	.30	.35	.30	1.7	1.3	.06	.00	.00	70	.00	4.4
6	.00	.26	.30	.25	1.7	1.1	.02	.00	.00	.31	.00	49
7	.00	.23	.25	.20	1.4	.97	.00	.00	.00	.00	.00	3.4
8	.00	.30	.30	.20	1.2	.98	.00	.00	.00	3.2	.00	.30
9	.00	.34	.35	.20	1.2	.79	.00	.00	.00	19	.00	.01
10	.00	.30	.35	.10	1.1	.73	.00	.00	.00	.13	50	.00
11	.00	.30	.35	.10	1.1	.48	.00	.00	.00	.00	509	.00
12	.00	.20	.40	.20	1.0	.26	.00	.00	.00	.00	15	.00
13	.00	.17	.35	.25	.97	.24	.00	.46	.00	4.5	9.9	.00
14	.00	.55	.40	.30	.85	.17	.00	.42	.00	2.5	83	.00
15	.00	.50	.40	.25	.75	.01	.00	.00	.00	10	16	.00
16	.00	.30	.35	.25	.84	.04	.00	.00	.00	.57	5.7	.00
17	.00	.25	.40	.30	.76	.08	.00	.00	.00	.00	26	.00
18	.00	.35	.40	.40	.59	.00	.00	.00	.00	.00	12	.00
19	.00	.34	.45	.50	.43	.00	.18	.00	.00	.00	6.6	.00
20	.00	.20	.40	.60	.41	.03	.21	.00	.00	.00	17	.00
21	.00	.26	.40	.50	.43	.00	.29	.00	.00	5.5	.00	.00
22	.00	.30	.35	.60	.56	.00	.02	.00	.00	.69	.00	.00
23	.04	.35	.40	.70	.09	.00	.00	.00	.00	5.2	.00	.00
24	.09	.30	.40	.60	.78	.00	.10	.00	.00	.75	205	.00
25	.12	.30	.35	.50	1.1	.00	.19	.00	.00	17	21	.00
26	.06	.25	.45	.50	1.2	.00	.01	.00	.00	9.1	2.4	.00
27	.03	.05	.40	.50	1.3	1.0	.05	.00	.00	11	.47	.00
28	.12	.00	.35	.50	1.3	.47	.03	.00	.00	.00	.00	.00
29	.17	.00	.35	.60	---	.16	.08	.00	.00	.00	3.1	.00
30	.15	.00	.30	.60	---	.09	.00	.00	.00	.00	11	.00
31	.17	---	.30	.70	---	.03	---	.00	---	.00	1.2	---
TOTAL	.95	7.56	10.90	11.90	28.86	13.67	2.34	.88	.00	159.45	994.37	180.73
MEAN	.031	.25	.35	.38	1.03	.44	.078	.028	.000	5.14	32.1	6.02
MAX	.17	.55	.45	.70	2.0	1.3	.67	.46	.00	70	509	66
MIN	.00	.00	.10	.10	.09	.00	.00	.00	.00	.00	.00	.00
AC-FT	1.9	15	22	24	57	27	4.6	1.7	.00	316	1970	358

CAL YR 1976 TOTAL 3094.85 MEAN 8.46 MAX 620 MIN .00 AC-FT 6140
WTR YR 1977 TOTAL 1411.61 MEAN 3.87 MAX 509 MIN .00 AC-FT 2800

NOTE.--No gage-height record Dec. 1 to Jan. 7, July 5 to Aug. 10.

RIO GRANDE BASIN

08317950 GALISTEO CREEK BELOW GALISTEO DAM, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1971 to current year.

WATER TEMPERATURES: July 1971 to current year.

SUSPENDED SEDIMENT DISCHARGE: July 1971 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler.

REMARKS.--Samples are collected when flow is observed on this ephemeral stream. The extremes for specific conductance and water temperatures were not reported because the number of missing days of record exceeded 20 percent of flow of year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 73,100 mg/L July 17, 1972; minimum daily, no flow on many days each year.

SEDIMENT LOADS: Maximum daily 203,000 tons (184,000 tonnes) Aug. 24, 1976; minimum daily, 0 tons (0 tonnes) on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily, 36,100 mg/L July 5; minimum daily, no flow on many days.

SEDIMENT LOADS: Maximum daily, 77,900 tons (70,700 tonnes) Aug. 11; minimum daily, 0 tons (0 tonnes) on many days.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)
NOV							
11...	1000	.56	6.0	105	.16	41	41
MAR							
03...	1525	3.0	6.5	398	3.2	--	--
APR							
27...	1045	.05	7.0	190	.03	--	--
MAY							
13...	1050	.56	19.5	412	.62	56	67
JUL							
05...	0135	21	--	1180	67	37	57
AUG							
11...	1200	180	18.0	23200	11300	56	67
15...	1725	66	28.0	34100	6080	51	69

DATE	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70332)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70333)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70334)
NOV							
11...	57	--	--	84	95	99	100
MAR							
03...	--	--	--	100	--	--	--
APR							
27...	--	--	--	58	--	--	--
MAY							
13...	85	--	--	94	99	99	100
JUL							
05...	78	--	--	88	96	100	--
AUG							
11...	84	97	100	--	--	--	--
15...	85	98	100	--	--	--	--

RIO GRANDE BASIN

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08317950 GALISTEO CREEK BELOW GALISTEO DAM, NM -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---				---		---	---	
2				---				---		---	---	
3				---				---		---	---	
4				---				---		---	---	
5				---				---		1650	---	
6				---				---		1650	---	
7				---				---		---	---	
8				---				---		---	---	
9				---				---		---	---	
10				---				---		---	---	
11				---				---		---	1020	
12				---				---		---	1280	
13				---				2060		---	---	
14				---				---		---	---	
15				---				---		---	1480	
16				---				---		---	---	
17				---				---		---	---	
18				1820				---		---	---	
19				---				---		---	---	
20				---				---		---	---	
21				---				---		1180	---	
22				---				---		---	---	
23				---				---		---	---	
24				---				---		---	740	
25				---				---		---	1120	
26				---				---		1220	1390	
27				---				---		---	---	
28				---				---		---	---	
29				---				---		---	---	
30				---				---		---	---	
31				---				---		---	1330	
MEAN				1820				2060		1430	1190	
WTR YR 1977	MEAN	1380		MAX	2060	MIN	740					

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

RIO GRANDE BASIN

08317950 GALISTEO CREEK BELOW GALISTEO DAM, NM -- Continued

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---				---		---	---	
2				---				---		---	---	
3				---				---		---	---	
4				---				---		---	---	
5				---				---		23.0	---	
6				---				---		25.0	---	
7				---				---		---	---	
8				---				---		---	---	
9				---				---		---	---	
10				---				---		---	---	
11				---				---		---	18.0	
12				---				---		---	22.5	
13				---				21.0		---	---	
14				---				---		---	---	
15				---				---		---	19.0	
16				---				---		---	---	
17				---				---		---	---	
18				.0				---		---	---	
19				---				---		---	---	
20				---				---		---	---	
21				---				---		18.0	---	
22				---				---		---	---	
23				---				---		---	---	
24				---				---		---	17.0	
25				---				---		---	18.0	
26				---				---		26.0	29.0	
27				---				---		---	---	
28				---				---		---	---	
29				---				---		---	---	
30				---				---		---	---	
31				---				---		---	27.0	
MEAN				.0				21.0		23.0	21.5	
WTR YR 1977	MEAN	20.5		MAX	29.0	MIN	.0					

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

08317950 GALISTEO CREEK BELOW GALISTEO DAM, NM -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	0	.00	150	.08	100	.03	150	.12	320	.86	410	1.4
2	0	.00	150	.08	95	.05	150	.12	500	2.7	410	1.4
3	0	.00	140	.08	90	.10	150	.12	345	1.4	398	1.0
4	0	.00	160	.11	90	.09	145	.12	370	1.6	340	1.1
5	0	.00	200	.16	85	.08	145	.12	410	1.9	350	1.2
6	0	.00	200	.14	85	.07	140	.09	400	1.8	310	.92
7	0	.00	190	.12	80	.05	80	.04	340	1.3	290	.76
8	0	.00	200	.16	85	.07	80	.04	335	1.1	290	.77
9	0	.00	180	.17	85	.08	80	.04	335	1.1	280	.60
10	0	.00	140	.11	90	.09	50	.01	330	.98	260	.51
11	0	.00	105	.09	85	.08	50	.01	330	.98	220	.29
12	0	.00	100	.05	95	.10	75	.04	300	.81	140	.10
13	0	.00	95	.04	90	.09	100	.07	300	.79	120	.08
14	0	.00	250	.37	110	.12	140	.11	280	.64	100	.05
15	0	.00	200	.27	100	.11	90	.06	275	.56	10	.00
16	0	.00	190	.15	95	.09	80	.05	280	.64	20	.00
17	0	.00	180	.12	90	.10	40	.03	270	.55	40	.01
18	0	.00	195	.18	90	.10	30	.03	245	.39	0	.00
19	0	.00	190	.17	120	.15	80	.11	200	.23	0	.00
20	0	.00	150	.08	110	.12	250	.41	140	.15	20	.00
21	0	.00	170	.12	110	.12	240	.32	140	.16	0	.00
22	0	.00	180	.15	100	.09	250	.41	200	.30	0	.00
23	100	.01	195	.18	110	.12	280	.53	30	.01	0	.00
24	90	.02	180	.15	105	.11	250	.41	270	.57	0	.00
25	110	.04	180	.15	100	.09	240	.32	330	.98	0	.00
26	80	.01	150	.10	115	.14	240	.32	340	1.1	0	.00
27	50	.00	50	.01	110	.12	230	.31	360	1.3	450	1.2
28	120	.04	0	.00	95	.09	230	.31	350	1.2	240	.30
29	110	.05	0	.00	90	.09	250	.41	---	---	100	.04
30	100	.04	0	.00	90	.07	250	.41	---	---	50	.01
31	100	.05	---	---	90	.07	275	.52	---	---	20	.00
TOTAL	---	0.26	---	3.59	---	2.88	---	6.01	---	26.10	---	11.74

RIO GRANDE BASIN

08317950 GALISTEO CREEK BELOW GALISTEO DAM, NM -- Continued

SUSPENDED--SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)	
	LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	0	.00	0	.00	0	.00	0	.00	0	.00	268	.45
2	30	.00	0	.00	0	.00	0	.00	0	.00	13700	10700
3	250	.45	0	.00	0	.00	0	.00	0	.00	5580	855
4	190	.20	0	.00	0	.00	0	.00	0	.00	13400	2080
5	40	.01	0	.00	0	.00	36100	13400	0	.00	2700	32
6	15	.00	0	.00	0	.00	3110	4.2	0	.00	12600	3380
7	0	.00	0	.00	0	.00	0	.00	0	.00	2500	23
8	0	.00	0	.00	0	.00	6470	280	0	.00	840	.68
9	0	.00	0	.00	0	.00	17700	1120	0	.00	93	.01
10	0	.00	0	.00	0	.00	1030	1.1	5060	9520	0	.00
11	0	.00	0	.00	0	.00	0	.00	29000	77900	0	.00
12	0	.00	0	.00	0	.00	0	.00	2000	81	0	.00
13	0	.00	191	.35	0	.00	2580	337	5190	218	0	.00
14	0	.00	129	.15	0	.00	5280	115	8610	8130	0	.00
15	0	.00	0	.00	0	.00	10500	1160	8500	579	0	.00
16	0	.00	0	.00	0	.00	3430	20	5850	347	0	.00
17	0	.00	0	.00	0	.00	0	.00	15700	2340	0	.00
18	0	.00	0	.00	0	.00	0	.00	4430	264	0	.00
19	110	.05	0	.00	0	.00	0	.00	2350	838	0	.00
20	120	.07	0	.00	0	.00	0	.00	6840	808	0	.00
21	140	.11	0	.00	0	.00	15600	385	0	.00	0	.00
22	20	.00	0	.00	0	.00	3090	20	0	.00	0	.00
23	0	.00	0	.00	0	.00	13600	326	0	.00	0	.00
24	50	.01	0	.00	0	.00	650	26	28000	32700	0	.00
25	110	.06	0	.00	0	.00	4830	981	5000	283	0	.00
26	15	.00	0	.00	0	.00	5240	578	458	3.0	0	.00
27	100	.01	0	.00	0	.00	5300	474	170	.22	0	.00
28	20	.00	0	.00	0	.00	0	.00	0	.00	0	.00
29	40	.01	0	.00	0	.00	0	.00	6350	138	0	.00
30	0	.00	0	.00	0	.00	0	.00	9610	743	0	.00
31	---	---	0	.00	---	---	0	.00	475	1.5	---	---
TOTAL	---	0.98	---	0.50	---	0.00	---	19227.30	---	134893.72	---	17071.14
TOTAL LOAD FOR YEAR: 171244.22 TONS.												

RIO GRANDE BASIN

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08319000 RIO GRANDE AT SAN FELIPE, NM
(Surveillance network station)

LOCATION.--Lat 35°26'39", long 106°26'23", in SW¼NW¼ sec.17, T.14 N., R.5 E., Sandoval County, Hydrologic Unit 13020201, in San Felipe Grant, on right bank 200 ft (61 m) downstream from Tongue Arroyo, 1,700 ft (520 m) upstream from steel highway bridge, 0.8 mi (1.3 km) upstream from San Felipe Pueblo, 11 mi (18 km) northeast of Bernalillo, and at mile 1,572.7 (2,530.5 km).

DRAINAGE AREA.--16,100 mi² (41,670 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1926-30, WSP 1392: 1937(M), WSP 1512: 1931-32, 1933(M), 1934-36, 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 5,115.73 ft (1,559.275 m) above mean sea level. Prior to Sept. 27, 1957, at site 1,800 ft (550 m) downstream at datum 5.35 ft (1.63 m) lower, except period May 16, 1945 to Sept. 30, 1946 when it was 5.94 ft (1.81 m) lower than present datum.

REMARKS.--Water-discharge records good. Flow completely regulated since November 1973 by Cochiti Dam (station 08317300) 17 mi (27 km) upstream. Prior to November 1973 some regulation of flow by El Vado Reservoir (station 08285000) and Abiquiu Reservoir (station 08286900). Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510). Diversions for irrigation of about 705,000 acres (2,900 km²) 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 ft³/s (38.91 m³/s), 995,500 acre-ft/yr (1.23 km³/yr) prior to completion of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,300 ft³/s (773 m³/s) June 26, 1937, gage height, 11.13 ft (3.392 m) site and datum then in use, from rating curve extended above 15,000 ft³/s (425 m³/s); minimum, 32 ft³/s (0.906 m³/s) July 7, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Other major floods occurred in 1874, 1884, and 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,720 ft³/s (77.0 m³/s) July 16, gage height, 5.16 ft (1.573 m); minimum daily, 101 ft³/s (2.86 m³/s) Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	358	402	396	470	496	453	444	1120	118	789	350	850
2	364	430	431	490	499	550	422	1190	117	683	150	700
3	386	513	441	490	534	636	432	1100	112	555	159	560
4	381	531	442	470	560	599	461	895	1110	451	120	600
5	334	549	442	460	588	547	489	759	1380	466	101	520
6	295	517	434	465	495	544	437	806	1350	505	470	150
7	284	537	428	450	490	552	457	813	1120	585	447	130
8	252	489	460	430	488	533	385	822	822	550	446	258
9	259	400	470	450	488	522	385	729	776	861	415	205
10	303	451	480	460	490	512	404	789	778	780	573	154
11	310	461	510	430	502	515	432	768	940	657	1460	159
12	310	438	540	380	518	543	485	754	1280	663	1440	165
13	303	425	540	380	553	519	425	802	1290	639	1650	202
14	290	425	450	410	554	529	384	703	1300	548	1500	197
15	286	425	420	440	553	520	391	465	1280	844	1110	210
16	290	434	540	400	553	530	416	416	1290	1230	1050	183
17	512	435	600	430	528	552	408	364	1260	1210	1260	183
18	530	434	700	441	510	565	338	298	1200	1130	1460	215
19	462	441	730	442	540	560	263	271	1140	1010	1410	219
20	480	462	750	431	612	571	275	223	1190	775	856	165
21	525	496	770	414	616	612	352	254	1220	732	577	157
22	507	480	700	422	592	618	363	246	1140	826	361	155
23	466	459	690	493	562	522	423	210	968	1050	264	154
24	464	457	680	536	610	516	347	184	823	1120	413	413
25	464	455	500	553	640	612	255	171	751	1060	283	796
26	465	455	350	517	656	644	247	172	758	617	235	857
27	482	451	320	512	650	514	239	164	748	953	273	686
28	484	250	380	517	590	535	242	213	734	1060	280	641
29	483	230	390	495	---	557	241	169	688	485	300	699
30	484	282	340	506	---	489	491	148	666	549	400	737
31	521	---	350	525	---	446	---	143	---	408	900	---
TOTAL	12334	13214	15674	14309	15467	16917	11333	16161	28349	23791	20713	11320
MEAN	398	440	506	462	552	546	378	521	945	767	668	377
MAX	530	549	770	553	656	644	491	1190	1380	1230	1650	857
MIN	252	230	320	380	488	446	239	143	112	408	101	130
AC-FT	24460	26210	31090	28380	30680	33550	22480	32060	56230	47190	41080	22450
(+)	4010	0	0	0	0	3330	3430	3410	3260	2760	3850	3780
CAL YR 1976 TOTAL	360883				3030	161	AC-FT	715800				
WTR YR 1977 TOTAL	199582				1650	101	AC-FT	395900				

(+) MONTHLY DIVERSION, IN ACRE-FT, OF COCHITI EASTSIDE CANAL; RECORD OF THIS FLOW IS 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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)
OCT												
05...	1300	363	390	7.6	18.5	17.5	10	9.0	18	140	35	44
NOV												
02...	1030	432	400	7.7	14.0	10.0	5	10.8	15	150	29	47
DEC												
01...	0930	341	440	8.0	1.5	4.0	4	11.4	88	160	24	49
JAN												
04...	1300	472	400	7.8	6.0	5.0	5	11.0	26	150	11	47
FEB												
01...	1300	466	420	8.0	6.5	3.5	4	11.7	7	150	6	46
MAR												
01...	1420	430	410	8.1	12.5	5.0	4	12.0	8	150	12	45
APR												
06...	1300	460	365	8.2	25.0	12.5	10	8.7	13	140	19	44
MAY												
10...	1000	765	410	8.4	17.5	13.5	10	12.0	200	150	26	46
JUN												
01...	1111	127	444	8.2	25.5	18.0	15	8.8	7	180	42	57
JUL												
13...	1200	680	365	7.9	27.5	22.0	15	7.6	22	140	30	42
AUG												
12...	1930	1360	360	8.2	23.0	25.0	110	7.6	22	150	47	49
SEP												
15...	1930	210	465	8.0	23.5	21.5	7	8.2	7	190	62	60

DATE	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)
OCT												
05...	7.3	20	.7	3.0	128	0	69	6.9	.4	17	233	231
NOV												
02...	7.9	22	.8	3.2	148	0	62	6.3	.4	18	262	240
DEC												
01...	8.5	27	.9	3.4	163	0	67	7.5	.3	19	264	262
JAN												
04...	8.5	26	.9	3.3	172	0	67	8.4	.5	25	276	271
FEB												
01...	8.0	26	.9	3.1	173	0	61	8.6	.5	25	265	265
MAR												
01...	8.2	25	.9	3.1	163	0	58	13	.5	24	252	258
APR												
06...	7.9	24	.9	3.1	150	0	60	8.2	.4	24	246	246
MAY												
10...	8.2	26	.9	3.5	150	0	67	5.2	.5	<1.7	254	233
JUN												
01...	9.5	29	.9	3.7	170	0	83	8.1	.5	21	297	296
JUL												
13...	7.7	21	.8	2.9	130	0	73	5.4	.3	16	234	233
AUG												
12...	7.6	23	.8	3.4	130	0	94	5.2	.4	17	262	264
SEP												
15...	8.5	28	.9	4.0	150	0	100	6.6	.4	17	321	299

RIO GRANDE BASIN

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08319000 RIO GRANDE AT SAN FELIPE, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDEU ORGANIC CARBON (C) (MG/L) (00689)
OCT 05...	.01	.01	.00	.17	.18	.03	.01	50	10	--	5.8	.3
NOV 02...	.00	.00	.00	.05	.05	.02	.01	50	10	--	5.7	.2
DEC 01...	.02	.02	.00	.25	.27	.02	.01	50	10	--	3.1	.5
JAN 04...	.13	.13	.00	.08	.21	.03	.01	50	10	--	2.0	.2
FEB 01...	.25	.25	.01	.26	.52	.04	.02	50	0	--	2.2	.5
MAR 01...	.06	.06	.03	.51	.60	.04	.04	40	20	1.7	--	--
APR 06...	.01	.00	.01	.30	.32	.07	.08	80	10	--	2.1	1.1
MAY 10...	.07	.07	.02	.14	.23	.07	.03	50	90	--	2.9	.9
JUN 01...	.03	.03	.04	.36	.43	.06	.03	50	10	--	3.2	.8
JUL 13...	.03	.03	.01	.00	.03	.04	.02	40	0	--	2.8	.7
AUG 12...	.12	.12	.01	.63	.76	.29	.02	50	10	--	2.9	--
SEP 15...	.01	.00	.01	.22	.24	.05	.03	50	10	--	64	.4

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)
JUL 13...	1200	83
AUG 12...	1930	339

RIO GRANDE BASIN

08319000 RIO GRANDE AT SAN FELIPE, NM -- Continued

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
OCT				
05...	1300	18	39	--
NOV				
02...	1030	32	23	--
DEC				
01...	0930	4	32	--
JAN				
04...	1300	2	18	--
FEB				
01...	1300	0	15	--
MAR				
01...	1420	1	--	7
APR				
06...	1300	24	--	38
MAY				
10...	1000	30	--	620
JUN				
01...	1111	75	--	140
JUL				
13...	1200	480	--	420
AUG				
12...	1930	300	--	820
SEP				
15...	1930	110	--	56

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT						
05...	1300	363	17.5	64	63	66
DEC						
01...	0930	341	4.0	10	9.2	47
JAN						
04...	1300	472	5.0	217	277	5
FEB						
01...	1300	466	3.5	15	19	35
MAR						
01...	1420	430	5.0	27	31	18
APR						
06...	1300	460	12.5	22	27	91
MAY						
10...	1000	765	13.5	37	76	61
JUN						
01...	1111	127	18.0	21	7.2	93
JUL						
13...	1200	680	22.0	111	204	55
AUG						
12...	1930	1360	25.0	1020	3750	82
SEP						
15...	1930	210	21.5	82	46	92

LOCATION.---Lat 35°39'42", long 106°44'34", Sandoval County, Hydrologic Unit 13020202, in Cañon de San Diego Grant, on left bank 0.7 mi (1.1 km) downstream from Rio Guadalupe, 3.5 mi (5.6 km) north of Jemez, and at mile 29.5 (47.5 km).

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.

GAGE.--Water-stage recorder. Concrete control since Dec. 6, 1965. Datum of gage is 5,622.3 ft (1,713.68 m) above mean sea level. June 22, 1936 to Mar. 11, 1937, at site 60 ft (20 m) upstream at datum 0.50 ft (0.152 m) higher. Mar. 12, 1937, to July 8, 1938, at present site at datum 0.7 ft (0.21 m) higher. July 9, 1938, to May 6, 1941, at site 60 ft (20 m) upstream at datum 0.70 ft (0.213 m) higher.

AVERAGE DISCHARGE.--29 years (water years 1937-40, 1950, 1954-77), 66.6 ft³/s (1.886 m³/s), 48,250 acre-ft/yr (59.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft³/s (167 m³/s) Apr. 21, 1958, from rating curve extended above 2,200 ft³/s (62 m³/s) on basis of contracted-opening measurement; maximum gate height, 8.6 ft (2.62 m), May 6, 1941, present datum; minimum, 4.2 ft/s (0.12 m³/s) Jan. 5, 1972, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 340 ft³/s (9.63 m³/s) at 2330 hours Aug. 15, gage height, 4.83 ft (1.472 m), no peak above base of 1,000 ft³/s (28.3 m³/s); minimum daily, 9.8 ft³/s (0.28 m³/s) June 23.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	23	19	15	19	21	64	64	18	14	35	25
2	26	23	19	14	21	21	57	58	16	14	30	24
3	24	23	19	14	20	18	48	57	15	14	28	32
4	23	23	21	14	19	20	34	52	18	16	26	31
5	24	23	23	13	19	22	44	48	16	16	25	31
6	23	22	22	12	20	19	43	47	15	15	24	28
7	23	22	22	10	19	21	50	45	18	17	23	27
8	22	22	22	10	19	22	84	44	15	33	19	24
9	22	22	22	10	19	23	86	44	14	35	18	20
10	21	21	22	10	20	23	80	45	13	38	19	18
11	21	22	21	21	20	20	75	47	12	34	20	18
12	21	22	20	20	20	21	70	48	11	30	47	27
13	20	21	21	17	20	23	75	53	12	25	29	27
14	18	22	21	15	21	24	72	76	11	23	28	29
15	18	23	20	15	20	24	70	70	10	25	48	25
16	18	21	18	17	20	25	66	67	11	27	70	22
17	18	19	18	18	21	24	70	63	10	25	115	21
18	18	22	18	20	21	21	74	44	11	24	147	20
19	19	24	18	21	21	22	76	39	12	23	120	19
20	20	23	17	21	22	26	78	35	11	22	90	17
21	21	23	16	21	22	26	76	35	10	25	60	17
22	23	22	17	21	23	27	64	36	10	24	50	18
23	25	22	16	21	20	35	64	37	9.8	23	45	20
24	25	21	16	20	21	51	57	38	11	23	40	19
25	24	20	15	17	21	58	89	40	13	23	32	19
26	24	22	15	17	20	57	88	38	12	26	29	20
27	24	19	14	19	19	55	79	34	12	40	26	20
28	23	15	15	18	18	64	73	33	12	55	23	21
29	24	17	14	18	---	66	71	30	13	53	20	21
30	23	18	14	18	---	53	69	25	13	48	40	21
31	24	---	14	18	---	62	---	20	---	40	27	---
TOTAL	686	642	569	515	565	994	2046	1412	384.8	850	1353	681
MEAN	22.1	21.4	18.4	16.6	20.2	32.1	68.2	45.5	12.8	27.4	43.6	22.7
MAX	27	24	23	21	23	66	89	76	18	55	147	32
MIN	18	15	14	10	18	18	34	20	9.8	14	18	17
AC-FT	1360	1270	1130	1020	1120	1970	4060	2800	763	1690	2680	1350
CAL YR 1976	TOTAL	12668.0	MEAN	34.6	MAX	193	MIN	13	AC-FT	25130		
WTR YR 1977	TOTAL	10697.8	MEAN	29.3	MAX	147	MIN	9.8	AC-FT	21220		

RIO GRANDE BASIN

08328500 JEMEZ CANYON RESERVOIR NEAR BERNALILLO, NM

LOCATION.--Lat 35°23'40", long 106°32'50", in SW¼SW¼ sec.32, T.14 N., R.4 E., Sandoval County, Hydrologic Unit 13020202, at corner of outlet works control tower of Jemez Canyon Dam on Jemez River, 2.8 mi (4.5 km) upstream from mouth, and 6 mi (10 km) north of Bernalillo.

DRAINAGE AREA.--1,034 mi² (2,678 km²).

PERIOD OF RECORD.--October 1953 to September 1965 (monthend contents only), October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam, completed October 19, 1953. Capacity, 176,200 acre-ft (217 hm³), from capacity table adapted June 1, 1975, between elevations 5,125.0 ft (1,562.10 m) sill of outlet gates and 5,252.3 ft (1,600.90 m) operating deck of spillway. Maximum controlled capacity, 106,100 acre-ft (130 hm³) at elevation 5,232.0 ft or 1,594.71 m (floor of spillway which is located about 0.8 mi or 1.3 km south of dam). Capacity by original survey was 189,100 acre-ft (233 hm³). Original plan for reservoir operation was to desilt all flow above 30 ft³/s (0.85 m³/s) by storage for one day before releasing to Rio Grande, and for possible detention during flood stage on Rio Grande.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 71,220 acre-ft (87.8 hm³) June 8, 1958, elevation, 5,213.36 ft (1,589.032 m); no storage most of time.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 669 acre-ft (824,900 m³) July 22, elevation, 5,154.20 ft (1,571.000 m); no contents most of year.

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

5,137	1	5,150	179
5,138	2	5,155	811
5,140	6	5,160	1,980
5,142	13	5,165	3,700
5,146	30	5,170	6,180

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 0800 (OCT. 1 TO DEC. 31), AT 2400 (JAN. 1 TO SEPT. 30)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	2.00	68.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	5.00	42.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	12.00	23.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	1.00	10.00	144.0	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	141.0	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	23.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	3.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	63.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	174.0	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	235.0	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	277.0	.00	.00	.00	185.0	.00
13	.00	.00	.00	.00	.00	.00	292.0	2.00	.00	.00	100.0	.00
14	.00	.00	.00	.00	.00	.00	317.0	1.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	326.0	14.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	310.0	1.00	.00	.00	129.0	.00
17	.00	.00	.00	.00	.00	.00	292.0	1.00	.00	.00	216.0	.00
18	.00	.00	.00	.00	.00	.00	265.0	2.00	.00	.00	239.0	.00
19	.00	.00	.00	.00	.00	.00	312.0	.00	.00	.00	196.0	.00
20	.00	.00	.00	.00	.00	.00	333.0	.00	.00	.00	310.0	.00
21	.00	.00	.00	.00	.00	.00	314.0	.00	.00	21.00	270.0	.00
22	.00	.00	.00	.00	.00	.00	279.0	.00	.00	669.0	178.0	.00
23	.00	.00	.00	.00	.00	.00	230.0	.00	.00	332.0	48.00	.00
24	.00	.00	.00	.00	.00	.00	177.0	.00	.00	320.0	.00	.00
25	.00	.00	.00	.00	.00	.00	137.0	.00	.00	320.0	.00	.00
26	.00	.00	.00	.00	.00	.00	131.0	.00	.00	364.0	.00	.00
27	.00	.00	.00	.00	.00	.00	125.0	.00	.00	194.0	.00	.00
28	.00	.00	.00	.00	.00	.00	118.0	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	107.0	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	1.00	92.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	1.00	---	.00	---	.00	.00	---
MAX	.00	.00	.00	.00	.00	1.00	333	68	144	669	310	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(†)	-	-	-	-	-	5136.95	5148.48	-	-	-	-	-
(‡)	0	0	0	0	0	+1.0	+91	-92	0	0	0	0
CAL YR 1977	MAX 669	MIN 0	(†) 0									
WTR YR 1977	MAX 669	MIN 0	(†) 0									

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

08329000 JEMEZ RIVER BELOW JEMEZ CANYON DAM, NM

LOCATION.--Lat 35°23'24", long 106°32'03", in NE¼ sec.5, T.13 N., R.4 E., Sandoval County, Hydrologic Unit 13020202, on right bank 0.8 mi (1.3 km) downstream from Jemez Canyon Dam, 2.0 mi (3.2 km) upstream from mouth, and 6 mi (9.6 km) north of Bernalillo.

DRAINAGE AREA.--1,038 mi² (2,688 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1936 to January 1938, March 1943 to current year. Published as "Jemez Creek" prior to 1948, and as "near Bernalillo" prior to 1954.

REVISED RECORDS.--WSP 1178: 1949. WSP 1212: 1950. WSP 1512: 1936, 1943, 1945, 1947-48, 1949(M), 1950. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,095.60 ft (1,553.139 m) above mean sea level, from Corps of Engineers bench mark. Prior to Apr. 24, 1951, at site 0.8 mi (1.3 km) upstream at datum 24.51 ft (7.471 m) higher. Apr. 24, 1951, to June 25, 1958, at site 37 ft (11 m) upstream at datum 4.40 ft (1.341 m) above present datum. Supplementary water-stage recorder at gages on Jemez Canyon Dam at datum 5,125.00 ft (1,562.100 m) above mean sea level (Corps of Engineers bench mark) used at times since January 1953.

REMARKS.--Water-discharge records poor. Subsequent to October 1953, flow at this station can be completely regulated by Jemez Canyon Reservoir (station 08328500). However, reservoir is designed essentially for desilting and flood control rather than storage. Diversions for irrigation of about 3,000 acres (12 km²) above station.

AVERAGE DISCHARGE.--35 years (water years 1937, 1944-77), 52.8 ft³/s (1.495 m³/s), 38,250 acre-ft/yr (47.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft³/s (462 m³/s) Aug. 29, 1943, gage height, 5.62 ft (1.713 m), site and datum then in use, from rating curve extended above 3,000 ft³/s (85.0 m³/s); no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in 1900 was probably less than 16,000 ft³/s (453 m³/s), but highest observed outside period of record.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 208 ft³/s (5.89 m³/s) Aug. 30, gage height, 6.40 ft (1.951 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	7.9	.00	26	26	18	59	41	.00	.00	.10	38
2	7.6	6.2	.00	20	27	16	61	42	.00	.03	.01	20
3	6.2	6.2	.00	13	28	14	68	38	.00	.09	.01	10
4	5.8	6.0	1.0	12	18	17	64	25	24	.04	.01	3.0
5	3.9	6.8	1.2	12	19	20	51	15	24	.00	.10	.00
6	1.7	6.4	1.5	12	15	20	53	10	97	.00	.20	.00
7	1.5	8.0	1.3	12	14	15	50	2.0	50	.00	.20	.00
8	1.9	8.6	1.3	13	17	20	55	.00	20	.00	.30	.00
9	5.2	8.2	1.1	15	17	18	74	.00	5.0	3.6	.30	.00
10	3.6	8.5	1.1	15	19	20	88	.00	.00	3.9	.40	.00
11	3.4	9.0	1.0	20	13	18	83	.00	.00	.00	2.0	.00
12	4.0	7.7	.90	20	13	15	87	.00	.00	.00	22	.00
13	1.7	3.4	.90	26	15	23	92	.00	.00	.00	52	.00
14	5.7	18	.90	24	15	25	94	20	.00	.00	37	.00
15	1.9	14	.80	24	14	22	106	30	.00	1.2	3.8	.00
16	.15	13	.80	24	16	20	101	33	.02	19	66	.00
17	1.1	13	.90	25	17	23	107	24	.03	35	75	.00
18	.61	14	.90	25	18	20	109	24	.03	.00	71	.00
19	.13	15	1.0	25	13	19	102	24	.03	.00	64	.00
20	4.1	13	1.2	26	15	19	100	10	.03	.00	61	.00
21	6.6	15	1.0	26	14	20	93	5.0	.00	104	60	.00
22	8.0	15	1.0	27	25	19	87	.00	.00	162	59	.00
23	6.8	14	1.0	27	18	20	76	.00	.00	131	59	.00
24	6.2	15	2.0	27	17	25	69	.00	.00	108	53	.00
25	9.5	16	2.0	25	24	35	68	.00	.00	96	30	.00
26	12	16	4.0	25	18	44	67	.00	.00	70	20	.00
27	10	5.0	6.0	25	14	59	54	.00	.00	75	15	.00
28	12	.00	6.0	24	18	59	49	.00	.00	10	10	.00
29	11	.00	8.0	25	---	69	49	.00	.00	5.0	10	.00
30	7.4	.00	8.0	24	---	56	42	.00	.00	2.0	47	.00
31	8.7	---	10	22	---	60	---	.00	---	.50	64	---
TOTAL	168.19	288.90	66.80	666	497	848	2258	343.00	220.14	826.36	882.43	71.00
MEAN	5.43	9.63	2.15	21.5	17.8	27.4	75.3	11.1	7.34	26.7	28.5	2.37
MAX	12	18	10	27	28	69	109	42	97	162	75	38
MIN	.13	.00	.00	12	13	14	42	.00	.00	.00	.01	.00
AC-FT	334	573	132	1320	986	1680	4480	680	437	1640	1750	141

CAL YR 1976 TOTAL 6623.06 MEAN 18.1 MAX 150 MIN .00 AC-FT 13140
WTR YR 1977 TOTAL 7135.82 MEAN 19.6 MAX 162 MIN .00 AC-FT 14150

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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPERATURE (DEG C) (00020)	TEMPERATURE (DEG C) (00010)	HARDNESS (CA+MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)
OCT 18...	0935	.05	2330	7.7	--	8.5	390	0
NOV 01...	0940	6.8	2700	7.9	11.5	5.0	270	31
08...	1045	6.8	2190	8.0	--	7.0	--	--
JAN 03...	1000	12	2340	8.0	--	.0	300	31
22...	1100	27	2320	7.9	--	.0	330	89

DATE	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)
OCT 18...	110	27	370	8.2	21	470	0	390	310
NOV 01...	87	12	320	8.5	17	287	0	340	310
08...	--	--	--	--	--	--	--	--	--
JAN 03...	96	15	400	10	17	330	0	370	370
22...	110	13	380	9.1	16	292	0	410	340

DATE	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SIO2) (MG/L) (00955)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS-SOLVED ORTHO-PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)
OCT 18...	1.0	33	--	1490	.23	--	--	--
NOV 01...	1.6	36	1290	1270	.20	.02	1600	0
08...	--	--	--	--	--	--	--	--
JAN 03...	1.7	37	--	1470	.19	--	--	--
22...	1.7	29	--	1450	.32	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	DIS-SOLVED ARSENIC (AS) (UG/L) (01000)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)
NOV 01...	0940	50	1600	0

08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM

LOCATION.--Lat 35°11'58", long 106°35'53", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on left bank 0.5 mi (0.8 km) upstream from Edith Blvd., 1.1 mi (1.8 km) upstream from mouth, and 1.2 mi (1.9 km) northeast of Alameda.

PERIOD OF RECORD.--July 1968 to current year (no winter records).

GAGE.--Water-stage recorder and concrete lined channel. Altitude of gage is 5,015 ft (1,529 m), from Corps of Engineers plan and profile map.

REMARKS.--Records good. Floodway channel intercepts flow of numerous arroyos in northeast Albuquerque and discharges into the Rio Grande at a point 1.6 mi (2.6 km) north of Alameda.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s (142 m³/s) July 26, 1971, gage height, 6.30 ft (1.920 m) from rating curve extended above 2,900 ft³/s (82 m³/s); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,640 ft³/s (103 m³/s) Aug. 18, gage height, 5.12 ft (1.561 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00				.00	.00	.00	.00	.00	.00	7.3
2	.00	.00				.00	.00	.00	.00	.00	.00	85
3	.00	.00				.00	68	.00	.00	.00	.00	52
4	.00	.00				.00	14	.00	.00	3.6	.00	.00
5	.00	.00				.00	.00	.00	.00	.00	.00	147
6	.00	.00				.00	.00	.00	.00	.00	.00	12
7	.00	.00				.00	.00	.00	.00	.00	10	.00
8	.00	.00				.00	.00	.00	.00	37	.00	.00
9	.00	.00				.00	.00	.00	.00	12	7.2	.00
10	.00	.00				.00	.00	.00	.00	.00	8.6	.00
11	.00	.00				.00	.00	.00	.00	.00	.00	45
12	.00	.00				.00	.00	.00	.00	.00	27	19
13	.00	.00				.00	.00	.00	.00	.00	118	5.9
14	.00	.00				.00	.00	.00	.00	.00	211	.00
15	.00	.00				.00	.00	.00	.00	17	33	.00
16	.00	.00				.00	.00	.00	.00	.00	21	.00
17	.00	.00				.00	.00	.00	.00	.00	5.4	.00
18	.00	.00				.00	.00	.00	.00	.00	290	.00
19	.00	.00				.00	60	.00	.00	.00	.00	.00
20	.00	.00				.00	42	.00	.00	17	.00	.00
21	.00	.00				.00	9.0	.00	.00	14	.00	.00
22	.00	.00				.00	.00	.00	.00	71	15	.00
23	.00	.00				.00	.00	.00	.00	21	6.3	.00
24	.00	.00				.00	.00	.00	.00	11	.00	.00
25	.00	.00				.00	.00	.00	.00	101	.00	.00
26	.00	.00				27	.00	.00	.00	11	.00	.00
27	.00	.00				91	.00	.00	.00	37	.00	.00
28	.00	.00				4.5	.00	.00	4.7	6.3	.00	.00
29	.00	.00				.00	.00	.00	.00	.00	.00	.00
30	.00	.00				.00	.00	.00	.00	.00	50	.00
31	.00	---				.00	---	.00	---	.00	8.1	---
TOTAL	.00	.00	---	---	---	122.50	193.00	.00	4.70	358.90	810.60	373.20
MEAN	.000	.000	---	---	---	3.95	6.43	.000	.16	11.6	26.1	12.4
MAX	.00	.00	---	---	---	91	68	.00	4.7	101	290	147
MIN	.00	.00	---	---	---	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	---	---	---	243	383	.00	9.3	712	1610	740

RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, NM

LOCATION.--Lat 35°05'21", long 106°40'48", Bernalillo County, Hydrologic Unit 13020203, in Atrisco Grant, at downstream side of Old Town Bridge on U.S. Highway 66 at Albuquerque, and at mile 1,540.0 (2,477.9 km).

DRAINAGE AREA.--17,440 mi² (45,170 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1946(M).

GAGE.--Water-stage recorder. Datum of gages is 4,946.16 ft (1,507.590 m) above mean sea level. Prior to Sept. 18, 1947, at various sites at datum about 2.00 ft (0.610 m) higher; Sept. 18, 1947, to Apr. 12, 1959, at site 550 ft (170 m) to the left of present site; Apr. 13, 1959, to June 29, 1960, at site 150 ft (46 m) to right of present site. Supplemental water-stage recorders at sites 75 ft (23 m) and 150 ft (46 m) to right of present site used at various times since 1964.

REMARKS.--Water-discharge records good. Flow completely regulated since November 1973 by Cochiti Dam (station 08317300) 50 mi (80 km) upstream. Possible regulation by operation of reservoirs on Rio Chama and by flood-and-silt-detention reservoirs on Galisteo Creek and Jemez River (stations 08285000, 08286900, 08317900, 08328500). Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510). Diversions above station for irrigation of about 718,000 acres (2,900 km²), 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s (708 m³/s) Apr. 24, 1942, from rating curve extended above 13,900 ft³/s (394 m³/s); maximum gage height, 7.82 ft (2.384 m) Aug. 10, 1967; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,190 ft³/s (62.0 m³/s) Aug. 18, gage height, 6.17 ft (1.881 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	457	442	290	449	584	558	302	12	.00	159	260	25
2	197	400	305	516	575	432	288	411	.00	244	119	100
3	147	431	436	557	588	504	293	640	.00	208	66	150
4	120	548	474	557	623	565	320	495	.00	137	38	200
5	60	592	530	518	619	569	305	300	.00	77	35	300
6	20	648	544	468	630	540	307	214	315	62	35	295
7	18	606	509	529	537	557	239	262	709	57	32	238
8	17	621	523	484	535	483	248	226	425	104	13	163
9	16	550	523	395	526	470	225	258	206	230	.79	93
10	15	462	488	325	523	439	215	206	172	454	.50	27
11	14	489	530	346	503	423	210	250	343	338	299	25
12	13	511	554	416	499	381	186	214	687	169	959	58
13	10	483	583	367	522	402	198	282	932	150	1040	17
14	2.7	453	589	373	554	410	162	295	803	134	1280	68
15	4.0	456	503	372	559	458	108	266	728	90	943	58
16	3.6	452	537	465	574	402	91	97	700	353	626	32
17	3.2	471	594	444	590	424	50	53	707	888	718	16
18	7.1	465	689	421	584	468	37	16	700	688	1640	13
19	.40	458	766	503	565	458	21	15	665	497	1490	13
20	4.6	469	862	502	613	445	52	15	683	389	1270	5.2
21	.40	490	858	513	676	484	16	14	744	249	750	2.0
22	7.6	528	874	513	671	521	27	14	737	296	530	1.0
23	3.6	508	869	529	652	524	16	13	679	440	316	.00
24	3.2	477	795	583	639	453	36	12	569	547	279	11
25	.80	467	839	599	712	430	70	6.0	432	738	250	19
26	5.8	452	597	564	706	549	39	5.0	373	918	150	26
27	15	465	377	543	687	718	13	3.4	388	573	75	35
28	25	390	337	579	631	499	13	1.0	377	980	50	40
29	84	340	431	562	---	475	16	.50	314	852	29	40
30	152	335	445	521	---	471	13	.00	233	452	25	18
31	230	---	461	565	---	367	---	.00	---	218	20	---
TOTAL	1657.00	14459	17712	15078	16677	14879	4116	4595.90	13621.00	11691	13338.29	2088.20
MEAN	53.5	482	571	486	596	480	137	148	454	377	430	69.6
MAX	457	648	874	599	712	718	320	640	932	980	1640	300
MIN	.40	335	290	325	499	367	13	.00	.00	57	.50	.00
AC-FT	3290	28680	35130	29910	33080	29510	8160	9120	27020	23190	26460	4140
(†)	22280	1550	1180	1230	1360	9180	17040	19600	14320	16840	13200	12270
CAL YR 1976 TOTAL	301817.00											
WTR YR 1977 TOTAL	129912.39											
MEAN	825											
MAX	3170											
MIN	.40											
AC-FT	598700											
(†)	130200											
AC-FT	257700											
(†)	130000											

(†) COMBINED FLOW, IN ACRE-FT, OF ALBUQUERQUE RIVERSIDE DRAIN, AND ARENAL, ARMIJO, AND ATRISCO CANALS. THIS FLOW WHICH BYPASSES RIVER GAGE, CAN BE ADDED TO RIVER RECORDS TO GET ENTIRE SURFACE FLOW IN VALLEY CROSS-SECTION.

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to current year.

WATER TEMPERATURES: October 1969 to current year.

SUSPENDED SEDIMENT DISCHARGES: May 1969 to September 1969 (partial-record station), October 1969 to current year.

REMARKS.--Additional sediment total discharge determination were made bi-weekly when needed.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,840 micromhos Oct. 12, 1974; minimum daily 133 micromhos July 21, 1971.

WATER TEMPERATURES: Maximum, 34.0°C July 12, 1970; minimum, 0.0°C on many days in 1971, 1975-1977.

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, 1,450 micromhos June 7; minimum daily, 373 micromhos Dec. 22.

WATER TEMPERATURES: Maximum, 29.0°C Aug. 21; minimum, 0.0°C on many days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily, 21,100 mg/L Aug. 12; minimum daily, no flow on several days during May, June, and September.

SEDIMENT LOADS: Maximum daily, 54,600 tons (49,500 tonnes) Aug. 12; minimum daily, 0 tons (0 tonnes) on several days during May, June, and September.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (000061)	TEMPER- ATURE (DEG C) (000010)	SUS- PEN- DED SEDIM- ENT (MG/L) (80154)	SUS- PEN- DED SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)
OCT										
04...	1200	119	18.5	236	76	65	74	80	--	--
NOV										
01...	1330	489	.0	546	721	49	56	74	--	--
29...	1030	378	.0	159	162	27	27	36	--	--
DEC										
13...	1530	608	10.0	460	755	31	40	57	--	--
27...	1313	369	5.5	190	189	20	25	36	--	--
JAN										
17...	1234	507	4.0	392	537	--	--	--	44	47
31...	1600	531	9.0	455	652	41	47	59	--	--
FEB										
14...	1212	545	8.0	564	830	13	15	21	36	39
28...	1400	625	8.0	325	548	19	23	31	58	64
MAR										
14...	1234	425	11.5	195	224	--	--	--	--	--
28...	1200	488	7.5	384	506	50	57	65	--	--
APR										
11...	1145	202	15.0	393	214	76	84	92	--	--
MAY										
09...	1100	304	18.0	191	157	43	51	67	--	--
16...	1130	105	16.5	240	68	68	74	81	--	--
JUN										
06...	1100	252	20.5	1990	1350	49	64	84	--	--
20...	1400	694	22.0	702	1320	28	33	51	--	--
24...	1000	624	21.0	214	361	35	39	55	--	--
JUL										
08...	1000	146	20.0	986	389	68	85	99	100	--
18...	1000	743	22.0	9500	19100	73	80	98	100	--
19...	1330	486	27.5	4490	5890	58	75	93	--	--
27...	1000	523	22.0	10500	14800	69	82	97	--	--
29...	1000	1130	22.0	3960	12100	60	73	88	--	--
AUG										
15...	1234	786	25.0	5120	10900	56	73	91	97	98
18...	1000	2190	21.0	6280	37100	40	47	73	--	--
19...	1000	1450	22.0	4230	16600	50	67	83	--	--
21...	1800	648	29.0	1820	3180	58	76	87	--	--
25...	1000	250	21.0	1050	709	72	88	100	--	--
SEP										
01...	1000	25	21.0	3680	248	79	95	100	--	--
06...	1400	356	23.5	855	822	52	65	76	--	--

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. FALL DIAM. % FINER THAN (70346)	SUS. SED. FALL DIAM. % FINER THAN (70347)	SUS. SED. FALL DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70332)	SUS. SED. FALL DIAM. % FINER THAN (70333)	SUS. SED. FALL DIAM. % FINER THAN (70334)	SUS. SED. FALL DIAM. % FINER THAN (70335)
		.250 MM	.500 MM	1.00 MM	2.00 MM	.062 MM	.125 MM	.250 MM	.500 MM	1.00 MM
OCT										
04...		--	--	--	--	85	86	93	99	100
NOV										
01...		--	--	--	--	88	93	98	100	--
29...		--	--	--	--	43	53	86	100	--
DEC										
13...		--	--	--	--	75	80	95	100	--
27...		--	--	--	--	53	63	92	100	--
JAN										
17...		79	100	--	--	--	--	--	--	--
31...		--	--	--	--	76	80	95	100	--
FEB										
14...		49	90	100	--	--	--	--	--	--
28...		88	99	99	99	--	--	--	--	--
MAR										
14...		--	--	--	--	77	81	93	100	--
28...		--	--	--	--	77	80	94	100	--
APR										
11...		--	--	--	--	96	97	99	100	--
MAY										
09...		--	--	--	--	81	85	93	100	--
16...		--	--	--	--	87	89	95	100	--
JUN										
06...		--	--	--	--	95	96	98	100	--
20...		--	--	--	--	84	90	98	100	--
24...		--	--	--	--	83	91	98	100	--
JUL										
08...		--	--	--	--	--	--	--	--	--
18...		--	--	--	--	--	--	--	--	--
19...		--	--	--	--	98	99	100	--	--
27...		--	--	--	--	97	98	99	99	100
29...		--	--	--	--	97	98	99	100	--
AUG										
15...		100	--	--	--	--	--	--	--	--
18...		--	--	--	--	95	97	100	--	--
19...		--	--	--	--	95	97	100	--	--
21...		--	--	--	--	94	95	98	100	--
25...		--	--	--	--	--	--	--	--	--
SEP										
01...		--	--	--	--	--	--	--	--	--
06...		--	--	--	--	83	85	90	100	--
DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN (70337)	SUS. SED. FALL DIAM. % FINER THAN (70338)	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. FALL DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70332)
						.002 MM	.004 MM	.016 MM	.062 MM	.125 MM
SEP										
25...	1000	20	16.0	176	9.5	78	86	93	99	100

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT (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...	1200	119	236	76	0	2	26	81
NOV								
01...	1330	489	546	721	5	8	42	84
29...	1030	378	159	162	4	8	44	--
DEC								
13...	1530	608	460	755	4	6	52	92
27...	1313	369	190	189	9	14	62	--
JAN								
17...	1234	507	392	537	1	4	39	90
31...	1600	531	455	652	2	4	42	89
FEB								
14...	1212	545	564	830	0	1	42	93
28...	1400	625	325	548	1	3	40	91
MAR								
14...	1234	425	195	224	1	3	37	85
28...	1200	488	384	506	1	3	40	90
APR								
11...	1145	202	393	214	1	1	30	85
MAY								
09...	1100	304	191	157	1	4	46	92
16...	1130	105	240	68	1	1	25	86
JUN								
06...	1100	252	1990	1350	1	2	44	88
20...	1400	694	702	1320	3	8	50	91
JUL								
05...	1030	--	--	--	2	3	50	86
19...	1330	486	4490	5890	2	5	48	90
AUG								
15...	1234	786	5120	10900	1	3	53	94
SEP								
06...	1400	356	855	822	1	1	29	81

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 .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)
OCT								
04...	--	--	--	95	99	100	--	--
NOV								
01...	93	--	--	--	97	99	99	100
29...	--	--	96	99	100	--	--	--
DEC								
13...	--	--	--	98	99	100	--	--
27...	--	--	86	98	100	--	--	--
JAN								
17...	--	--	--	97	99	100	--	--
31...	--	--	--	96	99	100	--	--
FEB								
14...	--	--	--	96	98	99	100	--
28...	--	--	--	98	100	--	--	--
MAR								
14...	--	--	--	95	98	99	100	--
28...	--	--	--	97	99	100	--	--
APR								
11...	--	--	--	95	98	100	--	--
MAY								
09...	--	--	--	96	99	100	--	--
16...	--	--	--	94	98	100	--	--
JUN								
06...	97	100	--	--	--	--	--	--
20...	99	100	--	--	--	--	--	--
JUL								
05...	98	100	--	--	--	--	--	--
19...	99	100	--	--	--	--	--	--
AUG								
15...	100	--	--	--	--	--	--	--
SEP								
06...	97	100	--	--	--	--	--	--

RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	TOTAL SEDI- MENT DIS- CHARGE (T/DAY) (80156)	STREAM WIDTH (FT) (00004)	MEAN DEPTH (FT) (00064)	STREAM VELOC- ITY (FPS) (00055)
OCT									
04...	1200	119	18.5	236	76	105	81	.90	1.6
NOV									
01...	1330	489	.0	546	721	830	275	1.0	1.8
29...	1030	378	.0	159	162	323	185	1.2	1.8
DEC									
13...	1530	608	10.0	460	755	836	260	1.2	1.9
27...	1313	369	5.5	190	189	199	180	1.2	1.7
JAN									
17...	1234	507	4.0	392	537	786	255	1.1	1.8
31...	1600	531	9.0	455	652	822	195	1.2	2.3
FEB									
14...	1212	545	8.0	564	830	1260	220	1.3	1.9
28...	1400	625	8.0	325	548	827	260	1.3	1.9
MAR									
14...	1234	425	11.5	195	224	246	130	1.8	1.9
28...	1200	488	7.5	384	506	555	225	1.1	1.9
APR									
11...	1145	202	15.0	393	214	254	117	1.1	1.6
MAY									
09...	1100	304	18.0	191	157	208	190	.92	1.7
16...	1130	105	16.5	240	68	110	111	.59	1.6
JUN									
06...	1100	252	20.5	1990	1350	1440	84	1.9	1.6
20...	1400	694	22.0	702	1320	1490	240	1.5	2.0
JUL									
19...	1330	486	27.5	4490	5890	6180	230	1.1	1.9
AUG									
15...	1234	786	25.0	5120	10900	11800	268	1.5	2.0
SEP									
06...	1400	356	23.5	855	822	1020	125	1.5	1.9

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	395	444	451	502	463	425	485	495	---	444	532	562
2	417	450	460	518	453	451	489	461	---	419	539	515
3	446	433	445	494	481	474	486	453	---	422	555	415
4	442	441	428	475	471	417	448	444	---	447	549	596
5	422	446	447	481	469	423	515	459	---	464	564	524
6	417	448	443	487	502	443	492	476	456	558	560	523
7	418	440	464	484	477	460	489	451	1450	487	---	560
8	424	439	445	448	459	423	472	426	510	456	---	549
9	425	429	448	479	473	455	478	437	466	473	---	544
10	434	454	451	471	476	462	475	430	452	478	---	540
11	424	454	454	454	474	479	490	454	456	464	593	557
12	432	450	441	456	477	450	479	444	443	448	866	552
13	436	454	444	488	496	433	483	425	434	455	473	554
14	429	442	439	464	446	444	455	440	425	448	688	542
15	429	473	473	485	460	457	478	642	430	474	750	545
16	427	457	472	483	457	446	483	516	421	425	508	544
17	428	460	470	474	467	482	491	541	425	1130	654	555
18	400	450	457	472	463	468	507	501	417	874	447	552
19	401	469	461	471	464	469	510	498	413	420	562	550
20	406	468	447	478	484	418	404	---	456	409	535	557
21	417	454	432	480	465	450	495	---	404	442	578	552
22	410	451	373	489	437	444	479	---	406	1010	606	556
23	414	463	375	523	475	442	475	497	407	1090	692	---
24	417	454	428	504	453	464	515	499	402	1130	590	521
25	420	---	446	541	460	455	480	501	425	1050	529	525
26	423	---	457	484	473	472	475	497	423	835	574	507
27	419	---	477	475	493	462	486	473	425	1020	535	505
28	432	---	467	467	437	489	483	514	423	1010	565	496
29	434	459	493	470	---	520	489	490	423	911	555	521
30	430	477	482	448	---	495	470	---	425	578	581	521
31	433	---	466	482	---	478	---	---	---	519	572	---
MEAN	423	452	450	482	468	456	482	479	473	638	583	536

WTR YR 1977 MEAN 494 MAX 1450 MIN 373
 WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	5.0	.0	.0	1.0	2.0	1.0	17.0	---	22.0	21.0	21.0
2	15.0	6.0	.0	1.0	1.0	1.0	4.0	13.0	---	26.0	22.0	20.0
3	23.0	7.0	.0	.0	1.0	1.0	5.0	14.0	---	21.0	22.0	20.0
4	14.0	6.0	1.0	.0	2.0	1.0	2.0	15.0	---	21.0	23.0	21.0
5	14.0	6.0	1.0	.0	1.0	1.0	3.0	14.0	---	22.0	22.0	20.0
6	13.0	7.0	1.0	.0	6.0	2.0	3.0	15.0	20.5	21.0	22.0	21.0
7	13.0	13.0	.0	.0	3.0	2.0	4.0	13.0	19.0	20.0	---	20.0
8	8.0	5.0	1.0	.0	3.0	3.0	4.0	18.0	20.0	20.0	---	19.0
9	19.0	6.0	1.0	1.0	1.0	3.0	5.0	18.0	20.0	21.0	---	19.0
10	21.0	5.0	1.0	.0	1.0	1.0	4.0	19.0	21.0	21.0	---	18.0
11	10.0	5.0	1.0	.0	1.0	8.0	5.0	18.0	21.0	20.0	21.0	18.0
12	12.0	4.0	4.0	4.0	2.0	2.0	10.0	18.0	21.0	21.0	21.0	18.0
13	13.0	3.0	1.0	.0	7.0	1.0	11.0	17.0	19.0	21.0	22.0	18.0
14	14.0	4.0	.0	.0	3.0	2.0	11.0	17.0	19.0	21.0	20.0	17.0
15	15.0	3.0	1.0	.0	2.0	1.0	10.0	17.0	20.0	20.0	21.0	18.0
16	19.0	4.0	.0	2.0	2.0	2.0	11.0	18.0	19.0	22.0	22.0	17.0
17	18.0	4.0	.0	.0	1.0	6.0	12.0	18.0	20.0	21.0	21.0	17.0
18	12.0	3.0	.0	.0	3.0	2.0	12.0	20.0	21.0	22.0	21.0	17.0
19	10.0	3.0	5.0	.0	3.0	7.0	10.0	20.0	25.0	22.0	22.0	15.0
20	8.0	4.0	.0	.0	6.0	3.0	10.0	---	22.0	22.0	21.0	17.0
21	11.0	3.0	.0	1.0	3.0	3.0	10.0	---	25.0	21.0	29.0	17.0
22	13.0	4.0	.0	.0	2.0	4.0	11.0	---	20.0	27.0	22.0	16.0
23	13.0	3.0	.0	2.0	1.0	4.0	14.0	20.0	20.0	23.0	22.0	---
24	19.0	3.0	5.0	2.0	1.0	3.0	16.0	14.0	21.0	21.0	22.0	16.0
25	5.0	---	6.0	1.0	3.0	4.0	15.0	16.0	26.0	21.0	21.0	16.0
26	6.0	---	.0	2.0	1.0	4.0	16.0	18.0	20.0	21.0	21.0	16.0
27	7.0	---	4.0	2.0	5.0	1.0	17.0	19.0	20.0	22.0	22.0	17.0
28	5.0	---	1.0	2.0	2.0	1.0	16.0	19.0	21.0	21.0	21.0	16.0
29	7.0	.0	.0	1.0	---	1.0	17.0	18.0	22.0	22.0	23.0	16.0
30	8.0	.0	1.0	1.0	---	2.0	17.0	---	22.0	23.0	21.0	17.0
31	9.0	---	.0	3.0	---	2.0	---	---	---	22.0	22.0	---
MEAN	12.5	4.5	1.0	1.0	2.5	2.5	9.5	17.0	21.0	21.5	22.0	18.0
WTR YR 1977	MEAN	11.0		MAX	29.0		MIN	.0				

RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	658	812	613	707	77	66	173	210	292	460	309	466
2	178	95	272	294	94	82	280	390	187	290	177	206
3	148	59	303	353	155	189	251	377	233	370	240	327
4	218	71	345	510	181	236	218	328	273	459	212	323
5	123	20	415	663	554	791	186	260	425	710	201	309
6	75	8.1	595	1040	292	415	119	150	440	748	275	401
7	82	4.4	422	690	152	203	189	270	247	358	193	290
8	124	5.0	472	791	441	617	145	189	211	305	228	297
9	102	3.6	272	404	465	652	137	146	193	274	200	254
10	60	2.1	214	267	385	505	65	57	192	271	157	186
11	41	1.4	238	314	316	445	66	62	183	249	173	198
12	36	1.3	307	424	316	473	160	180	179	241	141	145
13	71	1.5	212	276	389	612	90	89	235	331	195	212
14	35	.26	147	180	458	728	120	121	394	589	230	255
15	48	.22	163	201	447	607	121	122	250	377	217	268
16	26	.04	315	384	252	365	239	300	211	327	132	143
17	21	.04	303	385	193	310	256	307	218	347	167	191
18	45	.86	195	245	181	337	117	133	199	314	375	474
19	28	.23	214	265	536	1110	152	206	165	252	247	305
20	19	.11	265	336	567	1320	137	186	253	419	323	388
21	19	.15	305	404	403	934	148	205	352	642	291	380
22	32	.34	318	453	621	1470	148	205	385	698	278	391
23	26	.07	234	321	740	1740	170	243	367	646	257	364
24	18	.02	175	225	788	1690	386	608	578	997	342	418
25	7	.02	178	224	745	1690	359	581	289	556	554	643
26	25	.12	186	227	251	405	366	557	268	511	438	649
27	47	1.1	152	191	142	145	480	704	390	723	729	1410
28	52	2.2	131	138	111	101	467	730	345	588	417	562
29	140	27	125	129	138	161	477	724	---	---	366	469
30	75	28	76	76	147	177	253	356	---	---	415	528
31	338	194	---	---	133	166	377	575	---	---	372	369
TOTAL	---	1339.18	---	11117	---	18742	---	9571	---	13052	---	11821

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)	
	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	
APRIL												
1	332	271	40	1.3	0	.00	58	25	91	64	3680	248
2	275	214	1190	1640	0	.00	64	42	73	23	3080	832
3	301	238	876	1510	0	.00	62	35	57	10	2950	1190
4	218	188	487	651	0	.00	42	16	53	5.4	2310	1250
5	181	149	217	176	0	.00	44	9.1	34	3.2	4620	3740
MAY												
6	444	368	130	75	6070	6730	1600	268	22	2.1	994	792
7	443	286	365	258	13500	25800	550	85	20	1.7	1730	1110
8	198	133	230	140	1570	1800	935	263	20	.70	443	195
9	138	84	185	129	300	167	1040	1480	18	.04	514	124
10	137	80	122	68	202	94	3180	3900	18	.02	165	12
JUNE												
11	295	167	157	106	410	380	1310	1200	8000	6460	320	24
12	175	88	181	105	550	1020	343	157	21100	54600	193	39
13	218	117	941	716	1230	3100	259	105	4000	11200	115	5.3
14	132	58	1380	1100	1050	2280	217	79	6120	21200	125	23
15	85	25	243	175	1690	3320	241	59	4710	12000	89	14
JULY												
16	77	19	210	55	740	1400	2960	3990	1950	3300	80	6.9
17	113	15	33	4.7	525	1000	12600	32300	6660	12900	67	2.9
18	109	11	27	1.2	443	837	9200	17100	6120	27100	56	2.0
19	62	3.5	107	4.3	481	864	2950	3960	4060	16300	94	3.3
20	250	35	83	3.4	572	1050	800	840	2470	8470	57	.80
AUGUST												
21	87	3.8	55	2.1	540	1080	500	336	1910	3870	80	.43
22	77	5.6	54	2.0	405	806	8000	6390	2910	4160	45	.12
23	46	2.0	61	2.1	1040	1910	14400	17100	1410	1200	0	.00
24	110	11	52	1.7	178	273	14900	22000	524	395	161	4.8
25	148	28	50	.81	161	188	4030	8030	1030	695	180	9.2
SEPTEMBER												
26	39	4.1	65	.88	173	174	2800	6940	1000	405	185	13
27	38	1.3	47	.43	167	175	5020	7770	898	182	132	12
28	61	2.1	39	.11	147	150	8800	23300	1290	174	100	11
29	60	2.6	42	.06	148	125	3900	8970	240	19	90	9.7
30	40	1.4	0	.00	127	80	392	478	50	3.4	122	5.9
31	---	---	0	.00	---	---	240	141	493	27	---	---
TOTAL	---	2611.4	---	6929.09	---	54803.00	---	167368.1	---	184770.56	---	9680.35
TOTAL LOAD FOR YEAR: 491804.68 TONS.												

08330600 TIJERAS ARROYO NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'04", long 106°39'18", in SW¼SW¼ sec. 17, T.9 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on right bank 875 ft (267 m) downstream from highway bridge on Broadway Boulevard SE, 1,760 ft (536 m) upstream from South Diversion Channel, 0.5 mi (0.8 km) downstream from highway bridge on Interstate Highway 25, and 3 mi (5 km) south of Albuquerque.

DRAINAGE AREA.--133 mi² (344 km²).

PERIOD OF RECORD.--October 1951 to September 1968, (annual maximum only), August 1974 to current year.

GAGE.--Water-stage recorder and concrete lined channel. Altitude of gage is 4,961 ft (1,512 m), from Corps of Engineers plan and profile map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,530 ft³/s (71.6 m³/s) June 24, 1967, (gage height not determined); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 490 ft³/s (13.9 m³/s) Aug. 14, gage height, 2.00 ft (0.610 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

July 20	2.0	August 17	4.0	September 2	0.50
July 25	1.0	August 18	3.0	September 3	3.0
August 14	13.0	August 30	3.0		

Month	cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
July	3.0	2.0	0	0.097	6.0
August	23.0	13.0	0	0.74	46
September	3.50	3.0	0	0.12	6.9
CAL YR 1976	1331.80	376	0	3.64	2640
WTR YR 1977	29.50	13	0	0.081	59

NOTE.--During the 1977 Water Year flow occurred only on the days listed above.

08330800 TIJERAS ARROYO BELOW SOUTH DIVERSION CHANNEL INLET NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'09", long 106°39'41", in SW¼SE¼ sec. 18, T.9 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on left bank 260 ft (79 m) upstream from highway bridge on State Highway 47, 500 ft (152 m) downstream from South Diversion Channel inlet, 1.0 mi (1.6 km) downstream from highway bridge on Interstate Highway 27 and 2.5 mi (4.0 km) south of Albuquerque.

PERIOD OF RECORD.--July 1974 to current year.

GAGE.--Water-stage recorder and concrete lined channel. Altitude of gage is 4,933 ft (1,504 m), from Corps of Engineers plan and profile map.

REMARKS.--Records poor. South Diversion Channel intercepts flow of numerous arroyos in northeast and southeast Albuquerque and discharges into Tijeras Arroyo at a point 0.8 mi (1.3 km) upstream from the Rio Grande.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,450 ft³/s (41.1 m³/s) Aug. 19, 1976, gage height (not determined); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 340 ft³/s (9.63 m³/s) Aug. 14, gage height, 1.50 ft (0.457 m); no flow of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

March 27	22	July 21	1.1	August 30	3.1
April 3	5.2	July 25	2.3	September 2 .....	.62
April 19	8.8	August 14	13	September 3	3.0
April 20	2.4	August 17	5.1		
July 20	3.6	August 18	3.2		

Month	cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
March	22.0	22	0	0.71	44
April	16.40	8.8	0	0.55	33
July	7.00	3.6	0	0.23	14
August	24.40	13	0	0.79	48
September	3.62	3.0	0	0.12	7.2
CAL YR 1976	1363.00	380	0	3.72	2700
WTR YR 1977	73.42	22	0	0.20	146

NOTE.--During the 1977 Water Year flow occurred only on the days listed above.

RIO GRANDE BASIN

08331000 RIO GRANDE AT ISLETA, NM
(Surveillance station)

LOCATION.--Lat 34°54'21", long 106°41'04", in NE1/4, 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 mi² (46,900 km²) (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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	AIR TEMPERATURE (DEG C) (00020)	TEMPERATURE (DEG C) (00010)	TURBIDITY (JTU) (00070)	DISSOLVED OXYGEN (MG/L) (00300)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARDNESS (CA+MG) (MG/L) (00900)
OCT 12...	1000	232	465	7.3	15.5	10.0	15	7.6	23	170
NOV 02...	1500	481	480	7.7	21.0	15.5	75	8.4	46	170
DEC 06...	1331	484	494	7.3	2.5	2.5	50	8.5	15	170
JAN 25...	1441	594	590	7.7	8.0	8.0	110	10.0	16	170
FEB 25...	1331	639	530	7.6	6.0	9.0	95	10.0	21	150
MAR 25...	1300	454	510	7.9	20.0	14.5	50	8.1	32	160
APR 18...	1441	239	460	8.0	26.0	17.0	45	8.0	19	170
MAY 17...	1515	275	530	7.5	25.0	19.5	20	9.1	19	180
JUN 20...	1331	588	480	7.9	25.5	23.0	65	5.6	22	160
JUL 26...	1500	1090	640	7.8	28.5	25.0	2600	5.0	23	220
AUG 22...	1616	665	600	7.8	25.0	26.0	400	5.6	63	200
SEP 19...	1645	164	610	7.9	28.0	22.0	25	6.9	18	230

DATE	NON-CARBONATE HARDNESS (MG/L) (00902)	DISSOLVED CALCIUM (CA) (MG/L) (00915)	DISSOLVED MAGNESIUM (MG) (MG/L) (00925)	DISSOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DISSOLVED PHOSPHATE (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DISSOLVED SULFATE (SO4) (MG/L) (00945)
OCT 12...	33	53	8.0	33	1.1	4.8	161	0	90
NOV 02...	44	55	8.5	28	.9	5.5	156	0	83
DEC 06...	37	52	8.8	38	1.3	4.9	157	0	91
JAN 25...	19	54	8.6	50	1.7	4.6	184	0	97
FEB 25...	13	47	8.7	41	1.4	4.5	171	0	82
MAR 25...	22	52	8.4	40	1.4	4.8	174	0	86
APR 18...	34	55	8.8	36	1.2	4.4	170	0	78
MAY 17...	33	58	8.7	44	1.4	5.6	180	0	88
JUN 20...	38	51	8.3	33	1.1	4.4	150	0	83
JUL 26...	100	74	9.3	51	1.5	5.6	150	0	160
AUG 22...	69	65	9.1	42	1.3	5.4	160	0	130
SEP 19...	70	74	10	44	1.3	5.5	190	0	120

RIO GRANDE BASIN

08331000 RIO GRANDE AT ISLETA, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)
OCT 12...	17	.4	26	318	316	.85	.84	.02	.43
NOV 02...	18	.5	25	340	306	1.5	.87	.00	1.0
DEC 06...	23	.4	26	328	328	.87	.87	.62	.22
JAN 25...	31	.6	25	356	365	.51	.39	.76	.84
FEB 25...	24	.5	25	315	320	.52	.38	.48	.28
MAR 25...	23	.6	26	320	332	.71	.71	.86	.64
APR 18...	18	.6	26	307	314	.61	.49	.24	.50
MAY 17...	24	.6	26	346	349	.43	.38	1.6	.00
JUN 20...	14	.5	20	290	292	.60	.60	.80	.40
JUL 26...	27	.5	21	429	426	.76	.55	.46	2.9
AUG 22...	22	.6	25	384	383	.84	.71	.10	1.4
SEP 19...	24	.6	28	389	403	1.1	.41	.11	.27

DATE	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDEO ORGANIC CARBON (C) (MG/L) (00689)
OCT 12...	1.3	.47	.34	90	20	--	--	3.3	.6
NOV 02...	2.5	.95	.59	110	10	--	--	2.2	1.2
DEC 06...	1.7	.83	.62	110	140	100	--	2.1	1.7
JAN 25...	2.1	.78	.53	150	0	--	--	2.2	2.7
FEB 25...	1.3	.50	.47	110	10	--	4.4	--	--
MAR 25...	2.2	.90	.71	110	20	60	5.9	2.9	2.1
APR 18...	1.4	.46	.43	90	20	--	--	2.7	>2.5
MAY 17...	2.0	1.3	1.1	130	30	--	--	2.8	--
JUN 20...	1.8	.72	.42	90	10	20	5.1	2.8	2.2
JUL 26...	4.2	4.4	.27	130	20	--	--	4.3	8.1
AUG 22...	2.3	.97	.50	120	10	--	--	13	4.4
SEP 19...	1.5	.61	.34	120	10	30	2.9	2.4	.9

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)
JUL 26...	1500	3960
AUG 22...	1616	726
SEP 19...	1645	48

08331000 RIO GRANDE AT ISLETA, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)
DEC 06...	1331	9	5	110	<10	1	0	0	<50	0	20	3
MAR 25...	1300	7	4	110	10	0	10	0	<50	0	10	0
JUN 20...	1331	7	5	90	10	0	10	0	<50	0	30	1
SEP 19...	1645	7	6	120	<10	1	10	0	<50	0	<10	0

DATE	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
DEC 06...	4100	140	<100	4	230	100	1.8	1.8	0	0	20	10
MAR 25...	2000	20	100	3	150	60	.0	.0	1	1	20	20
JUN 20...	20	10	<100	1	160	20	.0	.0	1	0	20	2
SEP 19...	1000	10	<100	4	120	30	.4	.0	0	0	20	10

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- UNIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
OCT 12...	1000	6700	2200	--
NOV 02...	1500	6300	350	--
DEC 06...	1331	630	240	--
JAN 25...	1441	120	58	--
FEB 25...	1331	33	110	--
MAR 25...	1300	110	--	430
APR 18...	1441	1800	--	380
MAY 17...	1515	660	--	300
JUN 20...	1331	760	--	160
JUL 26...	1500	15000	--	6000
AUG 22...	1616	2700	--	620
SEP 19...	1645	720	--	320

RIO GRANDE BASIN

08331000 RIO GRANDE AT ISLETA, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (000061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT						
12...	1000	232	10.0	28	18	93
NOV						
02...	1500	481	15.5	370	481	57
DEC						
06...	1331	484	2.5	254	332	50
JAN						
25...	1441	594	8.0	489	784	63
FEB						
25...	1331	639	9.0	392	676	54
MAR						
25...	1300	454	14.5	150	184	75
APR						
18...	1441	239	17.0	110	71	90
MAY						
17...	1515	275	19.5	102	76	89
JUN						
20...	1331	588	23.0	197	313	89
JUL						
26...	1500	1090	25.0	3080	9060	70
AUG						
22...	1616	665	26.0	820	1470	81
SEP						
19...	1645	164	22.0	59	26	90

08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, NM

LOCATION.--Lat 34°24'52", long 106°48'11", Socorro County, Hydrologic Unit 13020203, in Sevilleta or Belen Grant, 0.2 mi (0.3 km) south of U.S. Highway 60, 1.8 mi (2.9 km) east of Bernardo, about 3 mi (5 km) upstream from floodway, and 4 mi (6 km) upstream from Rio Puerco.

PERIOD OF RECORD.--June 1936 to September 1937, October 1964 to current year. July 1943 to September 1964, included in composite flow of "Rio Grande near Bernardo". October 1960 to September 1964, monthly acre-feet published in WSP 1923 (daily records available in district files). Beginning October 1952, flow in conveyance channel represents controlled diversion from Rio Grande. Prior to October 1952, records called "San Francisco Riverside drain near Bernardo", are not equivalent.

GAGE.--Water-stage recorder with concrete control. Datum of gage is 4,720.00 ft (1,438.656 m) above mean sea level. Prior to October 1964, 0.2 mi (0.3 km) upstream at various datums.

REMARKS.--Records good. Conveyance channel is 1 of 4 channels (stations 08332010, 08332030, and 08332050) carrying flow in valley cross section. Original design and plan was for conveyance channel to carry flows up to about 2,000 ft³/s (57 m³/s). For combined monthly flow in acre-ft of this channel, floodway, Bernardo interior drain and Lower San Juan Riverside drain, see tabulation below daily table for station 08332010. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,220 ft³/s (62.9 m³/s) Apr. 22, 1958; no flow many days most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.5	5.1	3.8	4.1	3.8	3.4	1.5	.00	.00	.00	.00
2	2.8	3.5	5.0	4.1	4.2	3.8	3.4	1.3	.00	.00	.00	.00
3	2.8	3.5	5.0	4.1	4.1	3.8	3.4	1.3	.00	.00	.00	.00
4	2.6	3.5	4.6	4.1	4.1	3.4	3.4	1.2	.00	.00	.00	.00
5	2.4	3.8	4.6	4.1	4.1	3.6	3.4	1.1	.00	.00	.00	.00
6	2.5	4.0	4.5	4.1	4.1	3.5	3.4	1.0	.00	.00	.00	.00
7	2.3	3.9	4.2	4.1	4.1	3.4	4.5	.89	.00	.00	.00	.00
8	2.4	4.0	4.5	4.1	4.0	3.4	3.9	.84	.00	.00	.00	.00
9	2.4	4.2	4.4	4.1	3.8	3.4	3.6	.73	.00	.00	.00	.00
10	2.4	4.2	4.6	4.1	4.2	3.4	3.4	.69	.00	.00	.00	.00
11	2.4	3.9	4.6	4.1	4.1	3.4	3.2	.62	.00	.00	.00	.00
12	2.4	4.1	4.4	4.1	3.9	3.4	3.0	.65	.00	.00	.00	.00
13	2.4	4.2	4.5	4.1	3.8	3.2	3.2	.58	.00	.00	.00	.00
14	2.4	4.2	4.5	3.8	3.8	3.1	3.2	.57	.00	.00	.00	.00
15	2.3	4.2	4.6	3.8	3.8	3.5	2.9	.52	.00	.00	.00	.00
16	2.1	4.2	5.1	3.8	3.9	10	2.9	.44	.00	.00	.00	.00
17	2.9	4.2	5.0	3.8	4.1	3.5	2.6	.36	.00	.00	.00	.00
18	2.4	4.2	5.1	3.8	3.8	6.9	2.4	.30	.00	.00	.00	.00
19	2.4	4.2	5.1	3.8	3.8	9.3	2.4	.29	.00	.00	.00	.00
20	2.4	4.2	5.0	3.8	3.8	3.8	2.5	.66	.00	.00	.00	.00
21	2.8	4.0	5.1	3.8	3.8	3.9	2.4	.99	.00	.00	.00	.00
22	2.5	4.2	5.0	4.1	4.0	3.4	2.5	.79	.00	.00	.00	.00
23	2.8	4.2	5.1	4.1	4.0	3.2	2.9	.60	.00	.00	.00	.00
24	3.1	4.2	5.1	4.1	3.8	2.9	3.2	.58	.00	.00	.00	.00
25	3.1	4.0	5.0	4.1	3.8	2.8	2.6	.51	.00	.00	.40	.00
26	3.1	4.1	5.1	4.1	3.8	3.0	2.4	.42	.00	.00	.00	.00
27	3.1	3.6	5.0	4.1	3.8	3.6	2.3	.32	.00	.00	.00	.00
28	3.4	4.2	5.1	4.1	3.8	3.3	2.0	.00	.00	.00	.00	.00
29	3.5	4.5	5.0	4.1	---	3.4	1.7	.00	.00	.00	.00	.00
30	3.5	5.6	5.1	4.5	---	3.4	1.5	.00	.00	.00	.00	.00
31	3.5	---	4.5	4.5	---	3.4	---	.00	---	.00	.00	---
TOTAL	84.0	122.3	149.5	125.2	110.4	121.9	87.6	19.75	.00	.00	.40	.00
MEAN	2.71	4.08	4.82	4.04	3.94	3.93	2.92	.64	.000	.000	.013	.000
MAX	3.5	5.6	5.1	4.5	4.2	10	4.5	1.5	.00	.00	.40	.00
MIN	2.1	3.5	4.2	3.8	3.8	2.8	1.5	.00	.00	.00	.00	.00
AC-FT	167	243	297	248	219	242	174	39	.00	.00	.8	.00

CAL YR 1976 TOTAL 1453.78 MEAN 3.97 MAX 12 MIN .00 AC-FT 2880
WTR YR 1977 TOTAL 821.05 MEAN 2.25 MAX 10 MIN .00 AC-FT 1630

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 (8 km) downstream from heading of conveyance channel, 2 mi (3 km) east of Bernardo, and at mile 1,487.2 (2,392.9 km).

DRAINAGE AREA.--19,230 mi² (49,810 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1936 to January 1939, October 1941 to current year. Monthly discharge only October 1942 to June 1943 published in WSP 1312, and October 1960 to September 1964, published in WSP 1923 (daily records available in district files). Published as "Rio Grande near Bernardo" prior to October 1964. Prior to October 1952, flow of Bernardo interior drain was included only when it carried river overflow, the entire flow has been included from October 1952 to September 1964. Flow in the conveyance channel, formerly San Francisco Riverside drain, has been included in record prior to October 1964.

GAGE.--Water-stage recorder. Datum of gage is 4,722.55 ft (1,439.433 m) above mean sea level.

REMARKS.--Water-discharge records poor. Since November 1973 flow completely regulated by Cochiti Dam (station 08317300) 100 mi (161 km) upstream. Floodway is 1 of 4 channels (stations 08331990, 08332030, and 08332050) carrying flow in valley cross section. For combined monthly flow in acre-ft of floodway, conveyance channel, Bernardo interior drain and Lower San Juan Riverside drain see tabulation below. Diversions for irrigation of about 740,000 acres (3,000 km²) above station.

AVERAGE DISCHARGE.--19 years (water years 1937-38, 1942-58), 1,125 ft³/s (31.86 m³/s), 815,100 acre-ft/yr (1,000 hm³/yr). Includes flow of floodway, conveyance channel, and Bernardo interior drain.

15 years (water years 1959-73) 898 ft³/s (25.43 m³/s), 605,600 acre-ft/yr (747 hm³/yr), includes flow of floodway, conveyance channel, Bernardo interior drain, and lower San Juan Riverside drain. Prior to completion of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD (1936-39 and SINCE 1941).--Maximum discharge, 21,000 ft³/s (595 m³/s) Apr. 25, 1942, gage height, 6.90 ft (2.103 m); no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 868 ft³/s (24.6 m³/s) Aug. 20 gage height, 4.55 ft (1.387 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	649	97	350	412	436	330	222	.00	.00	.00	8.3	.00
2	587	125	342	404	496	222	186	.00	.00	.00	.00	.00
3	288	301	327	412	487	147	152	.00	.00	.00	.00	.00
4	154	349	400	496	487	125	201	.00	.00	.00	.00	.00
5	97	458	483	541	505	212	163	.00	.00	.00	.00	8.3
6	56	520	511	541	541	256	153	.00	.00	.00	.00	6.1
7	49	628	538	452	550	256	133	.00	.00	.00	.00	21
8	40	618	557	487	487	215	94	.00	.00	.00	.00	31
9	40	649	529	478	428	153	40	.00	.00	.00	.00	27
10	38	639	566	444	412	123	9.7	.00	.00	.00	.00	4.1
11	32	492	502	388	388	140	36	.00	.00	.00	.00	.00
12	32	466	466	338	345	132	16	.00	.00	.00	.00	.00
13	22	511	492	345	324	113	5.3	.00	.00	.00	.00	.00
14	8.4	492	502	366	286	107	1.9	.00	.00	.00	.00	.00
15	23	466	538	373	262	116	.84	.00	.00	.00	20	.00
16	29	466	458	359	274	122	1.6	.00	.00	.00	221	1.3
17	29	449	511	388	259	74	7.5	.00	.00	.00	372	.01
18	40	458	538	428	268	115	11	.00	.00	.00	306	.00
19	48	474	529	436	260	139	4.9	.00	.00	.00	258	.00
20	44	492	618	460	240	136	12	4.1	.00	.00	647	.00
21	64	511	694	514	226	162	26	8.0	.00	.00	753	.00
22	54	538	742	541	266	129	34	3.8	.00	.00	762	.00
23	56	587	766	560	301	112	23	4.1	.00	.00	482	.00
24	66	597	842	580	310	159	3.4	2.0	.00	.00	182	.00
25	78	566	766	580	276	148	9.5	.00	.00	.00	56	.00
26	74	557	790	600	317	152	9.6	.00	.00	.00	15	.00
27	62	538	754	600	353	226	.89	.00	.00	3.4	1.1	.00
28	112	500	466	532	366	398	.00	.00	.00	.58	.00	.00
29	158	450	392	514	---	423	.00	.00	.00	.69	.00	.00
30	88	400	400	487	---	276	.00	.00	.00	124	.00	.00
31	100	---	441	444	---	220	---	.00	---	156	.00	---
TOTAL	3217.4	14394	16810	14500	10150	5638	1557.13	22.00	.00	410.40	4083.40	98.81
MEAN	104	480	542	468	363	182	51.9	.71	.000	13.2	132	3.29
MAX	649	649	842	600	550	423	222	8.0	.00	156	762	31
MIN	8.4	97	327	338	226	74	.00	.00	.00	.00	.00	.00
AC-FT	6380	28550	33340	28760	20130	11180	3090	44	.00	814	8100	196
(†)	20470	34580	39230	34200	24830	24680	14710	8260	6040	10990	19180	11930
CAL YR 1976 TOTAL	209302.45			MEAN 572	MAX 3060	MIN .00	AC-FT 415200	(†) MEAN 746	AC-FT 541400			
WTR YR 1977 TOTAL	70881.14			MEAN 194	MAX 842	MIN .00	AC-FT 140600	(†) MEAN 344	AC-FT 249100			

(†) COMBINED FLOW, IN ACRE-FT AND MEAN, IN FT³/S, OF FLOODWAY, CONVEYANCE CHANNEL, BERNARDO INTERIOR DRAIN, AND LOWER SAN JUAN RIVERSIDE DRAIN.

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957 to current year.

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 (1964 to 1977): Maximum daily, 1,410 micromhos July 23, 1976; minimum daily, 271 micromhos June 17, 1973.

WATER TEMPERATURES (1964 to 1977): Maximum, 34.5°C Aug. 9, 1975; minimum, 0.0°C Feb. 23, 1971, Feb. 3, 1972, and Nov. 27, 1976.

SEDIMENT CONCENTRATIONS (1964 to 1977): Maximum daily, not determined; minimum daily, no flow on many days each year.

SEDIMENT LOADS (1964 to 1977): Maximum daily, 356,000 tons (323,000 tonnes) Aug. 11, 1967; minimum daily, 0 tons (0 tonnes) on many days each year.

EXPREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 973 micromhos Apr. 25; minimum daily, 537 micromhos Dec. 24.

WATER TEMPERATURES: Maximum, 29.0°C Apr. 25; minimum, 0.0°C Nov. 27.

SEDIMENT CONCENTRATIONS: Maximum daily, 6,720 mg/L Aug. 16; minimum daily, no flow on many days.

SEDIMENT LOADS: Maximum daily, 8,230 tons (7,470 tonnes) Dec. 21; minimum daily, 0 tons (0 tonnes) on many days.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (000611)	SPECIFIC CONDUCTANCE (MICRO- MHOS) (000955)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (CA, MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DISSOLVED CALCIUM (CA) (MG/L) (00915)
NOV								
11...	1315	467	657	7.8	10.0	200	41	63
DEC								
03...	1045	313	650	7.7	2.0	210	38	63
16...	1230	451	602	7.7	4.5	190	45	60
JAN								
03...	1345	412	605	7.6	8.0	200	48	65
21...	1015	514	586	7.7	4.5	190	39	61
FEB								
07...	1100	550	578	7.5	8.0	190	34	60
17...	1000	259	565	7.8	7.0	190	31	59
MAR								
02...	1200	222	502	7.9	5.0	170	25	55
16...	1045	122	576	7.6	9.0	180	20	56
APR								
01...	1000	222	--	--	10.0	180	24	57
20...	1000	12	865	8.0	16.0	250	60	75
AUG								
23...	1345	492	616	8.4	28.0	210	58	67

DATE	DIS-SOLVED MAGNE- SIUM (MG) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORP- TION RATIO (00931)	DIS-SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLOR- IDE (CL) (MG/L) (00940)	DIS-SOLVED FLUO- RIDE (F) (MG/L) (00950)
NOV									
11...	10	51	1.6	4.9	192	0	120	26	.5
DEC									
03...	12	53	1.6	5.1	206	0	120	30	.5
16...	9.9	48	1.5	4.8	177	0	110	28	.6
JAN									
03...	9.8	54	1.7	5.1	188	0	110	46	.6
21...	9.4	49	1.5	4.9	185	0	100	23	.6
FEB									
07...	9.5	47	1.5	5.0	189	0	99	26	.5
17...	9.4	45	1.4	4.8	189	0	98	24	.5
MAR									
02...	8.6	42	1.4	4.8	180	0	89	22	.6
16...	8.8	45	1.5	5.1	190	0	120	21	.7
APR									
01...	9.4	53	1.7	5.2	190	--	120	24	.6
20...	15	94	2.6	6.3	230	0	200	42	.7
AUG									
23...	9.4	47	1.4	5.3	180	0	130	23	.5

RIO GRANDE BASIN

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTH0- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
NOV 11...	25	411	403	1.4	1.6	.55	130	0
DEC 03...	27	--	421	1.5	--	.58	130	10
16...	27	--	382	1.1	--	.62	120	0
JAN 03...	26	--	417	1.4	--	.60	150	10
21...	25	--	371	1.1	--	.59	130	0
FEB 07...	26	--	372	.96	--	.56	120	10
17...	25	--	365	.88	--	.54	120	10
MAR 02...	25	--	343	1.2	--	.57	110	30
16...	21	--	373	.17	--	.35	120	30
APR 01...	26	371	396	1.2	--	.42	120	0
20...	24	--	571	.01	--	.19	180	20
AUG 23...	23	--	397	.49	--	.23	120	20

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)
OCT 01...	1700	670	21.5	1420	2570	45	54
28...	1100	103	3.0	117	33	69	74
NOV 11...	1315	467	10.0	586	739	45	56
DEC 03...	1045	313	2.0	287	243	49	57
JAN 03...	1345	412	8.0	293	326	39	52
21...	1015	514	4.5	362	502	35	47
FEB 07...	1100	550	8.0	560	832	27	35
17...	1000	259	7.0	470	329	31	39
MAR 02...	1200	222	5.0	432	259	45	56
16...	1045	122	9.0	213	70	61	73
APR 01...	1000	222	10.0	340	204	44	52
SEP 08...	0900	25	18.0	772	52	86	91

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. SIEVE DIAM. % FINER THAN (70331)	SUS. SED. SIEVE DIAM. % FINER THAN (70332)	SUS. SED. SIEVE DIAM. % FINER THAN (70333)	SUS. SED. SIEVE DIAM. % FINER THAN (70334)	SUS. SED. SIEVE DIAM. % FINER THAN (70335)
OCT							
01...	73	--	84	89	97	100	--
28...	86	--	92	96	98	100	--
NOV							
11...	75	--	85	89	98	100	--
DEC							
03...	75	--	86	95	99	100	--
JAN							
03...	68	--	85	96	100	--	--
21...	69	--	86	94	99	100	--
FEB							
07...	47	--	65	77	93	100	--
17...	53	--	65	78	97	100	--
MAR							
02...	78	--	89	96	99	100	--
16...	87	--	94	98	100	--	--
APR							
01...	62	--	75	85	93	97	100
SEP							
08...	98	100	--	--	--	--	--

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (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)	BED MAT. FALL DIAM. % FINER THAN (80168)	BED MAT. FALL DIAM. % FINER THAN (80169)	BED MAT. FALL DIAM. % FINER THAN (80170)
OCT												
28...	1100	103	117	33	0	2	43	96	--	99	100	--
NOV												
11...	1315	467	586	739	1	12	92	99	100	--	--	--
DEC												
03...	1045	313	287	243	1	10	87	100	--	--	--	--
16...	1230	451	--	--	1	10	72	99	100	--	--	--
JAN												
03...	1345	412	293	326	2	16	65	96	--	99	100	--
21...	1015	514	362	502	1	13	67	96	--	98	100	--
FEB												
07...	1100	550	560	832	0	2	29	91	--	94	98	100
17...	1000	259	470	329	0	0	26	88	--	91	98	100
MAR												
02...	1200	222	432	259	2	12	56	95	--	96	99	100
16...	1045	122	213	70	1	23	76	93	--	93	98	100
APR												
01...	1000	222	340	204	1	1	37	95	100	--	--	--
AUG												
23...	1345	492	--	--	1	5	68	99	100	--	--	--

RIO GRANDE BASIN

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	TOTAL SEDI- MENT DIS- CHARGE (T/DAY) (80156)	STREAM WIDTH (FT) (00004)	MEAN DEPTH (FT) (00064)	STREAM VELOC- ITY (FPS) (00055)
OCT									
28...	1100	103	3.0	117	33	46	50	1.2	1.7
NOV									
11...	1315	467	10.0	586	739	762	110	2.2	2.0
DEC									
03...	1045	313	2.0	287	243	346	86	1.6	2.3
JAN									
03...	1345	412	8.0	293	326	478	135	1.5	2.1
21...	1015	514	4.5	362	502	831	340	.85	1.9
FEB									
07...	1100	550	8.0	560	832	988	100	2.3	2.3
MAR									
02...	1200	222	5.0	432	259	318	150	1.4	.9
16...	1045	122	9.0	213	70	84	72	1.3	1.3
APR									
01...	1000	222	10.0	340	204	287	108	1.4	1.5

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	582	806	630	581	583	549	606	---	---	---	---	---
2	561	804	644	596	567	547	628	---	---	---	---	---
3	628	718	656	609	587	557	672	---	---	---	---	---
4	706	695	637	602	589	565	640	---	---	---	---	---
5	735	665	621	613	597	582	649	---	---	---	---	---
6	803	642	606	585	593	570	645	---	---	---	---	---
7	821	616	619	599	632	554	699	---	---	---	---	670
8	728	625	611	585	590	595	699	---	---	---	---	688
9	720	624	620	590	600	574	766	---	---	---	---	675
10	708	625	608	606	585	584	756	---	---	---	---	---
11	758	645	619	597	583	583	805	---	---	---	---	---
12	751	639	608	619	573	583	779	---	---	---	---	---
13	822	631	613	622	587	576	872	---	---	---	---	---
14	854	630	582	617	594	561	789	---	---	---	---	---
15	876	643	603	630	591	604	743	---	---	---	---	---
16	858	632	591	597	576	596	---	---	---	---	644	---
17	842	642	600	626	581	623	---	---	---	---	641	---
18	832	635	593	606	575	612	---	---	---	---	622	---
19	864	640	590	615	583	605	---	---	---	---	617	---
20	814	630	568	603	582	593	880	---	---	---	609	---
21	791	631	568	587	584	601	813	---	---	---	583	---
22	833	627	557	585	572	610	791	815	---	---	569	---
23	820	620	565	597	566	641	813	---	---	---	574	---
24	790	614	537	599	559	618	860	---	---	---	652	---
25	830	586	554	583	579	633	973	---	---	---	664	---
26	820	621	545	627	562	661	835	---	---	---	---	---
27	790	616	549	635	568	630	935	---	---	---	---	---
28	732	611	588	613	564	573	---	---	---	---	---	---
29	725	637	617	592	---	588	---	---	---	---	---	---
30	792	630	609	605	---	568	---	---	---	---	---	---
31	767	---	612	594	---	599	---	---	---	---	---	---
MEAN	773	646	597	604	582	591	767	815	---	---	618	678
WTR YR 1977	MEAN	648	MAX	973	MIN	537						

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.5	15.5	4.5	8.0	12.0	11.0	18.0	---		---	---	---
2	19.0	15.0	5.5	9.0	8.0	7.0	15.0	---		---	---	---
3	23.0	15.0	8.0	10.0	12.0	11.5	11.0	---		---	---	---
4	23.0	16.0	9.0	9.0	12.5	14.0	19.0	---		---	---	---
5	20.0	15.5	6.0	7.5	13.0	10.5	23.0	---		---	---	---
6	22.0	8.5	8.5	5.5	13.0	11.5	23.0	---		---	---	---
7	17.0	15.0	9.0	7.5	14.0	18.0	22.5	---		---	---	19.0
8	17.5	15.5	11.0	6.0	14.5	18.5	25.0	---		---	---	18.0
9	18.5	15.5	9.5	3.0	14.0	18.0	20.0	---		---	---	17.5
10	15.5	15.0	7.0	5.0	9.0	13.0	24.0	---		---	---	---
11	21.0	14.0	9.0	5.0	14.5	14.5	21.0	---		---	---	---
12	21.5	7.0	9.0	5.0	14.5	19.0	26.0	---		---	---	---
13	20.5	7.0	9.5	6.5	11.5	7.0	23.5	---		---	---	---
14	18.5	7.0	10.0	8.0	14.0	17.5	16.5	---		---	---	---
15	20.0	10.5	10.0	7.5	15.0	16.5	23.0	---		---	---	---
16	12.0	10.0	8.0	7.0	13.0	16.5	---	---		22.0	---	---
17	15.0	16.0	4.5	8.5	17.5	16.0	---	---		22.0	---	---
18	18.0	16.0	8.5	10.0	17.5	17.5	---	---		22.0	---	---
19	17.5	13.0	8.0	8.5	15.5	17.5	---	---		22.0	---	---
20	15.0	13.5	9.0	9.0	17.0	16.5	27.0	---		22.0	---	---
21	16.0	10.0	6.0	9.0	13.5	19.5	25.0	---		25.0	---	---
22	17.0	12.5	6.5	9.5	9.0	21.0	27.0	25.0		23.0	---	---
23	11.0	12.5	6.5	11.0	13.0	18.0	27.0	---		21.0	---	---
24	16.0	12.5	7.0	13.5	15.0	20.5	25.0	---		22.0	---	---
25	24.0	13.0	8.0	11.0	9.0	17.0	29.0	---		20.0	---	---
26	20.0	13.5	4.5	10.5	13.5	15.0	22.0	---		---	---	---
27	8.5	.0	6.5	11.0	11.5	12.5	24.0	---		---	---	---
28	10.0	4.0	8.5	12.0	14.0	14.0	---	---		---	---	---
29	14.5	1.0	4.5	7.0	---	14.0	---	---		---	---	---
30	12.5	3.5	5.5	10.0	---	18.0	---	---		---	---	---
31	16.0	---	8.0	12.5	---	19.5	---	---		---	---	---
MEAN	17.5	11.5	7.5	8.5	13.0	15.5	22.5	25.0		22.0	18.0	
WTR YR 1977	MEAN	14.0		MAX	29.0	MIN	.0					

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

RIO GRANDE BASIN

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	1910	2650	248	65	620	586	618	687	381	449	507	452
2	1110	1760	270	91	469	433	886	966	458	613	467	280
3	572	445	823	669	319	282	471	524	772	1020	653	259
4	331	138	752	709	508	549	545	730	482	634	453	153
5	187	49	906	1120	809	1060	475	694	585	798	446	255
6	145	22	966	1360	883	1220	558	815	575	840	491	339
7	123	16	1140	1930	751	1090	460	561	628	933	452	312
8	90	9.7	997	1660	691	1040	362	476	691	909	361	210
9	99	11	905	1590	662	946	409	528	549	634	307	127
10	70	7.2	920	1590	691	1060	454	544	490	545	278	92
11	51	4.4	692	919	632	857	452	474	415	435	455	172
12	37	3.2	519	653	481	605	406	371	359	334	620	221
13	32	1.9	656	905	422	561	396	369	432	378	465	142
14	25	.57	940	1250	477	647	365	361	607	469	327	94
15	32	2.0	894	1120	690	1000	490	493	764	540	274	86
16	46	3.6	762	959	580	717	398	386	578	428	250	82
17	48	3.8	769	932	531	733	467	489	471	329	275	55
18	64	6.9	708	876	448	651	388	448	446	323	213	66
19	75	9.7	870	1110	550	786	409	481	506	355	296	111
20	57	6.8	811	1080	1390	2320	565	702	432	280	301	111
21	63	11	655	904	4390	8230	875	1210	562	343	1090	477
22	67	9.8	862	1250	1850	3710	704	1030	664	477	295	103
23	83	13	860	1360	1600	3310	532	804	662	538	257	78
24	98	17	722	1160	1280	2910	479	750	656	549	192	82
25	126	27	703	1070	858	1770	619	969	552	411	225	90
26	100	20	636	956	1310	2790	735	1190	533	456	214	88
27	100	17	663	963	623	1270	735	1190	544	518	375	229
28	162	49	650	877	478	601	621	892	515	509	578	621
29	319	136	619	752	420	445	482	669	---	---	523	597
30	141	34	624	674	498	538	518	681	---	---	331	247
31	185	50	---	---	624	743	461	553	---	---	289	172
TOTAL	---	5534.57	---	30554	---	43460	---	21037	---	15047	---	6403

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	304	182	0	.00	0	.00	0	.00	1050	24	0	.00
2	234	118	0	.00	0	.00	0	.00	0	.00	0	.00
3	231	95	0	.00	0	.00	0	.00	0	.00	0	.00
4	230	125	0	.00	0	.00	0	.00	0	.00	0	.00
5	199	88	0	.00	0	.00	0	.00	0	.00	678	16
6	197	81	0	.00	0	.00	0	.00	0	.00	385	5.3
7	151	54	0	.00	0	.00	0	.00	0	.00	768	44
8	121	31	0	.00	0	.00	0	.00	0	.00	772	65
9	81	8.7	0	.00	0	.00	0	.00	0	.00	686	50
10	60	1.6	0	.00	0	.00	0	.00	0	.00	350	3.9
11	118	12	0	.00	0	.00	0	.00	0	.00	0	.00
12	75	3.2	0	.00	0	.00	0	.00	0	.00	0	.00
13	59	.84	0	.00	0	.00	0	.00	0	.00	0	.00
14	105	.54	0	.00	0	.00	0	.00	0	.00	0	.00
15	96	.22	0	.00	0	.00	0	.00	3790	502	0	.00
16	53	.25	0	.00	0	.00	0	.00	6720	4280	225	1.5
17	106	2.1	0	.00	0	.00	0	.00	1590	1600	150	.00
18	113	4.0	0	.00	0	.00	0	.00	1430	1180	0	.00
19	61	.81	0	.00	0	.00	0	.00	1100	766	0	.00
20	29	.94	138	1.5	0	.00	0	.00	3050	5330	0	.00
21	49	3.4	138	3.0	0	.00	0	.00	2540	5160	0	.00
22	54	5.0	118	1.2	0	.00	0	.00	1510	3110	0	.00
23	41	2.5	70	.77	0	.00	0	.00	952	1240	0	.00
24	36	.33	36	.19	0	.00	0	.00	1010	496	0	.00
25	37	.95	0	.00	0	.00	0	.00	1030	156	0	.00
26	31	.80	0	.00	0	.00	0	.00	524	21	0	.00
27	35	.08	0	.00	0	.00	896	51	125	.37	0	.00
28	0	.00	0	.00	0	.00	3670	575	0	.00	0	.00
29	0	.00	0	.00	0	.00	2920	544	0	.00	0	.00
30	0	.00	0	.00	0	.00	3810	1280	0	.00	0	.00
31	---	---	0	.00	---	---	2610	1100	0	.00	---	---
TOTAL	---	822.26	---	6.66	---	0.00	---	3550.00	---	23865.37	---	186.70
TOTAL LOAD FOR YEAR: 150466.56 TONS.												

TOTAL LOAD FOR YEAR: 150466.56 TONS.

RIO GRANDE BASIN

08332050 BERNARDO INTERIOR DRAIN NEAR BERNARDO, NM

LOCATION.--Lat 34°24'56", long 106°49'15", Socorro County, Hydrologic Unit 13020203, on downstream side of bridge on U.S. Highway 60, and 1.0 mi (1.6 km) east of Bernardo.

PERIOD OF RECORD.--June 1936 to May 1937, October 1943 to current year. Monthly discharge only June 1936 to May 1937, published in WSP 828. October 1943 to September 1960 included in composite records for station 08332000 "Rio Grande near Bernardo". October 1960 to September 1964 monthly acre-ft published in WSP 1923. Daily records available in district files beginning October 1943.

GAGE.--Water-stage recorder. Datum of gage is 4,713.99 ft (1,436.824 m) above mean sea level. June 4, 1936 to May 17, 1937, nonrecording gage 150 ft (46 m) downstream at datum 2.77 ft (0.844 m) higher.

REMARKS.--Records good. This drain is 1 of 4 channels (stations 08331990, 08332010, and 08332030) carrying flow in valley cross section. For combined monthly flow in acre-ft of this drain, conveyance channel, floodway, and Lower San Juan Riverside drain see tabulation below daily table for station 08332010. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 187 ft³/s (5.30 m³/s) Aug. 7, 1970; no flow at times. Prior to 1952, drain was subject to overflow from floodway.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	31	26	25	26	47	82	55	28	82	74	68
2	66	29	26	25	25	52	82	52	27	88	69	80
3	66	29	26	25	25	56	82	52	32	75	60	97
4	59	29	26	25	25	55	85	51	34	93	57	119
5	61	29	26	25	24	40	85	54	32	93	54	109
6	65	28	26	25	25	39	86	63	30	89	56	110
7	73	28	26	25	24	38	85	57	28	71	56	123
8	92	28	26	25	24	45	82	53	28	62	64	137
9	100	27	26	25	25	73	80	50	28	67	55	97
10	95	27	26	25	25	77	72	53	25	80	54	92
11	87	27	26	25	25	79	68	47	29	92	50	84
12	91	28	26	25	25	78	66	48	28	78	47	84
13	92	27	26	25	25	78	64	49	26	55	69	107
14	85	27	26	25	26	78	56	54	26	49	93	99
15	66	27	26	25	27	75	57	52	26	47	84	93
16	62	26	26	26	28	75	67	56	27	50	89	89
17	59	26	26	26	28	85	64	50	24	42	104	96
18	58	26	26	26	28	82	65	53	25	46	99	94
19	54	26	26	26	29	78	61	52	26	51	92	86
20	48	26	26	26	29	87	66	54	25	49	101	78
21	51	26	26	26	30	80	78	54	27	55	100	54
22	44	26	26	27	30	75	78	50	27	63	85	56
23	41	26	26	27	31	77	67	51	37	65	66	53
24	45	26	27	27	32	77	61	53	52	58	71	54
25	43	26	26	27	32	78	63	50	63	72	86	50
26	45	25	26	28	33	81	67	40	65	60	76	48
27	56	26	26	27	34	80	68	38	78	53	80	49
28	54	26	26	27	38	80	64	35	86	60	83	50
29	51	26	25	27	---	82	59	33	87	74	74	52
30	43	26	25	26	---	82	59	31	86	94	80	52
31	38	---	25	26	---	82	---	30	---	85	66	---
TOTAL	1951	810	804	800	778	2191	2119	1520	1162	2098	2294	2460
MEAN	62.9	27.0	25.9	25.8	27.8	70.7	70.6	49.0	38.7	67.7	74.0	82.0
MAX	100	31	27	28	38	87	86	63	87	94	104	137
MIN	38	25	25	25	24	38	56	30	24	42	47	48
AC-FT	3870	1610	1590	1590	1540	4350	4200	3010	2300	4160	4550	4880
CAL YR 1976	TOTAL	18862	MEAN 54.3	MAX 154	MIN 25	AC-FT 39400						
WTR YR 1977	TOTAL	18987	MEAN 52.0	MAX 137	MIN 24	AC-FT 37660						

08334000 RIO PUERCO ABOVE ARROYO CHICO, NEAR GUADALUPE, NM

LOCATION.--Lat 35°38'08", long 107°09'56", in SW¼ sec.21, T.16 N., R.3 W., Sandoval County, Hydrologic Unit 13020204, on right bank 1.6 mi (2.6 km) upstream from Arroyo Chico, 5.5 mi (8.8 km) northeast of village of Guadalupe, and at mile 106.8 (171.8 km).

DRAINAGE AREA.--420 mi² (1,090 km²), approximately.

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,950 ft (1,813.6 m) above mean sea level. Prior to July 14, 1966 at datum 1.01 ft (0.308 m) higher.

REMARKS.--Records poor. Diversions for irrigation of about 3,700 acres (15 km²) above station in past years, but present diversion negligible. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--26 years, 13.0 ft³/s (0.368 m³/s), 9,420 acre-ft/yr (11.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,940 ft³/s (197 m³/s) July 29, 1967, gage height, 13.53 ft (4.124 m), from rating curve extended above 1,300 ft³/s (37 m³/s) on basis of slope-area measurements at gage heights 7.75 ft (2.362 m) and 10.60 ft (3.231 m); no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1943, probably exceeded 5,000 ft³/s (140 m³/s) based on records for stations above and below.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,080 ft³/s (30.6 m³/s) at 0530 hours Aug. 18, gage height, 5.80 ft (1.768 m), no other peak above base of 1,000 ft³/s (28.3 m³/s); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.07	.16	.00	.00	.00	.00	.02	.01
2	.00	.00	.00	.00	.05	.14	.00	.00	.00	.00	.01	.01
3	.00	.00	.00	.00	.19	.12	.00	.00	.00	.00	.00	.01
4	.00	.00	.00	.00	.34	.10	.00	.00	.00	.16	.00	.25
5	.00	.00	.00	.00	.10	.08	.00	.00	.00	.56	.04	.21
6	.00	.00	.00	.00	.10	.04	.00	.00	.00	1.0	.00	.18
7	.00	.00	.00	.00	.08	.02	.00	.00	.00	.50	.00	.10
8	.00	.00	.00	.00	.08	.02	.00	.00	.00	.00	.00	.7.0
9	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00	.7.0
10	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00	.5.0
11	.00	.00	.00	.00	.07	1.5	.00	.00	.00	.00	.00	.5.0
12	.00	.00	.00	.00	.07	.72	.00	.17	.00	.00	159	.38
13	.00	.00	.00	.00	.07	.62	.98	15	.00	1.0	.31	.90
14	.00	.00	.00	.00	.06	.10	5.7	7.3	.00	.50	.19	.20
15	.00	.00	.00	.00	.06	.10	9.2	5.1	.00	.11	.25	.14
16	.00	.00	.00	.00	.05	.34	2.2	.01	.00	2.0	.80	.11
17	.00	.00	.00	.00	.05	.34	.54	.00	.00	2.0	.39	.5.0
18	.00	.00	.00	.00	.03	.15	.01	.00	.00	5.0	263	.3.0
19	.00	.00	.00	.00	.03	.00	3.8	.00	.00	10	7.3	.1.0
20	.00	.00	.00	.00	.57	.00	8.7	.00	.00	30	7.5	.00
21	.00	.00	.00	.00	3.3	.00	.80	.00	.00	127	.05	.00
22	.00	.00	.00	.00	6.0	.00	.70	.00	.00	327	.00	.00
23	.00	.00	.00	.00	1.2	.00	.50	.00	.00	140	.00	.00
24	.00	.00	.00	.10	.62	.00	.10	.00	.00	88	.00	.00
25	.00	.00	.00	.23	.28	.00	.05	.00	.00	90	.00	.00
26	.00	.00	.00	.28	.23	.00	.00	.00	.00	31	.00	.00
27	.00	.00	.00	.12	.20	.00	.00	.00	.00	5.0	.00	.3.4
28	.00	.00	.00	.12	.18	.00	.00	.00	.00	3.0	.00	.9.2
29	.00	.00	.00	.12	---	.00	.00	.00	6.6	.50	.00	.3.0
30	.00	.00	.00	.08	---	.00	.00	.00	.40	.50	.01	.1.0
31	.00	---	.00	.12	---	.00	---	.00	---	.20	.01	---
TOTAL	.00	.00	.00	1.17	14.24	4.55	33.28	27.58	7.00	947.20	630.94	296.63
MEAN	.000	.000	.000	.038	.51	.15	1.11	.89	.23	30.6	20.4	9.89
MAX	.00	.00	.00	.28	6.0	1.5	9.2	15	6.6	327	263	90
MIN	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	2.3	28	9.0	66	55	14	1880	1250	588

CAL YR 1976 TOTAL 975.95 MEAN 2.67 MAX 400 MIN .00 AC-FT 1940
WTR YR 1977 TOTAL 1962.59 MEAN 5.38 MAX 327 MIN .00 AC-FT 3890

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 (0.3 km) upstream from mouth, 4.1 mi (6.6 km) northwest of Guadalupe, and 5.5 mi (8.8 km) southwest of Cabezón.

DRAINAGE AREA.--1,390 mi² (3,600 km²), approximately.

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

REVISED RECORDS.--WSP 1282: 1944-50.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,921 ft (1,804.7 m) above mean sea level, unadjusted. Prior to June 21, 1968 at site 500 ft (150 m) upstream at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records poor. Diversions for irrigation of about 100 acres (40 hm²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--34 years, 21.8 ft³/s (0.617 m³/s), 15,790 acre-ft/yr (19.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft³/s (430 m³/s) Sept. 12, 1972, gage height, 17.5 ft (5.33 m) from floodmarks, from rating curve extended above 2,900 ft³/s (82 m³/s) on basis of slope-measurements at gage heights 11.6 ft (3.536 m) and 14.8 ft (4.511 m); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,890 ft³/s (53.5 m³/s) at 2300 hours Aug. 15, gage height, 6.44 ft (1.963 m), no peak above base of 2,500 ft³/s (71 m³/s); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	7.2	.00	.00	.00	.00	.00	20
2	.00	.00	.00	.00	.00	5.0	.00	.00	.00	.00	.00	9.2
3	.00	.00	.00	.00	.00	4.7	.00	.00	.00	.02	.00	77
4	.00	.00	.00	.00	.00	4.1	.00	.00	.00	3.8	.00	34
5	.00	.00	.00	.00	.00	5.7	.00	.00	.00	17	.00	5.0
6	.00	.00	.00	.00	.00	6.4	.00	.00	.00	3.0	.00	1.0
7	.00	.00	21	.00	.30	5.0	.00	.00	.00	1.0	.00	.00
8	.00	.00	1.0	.00	.50	4.1	.00	.00	.00	.85	.00	.00
9	.00	.00	.50	.00	1.0	2.6	.00	.00	.00	92	.00	.00
10	.00	.00	.05	.00	1.7	2.8	.00	.00	.00	10	.00	.00
11	.00	8.2	.00	.00	2.1	2.6	.00	.00	.00	5.0	32	.00
12	.00	.50	.00	.00	2.8	.75	.00	.19	.00	2.0	270	63
13	.00	.00	.00	.00	2.4	.61	.00	8.4	.00	20	150	22
14	.00	.00	.00	.00	6.9	.53	.00	.89	.00	25	291	6.4
15	.00	.00	.00	.00	3.6	.33	.00	.57	.00	45	236	3.0
16	.00	.00	.00	.00	7.7	.27	.00	.41	.00	33	425	1.0
17	.00	.00	.00	.00	10	.00	.00	.19	.00	10	186	.00
18	.00	.00	.00	.00	7.7	.00	.00	.09	.00	5.0	319	.00
19	.00	.00	.00	.00	9.2	.00	.00	.05	.00	2.0	66	.00
20	.00	.00	.00	.00	9.8	.00	.00	.02	.00	52	190	.00
21	.00	.00	.00	.00	8.7	.00	.00	.00	.00	152	123	.00
22	.00	.00	.00	.00	7.7	.00	.00	.00	.00	295	50	.00
23	.00	.00	.00	.00	5.7	.00	.00	.00	.00	21	32	10
24	.00	.00	.00	.00	6.0	.00	.00	.00	.00	19	17	2.0
25	.00	.00	.00	.00	5.0	.00	.00	.00	.00	32	10	.00
26	.00	.00	.00	.00	9.2	.00	.00	.00	.00	17	5.0	.00
27	.00	.00	.00	.00	6.8	.00	.00	.00	.00	41	5.0	.00
28	.00	.00	.00	.00	5.7	.00	.00	.00	.00	20	2.0	6.5
29	.00	.00	.00	.00	---	.00	.00	.00	4.9	7.0	1.0	1.3
30	.00	.00	.00	.00	---	.00	.00	.00	.50	2.0	5.0	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	15	---
TOTAL	.00	8.70	22.55	.00	120.50	52.69	.00	10.81	5.40	932.67	2430.00	261.40
MEAN	.000	.29	.73	.000	4.30	1.70	.000	.35	.18	30.1	78.4	8.71
MAX	.00	8.2	21	.00	10	7.2	.00	8.4	4.9	295	425	77
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	17	45	.00	239	105	.00	21	11	1850	4820	518
CAL YR 1976 TOTAL	3290.24			MEAN 8.99	MAX 749	MIN .00	AC-FT 6530					
WTR YR 1977 TOTAL	3844.72			MEAN 10.5	MAX 425	MIN .00	AC-FT 7630					

08340500 ARROYO CHICO NEAR GUADALUPE, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April, 1977.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	TURBIDITY (NTU) (00076)	HARDNESS (CA+MG) (MG/L) (00900)	NON-CAR-BONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)
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APR 13...	0930	.01	3350	8.8	11.5	37	170	0	50	11	750
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DATE	TIME	SODIUM AD-SORPTION RATIO (00931)	DIS-SOLVED PO-TAS-SIUM (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SIO2) (MG/L) (00955)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (MG/L) (00630)
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APR 13...	25	3.9	382	14	1300	54	1.1	4.7	2380	.02
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DATE	TIME	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITROGEN (N) (MG/L) (00610)	TOTAL ORGANIC NITROGEN (N) (MG/L) (00605)	TOTAL NITROGEN (N) (MG/L) (00600)	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS-SOLVED ORTHO-PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
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APR 13...	.03	.04	.68	.74	.06	.02	210	30	30	6.9
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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS-SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BORON (B) (UG/L) (01020)	DIS-SOLVED BORON (B) (UG/L) (01027)	TOTAL CADMIUM (CD) (UG/L) (01025)	DIS-SOLVED CADMIUM (CD) (UG/L) (01025)	TOTAL CHROMIUM (CR) (UG/L) (01034)	DIS-SOLVED CHROMIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)
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APR 13...	0930	4	2	210	2	0	0	0	0	1
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DATE	TIME	DIS-SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS-SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS-SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS-SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MANGANESE (MN) (UG/L) (01055)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)
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APR 13...	0	7	1	1600	30	11	3	60	30
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DATE	TIME	TOTAL MERCURY (HG) (UG/L) (71900)	DIS-SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL MOLYBDENUM (MO) (UG/L) (01062)	DIS-SOLVED MOLYBDENUM (MO) (UG/L) (01060)	TOTAL NICKEL (NI) (UG/L) (01147)	DIS-SOLVED NICKEL (SE) (UG/L) (01145)	TOTAL VANADIUM (V) (UG/L) (01085)	DIS-SOLVED VANADIUM (V) (UG/L) (01085)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS-SOLVED ZINC (ZN) (UG/L) (01090)
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APR 13...	.0	.0	6	4	0	0	.0	40	10
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RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NON-FILTERABLE RESIDUE (MG/L) (00530)	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUSPENDED GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUSPENDED GROSS BETA AS CS-137 (PC/L) (03516)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80050)	SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L) (80060)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (09511)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80020)
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APR 13...	0930	49	<27	3.1	7.7	2.9	6.7	2.7	.05	3.3
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RIO GRANDE BASIN

06341400 BLUEWATER LAKE NEAR BLUEWATER, NM

LOCATION.--Lat 35°17'31", long 108°06'40", in SE¼ sec.9, T.12 N., R.12 W., Valencia County, Hydrologic Unit 13020207, at left end of Bluewater Dam on Bluewater Creek, and 9.5 mi (15.2 km) west of Bluewater.

DRAINAGE AREA.--201 mi² (521 km²).

PERIOD OF RECORD.--June 1927 to December 1950 (monthend contents only, published in WSP 1732), April 1958 to current year (monthend contents only).

GAGE.--Water-stage recorder. Datum of gage is 7,345.57 ft (2,238.930 m) above mean sea level. July 1958 to January 1961, nonrecording gage at nearby site, same datum. Gage heights have been converted to sea-level elevations.

REMARKS.--Reservoir is formed by concrete arch dam. Storage began in 1927. Capacity, 38,500 acre-ft (47.5 hm³) at elevation 7,402.6 ft (2,256.31 m) crest of uncontrolled siphon spillway which is vented to avoid drawdown below crest, and 44,200 acre-ft (54.5 hm³) at elevation 7,405.6 ft (2,257.23 m) crest of ungated spillway over dam. Dead storage, 3.4 acre-ft (4,190 m³) at elevation 7,345.4 ft (2,238.88 m) sill of lower outlet tube. Lake not usually drawn below conservation pool level elevation, 7,365.36 ft (2,244.962 m), below which ownership is by State Game and Fish Department. Above this level, water is owned and used by Bluewater-Toltec Irrigation Co. Figures given herein represent total contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents determined, 47,100 acre-ft (58.1 hm³) Apr. 30, 1941. Contents may have been greater on Apr. 28, 1941 when peak discharge of 800 ft³/s (22.7 m³/s) occurred at station 8 mi (13 km) downstream; no storage at times prior to 1947.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,430 acre-ft (4.23 hm³) Oct. 1, elevation, 7,365.6 ft (2,245.03 m); minimum, 2,200 acre-ft (2.71 hm³) Aug. 9, elevation, 7,361.1 ft (2,243.66 m).

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7365.6	3430	----
Oct. 31	7364.9	3210	-220
Nov. 30	7364.5	3100	-110
Dec. 31	7364.3	3040	-60
CAL YR 1976			-13390
Jan. 31	7364.2	3010	-30
Feb. 28	7364.1	2980	-30
Mar. 31	7363.8	2900	-80
Apr. 30	7363.5	2820	-80
May 31	7362.7	2600	-220
June 30	7361.9	2400	-200
July 31	7361.5	2300	-100
Aug. 31	7362.5	2550	+250
Sept. 30	7361.9	2400	-150
WTR YR 1977			-1030

RIO GRANDE BASIN

08343000 RIO SAN JOSE AT GRANTS, NM

LOCATION.--Lat 35°09'16", long 107°52'11", in SW¼ sec.26, T.11 N., R.10 W., Valencia County, Hydrologic Unit 13020207, on right bank at bridge on old State Highway 53 at Grants, 0.2 mi (0.3 km) south of U.S. Highway 66, and at mile 67.8 (109.1 km).

DRAINAGE AREA.--1,020 mi² (2,640 km²), approximately.

PERIOD OF RECORD.--October 1912 to February 1914, June 1914, October 1914 to February 1915, May 1915 to June 1921, September 1921 to June 1923, October 1923 to May 1926, September to December 1926, May 1949 to September 1966, June 1968 to current year. Monthly discharge only for some periods published in WSP 1312. Prior to October 1967, published as "Bluewater Creek at Grants".

REVISED RECORDS.--WSP 1512: 1913-14. WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,468.34 ft (1,971.550 m) above mean sea level (levels by Corps of Engineers). See WSP 1732 or 1923 for history of changes prior to Jan. 1, 1926.

REMARKS.--Records fair. Flow slightly regulated by Bluewater Lake (station 08341400) 24 mi (39 km) upstream. Diversions and ground-water withdrawals for irrigation of about 4,500 acres (18 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years (water years 1913, 1915-20, 1922, 1924-25, 1950-66, 1968-77), 3.34 ft³/s (0.095 m³/s), 2,420 acre-ft/yr (2.98 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (1950-66 and SINCE 1968).--Maximum discharge recorded, 1,760 ft³/s (49.8 m³/s) Aug. 28, 1952, gage height, 5.35 ft (1.631 m), from rating curve extended above 300 ft³/s (8.50 m³/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, 27 ft³/s (0.76 m³/s) at 2030 hours July 19, gage height, 2.37 ft (0.722 m), no peak above base of 200 ft³/s (5.7 m³/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
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	2.7	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.23	1.9	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.78	.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	2.93	2.68	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.095	.086	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.7	1.9	.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	5.8	5.3	.00

CAL YR 1976 TOTAL 14.60 MEAN .040 MAX 7.6 MIN .00 AC-FT 29
WTR YR 1977 TOTAL 5.61 MEAN .015 MAX 2.7 MIN .00 AC-FT 11

08343100 GRANTS CANYON AT GRANTS, NM

LOCATION.--Lat 35°09'39", long 107°50'15", in NE¼NE¼ sec.25, T.11 N., R.10 W., Valencia County, Hydrologic Unit 13020207, at Roosevelt Avenue, in the town of Grants, 0.2 mi (0.3 km) east of intersection of Roosevelt and First Avenue, and 1.1 mi (1.8 km) upstream from confluence with Rio San Jose (formerly Bluewater Creek).

DRAINAGE AREA.--13.0 mi² (33.7 km²).

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

GAGE.--Water-stage recorder and culvert control. Altitude of gage is 6,450 ft (1,966.0 m), from topographic map.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--16 years, 0.176 ft³/s (0.005 m³/s), 128 acre-ft/yr (157,800 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft³/s (43.9 m³/s) Aug. 26, 1963, gage height, 5.10 ft (1.554 m), from rating curve extended above 220 ft³/s (6.23 m³/s) on basis of slope-area measurements at gage heights 3.17 ft (0.966 m), 5.10 ft (1.554 m), and 5.38 ft (1.640 m); maximum gage height, 5.38 ft (1.640 m) Sept. 8, 1967; no flow for most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 405 ft³/s (11.5 m³/s) at 1700 hours July 25, gage height, 2.20 ft (0.671 m), no other peak above base of 175 ft³/s (5.0 m³/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
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	5.6
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.0
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	1.0
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	.73	.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	.12	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.30	.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	2.1	.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	10	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.50	3.3	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.9	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.50	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	.00	.00	.00	.00	.00	.00	.00	.42	.00	38.63	5.40	8.60
MEAN	.000	.000	.000	.000	.000	.000	.000	.014	.000	1.25	.17	.29
MAX	.00	.00	.00	.00	.00	.00	.00	.30	.00	23	3.3	5.6
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.8	.00	77	11	17
CAL YR 1976	TOTAL	1.99	MEAN .005	MAX 1.6	MIN .00	AC-FT 3.9						
WTR YR 1977	TOTAL	53.05	MEAN .15	MAX 23	MIN .00	AC-FT 105						

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., Valencia County, Hydrologic Unit 13020207, on right bank at west boundary of Acoma Pueblo Grant, 8.5 mi (13.7 km) southeast of Grants, and at mile 57.4 (92.4 km).

DRAINAGE AREA.--2,300 mi² (5,960 km²), approximately, of which 1,130 mi² (2,930 km²) does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1936 to current year. Prior to October 1955, published as "San Jose River near Grants".

REVISED RECORDS.--WSP 898: 1936-39(M). WSP 1512: 1943. WSP 1712: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 6,269.47 ft (1,910.934 m) above mean sea level.

REMARKS.--Records good. Flow slightly regulated by Bluewater Lake (station 08341400), 34 mi (55 km) upstream. Diversions and ground-water withdrawal for irrigation of about 5,100 acres (21 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--41 years, 6.49 ft³/s (0.184 m³/s), 4,700 acre-ft/yr (5.80 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,400 ft³/s (39.6 m³/s) Sept. 20, 1963, gage height, 4.87 ft (1.484 m), from rating curve extended above 450 ft³/s (12.7 m³/s) on basis of slope-area measurements at gage heights 3.19 ft (0.972 m) and 4.87 ft (1.484 m); minimum, 1.9 ft³/s (0.054 m³/s) Feb. 21, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood probably occurred Sept. 6 or 7, 1909, following destruction of Bluewater dam. The peak of Sept. 20, 1963 may have been exceeded by those of July 1919, August and September 1929, and August 1935.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Aug. 12	1630	*184 5.21	2.53 0.771
Aug. 16	2130	159 4.50	2.45 0.747

Minimum discharge, 2.9 ft³/s (0.082 m³/s) July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	6.8	6.0	7.0	6.6	5.9	5.9	6.3	5.2	4.7	4.4	5.1
2	6.7	6.8	5.8	7.0	6.4	5.9	5.9	6.2	5.2	4.7	4.6	5.1
3	6.7	6.8	5.6	7.5	6.5	5.7	6.2	6.4	5.4	4.3	4.9	7.7
4	6.6	6.9	6.1	7.5	6.4	5.7	5.9	6.5	5.7	4.3	5.1	8.8
5	6.2	6.8	6.5	7.0	6.5	5.9	5.7	6.1	5.7	4.2	5.7	6.1
6	6.2	6.7	6.1	7.0	6.6	6.0	5.5	6.5	5.4	4.1	6.1	8.9
7	6.2	6.6	6.1	6.5	6.4	5.9	5.4	5.7	5.6	3.8	6.5	6.5
8	6.3	6.6	6.5	7.0	6.3	6.0	5.5	5.7	5.6	3.9	6.9	4.7
9	6.4	6.6	6.5	6.5	6.4	5.8	5.5	5.7	6.0	4.0	7.4	4.8
10	6.4	6.6	6.5	6.5	6.5	5.5	5.6	5.3	6.0	4.1	8.0	4.7
11	6.5	6.5	6.1	6.5	6.4	5.3	5.5	5.7	6.2	4.0	8.2	4.7
12	6.5	6.4	6.1	6.5	6.5	5.2	5.6	5.7	6.2	4.1	32	6.1
13	6.6	6.2	6.5	6.5	6.6	5.4	5.7	6.1	6.0	4.1	15	4.7
14	6.6	6.6	6.5	6.1	6.4	5.4	5.8	6.5	6.0	3.9	9.8	4.5
15	6.5	6.7	6.5	6.1	6.3	5.2	5.8	6.1	5.8	3.8	12	4.7
16	6.5	6.5	6.5	6.1	6.3	5.4	5.7	5.7	5.9	3.7	37	4.7
17	6.5	6.4	6.5	6.1	6.3	5.4	5.7	5.7	6.0	3.7	27	4.7
18	6.5	6.6	7.0	6.1	6.2	5.3	5.6	5.7	6.1	3.8	7.0	4.5
19	6.2	6.7	7.0	6.1	6.1	5.3	5.7	5.4	5.8	4.8	6.3	4.5
20	6.2	6.6	7.5	6.5	6.1	5.4	6.0	5.7	5.6	7.5	5.9	4.8
21	6.3	6.6	7.5	6.5	6.3	5.1	6.4	5.7	6.0	12	17	4.9
22	6.6	6.5	7.5	6.5	6.5	5.2	6.4	5.4	6.0	15	16	5.1
23	6.7	6.5	7.5	7.0	5.8	5.4	6.3	5.4	6.3	6.9	7.5	5.1
24	6.8	6.7	7.0	7.0	5.8	5.5	6.4	5.3	6.4	3.8	7.4	5.2
25	6.8	6.8	7.0	6.8	5.7	5.5	6.3	5.2	6.2	3.7	6.0	5.8
26	6.9	6.6	6.1	6.2	5.7	5.6	6.4	5.3	6.8	9.5	5.4	5.7
27	6.8	6.4	6.5	6.3	5.7	6.1	6.6	5.0	6.6	5.2	5.5	5.8
28	6.9	6.4	6.5	6.8	5.6	5.9	6.7	5.0	6.7	4.3	5.2	6.0
29	7.0	6.6	6.5	6.5	---	6.0	6.6	5.2	6.7	3.9	5.0	6.1
30	6.9	6.6	7.0	6.4	---	6.0	6.6	5.3	5.7	3.9	5.3	5.6
31	6.9	---	7.0	6.5	---	5.9	---	5.1	---	4.2	5.1	---
TOTAL	203.6	198.1	204.0	204.6	174.9	173.8	178.9	176.6	178.8	157.9	305.2	165.6
MEAN	6.57	6.60	6.58	6.60	6.25	5.61	5.96	5.70	5.96	5.09	9.85	5.52
MAX	7.0	6.9	7.5	7.5	6.6	6.1	6.7	6.5	6.8	15	37	8.9
MIN	6.2	6.2	5.6	6.1	5.6	5.1	5.4	5.0	5.2	3.7	4.4	4.5
AC-FT	404	393	405	406	347	345	355	350	35	313	605	328

CAL YR 1976 TOTAL 2350.8 MEAN 6.42 MAX 43 MIN 3.7 AC-FT 4660
WTR YR 1977 TOTAL 2322.0 MEAN 6.36 MAX 37 MIN 3.7 AC-FT 4610

RIO GRANDE BASIN

08343500 RIO SAN JOSE NEAR GRANTS, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January, 1977.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (CA,MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)
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JAN 21...	1215	6.0	1350	7.8	10.0	370	160	85	38
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DATE	TIME	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED PHOSPHATE (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SI02) (MG/L) (00955)
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JAN 21...	130	2.9	7.4	257	0	290	110	.8	28
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DATE	TIME	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL NITROGEN (N) (MG/L) (00600)	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS-SOLVED ORTHO. PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (MG/L) (01020)	DIS-SOLVED IRON (FE) (MG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
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JAN 21...	829	1.2	1.3	2.8	2.1	2.1	360	40	3.7
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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	TOTAL BORON (B) (UG/L) (01022)	DIS-SOLVED BORON (B) (UG/L) (01020)	TOTAL CADMIUM (CD) (UG/L) (01027)	TOTAL CHROMIUM (CR) (UG/L) (01034)	TOTAL COBALT (CO) (UG/L) (01037)	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL IRON (FE) (UG/L) (01045)	DIS-SOLVED IRON (FE) (UG/L) (01046)
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JAN 21...	1215	4	0	400	360	<10	0	<50	<10	220	40
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DATE	TIME	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS-SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MANGANESE (MN) (UG/L) (01055)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL MOLYBDENUM (MO) (UG/L) (01062)	TOTAL SELENIUM (SE) (UG/L) (01147)	TOTAL SILVER (AG) (UG/L) (01077)	TOTAL STRONTIUM (SR) (UG/L) (01082)	DIS-SOLVED VANADIUM (V) (UG/L) (01085)
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JAN 21...	1215	<100	280	290	60	.0	3	5	<10	1000	7.7
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RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NON-FILTERABLE RESIDUE (MG/L) (00530)	DIS-SOLVED ALPHA AS U-NAT. (UG/L) (80030)	SUSPENDED GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUSPENDED GROSS BETA AS CS-137 (PC/L) (03516)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80050)	SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L) (80060)	DIS-SOLVED RA-226 (PC/L) (09511)	DIS-SOLVED NATURAL URANIUM (U) (UG/L) (22703)
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JAN 21...	1215	8	17	<.4	13	1.2	10	1.1	.10	3.8
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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., Valencia County, Hydrologic Unit 13020207, in Pagate Purchase Grant, near right bank on downstream end of bridge piling of the Atchison, Topeka and Santa Fe Railway Co. bridge, 1.4 mi (2.3 km) downstream from Rio Moquino, 4.2 mi (6.8 km) upstream from Pagate Reservoir, 5.0 mi (8.0 km) south-east of Pagate and 26 mi (42 km) east of Grants.

DRAINAGE AREA.--107 mi² (277 km²).

PERIOD OF RECORD.--March 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,820 ft (1,774 m), from topographic map.

REMARKS.--Records fair. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,300 ft³/s (65.1 m³/s) Aug. 24, 1976, gage height, 8.60 ft (2.621 m), from slope-area measurement of peak flow; minimum, 0.04 ft³/s (0.001 m³/s) at times in July and August 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 824 ft³/s (23.3 m³/s) at 0300 hours Aug. 12, gage height, 5.06 ft (1.542 m); minimum, 0.04 ft³/s (0.001 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	1.1	1.6	2.1	.81	1.8	1.5	2.0	1.0	.10	.05	.24
2	.38	1.1	1.5	2.1	2.0	1.8	1.6	2.0	1.0	.30	.05	2.1
3	.37	1.1	1.5	2.1	1.8	2.0	2.5	2.3	1.0	.20	.04	34
4	.37	1.1	1.5	2.6	1.4	1.7	2.1	2.3	1.0	.15	.04	10
5	.41	1.1	1.4	2.1	1.4	1.7	2.0	2.3	1.0	.15	.05	5.7
6	.41	1.2	1.3	2.0	1.4	1.6	1.5	2.3	1.0	.10	.05	2.5
7	.40	1.1	1.2	2.5	1.5	1.6	1.4	2.1	1.0	.10	.05	2.0
8	.41	1.1	1.2	2.2	1.2	1.6	1.3	2.0	1.0	.25	.05	2.0
9	.41	1.1	1.1	2.2	1.3	1.6	1.2	2.1	1.0	1.0	.10	2.0
10	.41	1.1	1.1	2.0	1.4	1.6	1.1	2.1	1.0	.50	.21	3.0
11	.49	1.1	1.0	2.0	1.5	1.8	1.2	2.5	1.0	.50	.26	14
12	.48	1.1	1.0	2.0	1.5	1.7	1.2	18	1.0	.50	25	1.8
13	.48	1.1	.97	2.0	1.8	1.7	1.3	1.3	1.0	.30	2.0	1.5
14	.46	1.1	.95	1.8	1.8	1.6	1.4	1.2	.50	.30	1.0	1.2
15	.48	1.1	.87	1.8	1.7	1.6	1.3	1.1	.50	2.0	.80	1.1
16	.67	1.0	.82	1.8	1.5	1.5	1.0	1.1	.30	1.0	.80	1.1
17	.67	1.0	.82	1.8	1.8	1.6	1.0	1.1	.30	1.0	.67	1.0
18	.65	1.0	.84	1.5	2.0	1.6	1.0	1.1	.20	.50	1.8	.91
19	.65	1.0	.80	1.5	1.8	1.6	1.1	1.1	.20	2.0	7.4	.88
20	.67	1.0	.70	1.5	2.1	1.6	1.4	1.0	.20	5.0	5.0	.79
21	.95	.97	.70	1.3	2.1	1.6	1.2	1.1	.16	3.0	2.0	.78
22	.95	.97	.77	1.2	2.0	1.6	1.4	1.0	.12	1.0	1.0	.81
23	.87	.97	.90	1.3	2.3	1.5	1.2	1.0	.11	.50	1.0	.80
24	.84	.97	1.0	1.2	2.1	1.6	1.3	1.0	.11	.30	1.0	.80
25	.84	.95	1.1	1.3	1.7	1.6	1.5	1.0	.09	.20	.50	.74
26	1.1	1.0	1.2	1.5	1.7	1.7	1.8	1.0	.07	.10	.50	.77
27	1.1	1.1	1.4	1.1	1.7	1.7	2.5	1.0	.05	.09	.30	7.5
28	1.1	1.1	1.4	.72	1.7	1.5	2.3	1.0	.06	.06	.30	1.0
29	1.2	1.2	1.6	.72	---	1.8	2.3	1.0	.10	.04	.50	.57
30	1.1	1.4	1.7	.72	---	1.9	2.3	1.0	.10	.04	.20	.52
31	1.1	---	1.7	.81	---	1.6	---	1.0	---	.04	.20	---
TOTAL	20.80	32.23	35.64	51.47	47.01	51.4	45.9	62.1	16.17	21.32	52.92	102.11
MEAN	.67	1.07	1.15	1.66	1.68	1.66	1.53	2.00	.54	.69	1.71	3.40
MAX	1.2	1.4	1.7	2.6	2.3	2.0	2.5	18	1.0	5.0	25	34
MIN	.37	.95	.70	.72	.81	1.5	1.0	1.0	.05	.04	.04	.24
AC-FT	41	64	71	102	93	102	91	123	32	42	105	203

WTR YR 1977 TOTAL 539.07 MEAN 1.48 MAX 34 MIN .04 AC-FT 1070

RIO GRANDE BASIN

08349800 RIO PAGUATE BELOW JACKPILE MINE NEAR LAGUNA, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January, 1977.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (CA+MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)
JAN 18...	1650	1.5	1370	8.0	.0	540	320	110	65
24...	1130	--	1400	8.3	9.0	660	410	130	81

DATE	TIME	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SI02) (MG/L) (00955)
JAN 18...	110		2.1	5.8	267	0	530	12	.6	22
24...	140		2.4	7.0	301	0	690	16	.6	22

DATE	TIME	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL NITROGEN (N) (MG/L) (00600)	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS-SOLVED ORTHOPHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
JAN 18...	988	--	--	.24	--	--	.03	70	0	--
24...	1240	.18	.16	.59	.26	.02	.80	70	4.3	

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	TOTAL BORON (B) (UG/L) (01022)	DIS-SOLVED BORON (B) (UG/L) (01020)	TOTAL CADMIUM (CD) (UG/L) (01027)	TOTAL CHROMIUM (CR) (UG/L) (01034)	TOTAL COBALT (CO) (UG/L) (01037)	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL IRON (FE) (UG/L) (01045)	DIS-SOLVED IRON (FE) (UG/L) (01046)
JAN 24...	1130	5	100	120	80	10	0	<50	10	7500	70

DATE	TIME	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS-SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MANGANESE (MN) (UG/L) (01055)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL MOLYBDENUM (MO) (UG/L) (01062)	TOTAL SELENIUM (SE) (UG/L) (01147)	TOTAL SILVER (AG) (UG/L) (01077)	TOTAL STRONTIUM (SR) (UG/L) (01082)	DIS-SOLVED VANADIUM (V) (UG/L) (01085)
JAN 24...		<100	50	40	180	.0	2	8	<10	1500	.3

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NON-FILTERABLE RESIDUE (MG/L) (00530)	DIS-SOLVED GROSS ALPHA U-NAT. (UG/L) (80030)	SUSPENDED GROSS ALPHA U-NAT. (UG/L) (80040)	DIS-SOLVED GROSS BETA CS-137 (PC/L) (03515)	SUSPENDED GROSS BETA CS-137 (PC/L) (03516)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80050)	SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L) (80060)	DIS-SOLVED RA-226 (PC/L) (09511)	DIS-SOLVED NATURAL URANIUM (U) (22703)
JAN 24...	1130	640	120	150	20	56	17	47	1.7	72

08351500 RIO SAN JOSE AT CORREO, NM

LOCATION (~~REVISED~~).--Lat 34°58'03", long 107°10'10", in NE¼ sec.32, T.9 N., R.3 W., Valencia County, Hydrologic Unit 13020207, on left bank 0.3 mi (0.5 km) downstream from State Highway 6, 1.2 mi (1.9 km) northeast of Correo, and 13 mi (21 km) upstream from mouth.

DRAINAGE AREA.--3,660 mi² (9,480 km²), approximately, of which about 1,130 mi² (2,930 km²) does not contribute directly to surface runoff.

PERIOD OF RECORD.--April 1943 to current year. Prior to October 1955, published as "San Jose River at Correo".

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,474.88 ft (1,668.743 m) above mean sea level, unadjusted. Oct. 1, 1958 to Sept. 30, 1975, water-stage recorder at site 1 mi (1.6 km) upstream at datum 17.55 ft (5.349 m) higher.

REMARKS.--Records poor. Flow regulated to some extent since 1927 by Bluewater Lake (station 08341400) 79 mi (127 km) upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--34 years, 11.7 ft³/s (0.331 m³/s), 8,480 acre-ft/yr (10.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,150 ft³/s (202 m³/s) Aug. 11, 1955; maximum gage height, 20.7 ft (6.31 m), Aug. 22, 1958, backwater from dam (present datum); no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood which probably occurred Aug. 21, 1935, reached a stage of 15.4 ft (4.69 m), from floodmarks, former site and datum (discharge, about 11,000 ft³/s or 312 m³/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, 520 ft³/s (14.7 m³/s) at 2330 hours Sept. 3, gage height, 5.00 ft (1.524 m), no peak above base of 800 ft³/s (23 m³/s); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.0	1.4	4.0	7.0	4.4	6.1	.00	.00	.00	.00	.00
2	.00	1.0	1.5	4.0	3.0	5.4	5.7	.00	.00	.00	.00	10
3	.00	1.0	1.5	5.0	6.0	6.8	6.1	.00	.00	.00	.00	178
4	.00	1.0	1.5	6.0	7.0	6.1	6.4	.00	.00	.00	.00	358
5	.00	1.3	1.8	6.0	7.0	5.4	5.4	.00	.00	5.0	.00	141
6	.00	1.0	1.5	4.5	7.0	6.0	6.1	.00	.00	15	.00	55
7	.00	1.0	1.6	3.0	6.8	5.0	5.7	.00	.00	15	.00	31
8	.00	1.0	1.6	3.0	6.1	6.4	4.8	.00	.00	3.0	.00	20
9	.00	1.0	1.6	2.8	5.7	6.1	4.4	.00	.00	10	.00	16
10	.00	1.0	1.4	2.5	6.1	6.1	4.4	.00	.00	.00	14	13
11	.00	1.0	1.4	2.0	7.1	5.7	4.1	.00	.00	.00	35	16
12	.00	1.0	1.4	2.0	6.8	5.1	4.6	.00	.00	.00	30	25
13	.00	1.0	1.2	2.2	6.1	5.1	4.4	73	.00	.00	60	6.0
14	.00	1.2	1.2	2.1	5.4	4.8	6.4	23	.00	3.0	78	1.6
15	.00	1.2	1.4	2.0	5.1	4.1	8.2	5.0	.00	.00	47	.40
16	.00	1.2	1.5	1.0	4.8	4.4	3.8	1.0	.00	.00	96	.00
17	.00	1.2	1.5	.40	4.6	5.4	3.4	.00	.00	.00	46	.00
18	.00	1.3	1.5	.40	4.4	4.8	2.8	.00	.00	.00	99	.00
19	.00	1.3	1.5	.60	4.2	4.8	3.8	.00	.00	5.0	112	.00
20	.00	1.3	1.5	1.0	4.0	5.1	3.1	.00	.00	35	81	.00
21	.00	1.3	1.7	2.0	3.8	4.8	1.6	.00	.00	20	45	.00
22	.00	1.3	2.0	3.0	3.6	4.8	.00	.00	.00	40	22	.00
23	.00	1.4	2.0	4.0	3.4	4.8	.00	.00	.00	20	1.5	.00
24	.00	1.4	3.0	5.0	3.2	4.4	.00	.00	.00	10	.00	.00
25	.00	1.4	3.0	7.0	3.2	4.1	.00	.00	.00	10	.00	.00
26	.00	1.3	3.0	8.0	3.1	4.8	.00	.00	.00	7.8	.00	.00
27	.00	1.3	3.0	7.0	3.1	7.8	.00	.00	.00	4.4	.00	.00
28	.00	1.4	4.0	6.5	3.8	8.9	.00	.00	.00	.00	.00	33
29	.50	1.4	4.0	6.0	---	7.8	.00	.00	.00	.00	.00	28
30	.50	1.4	4.0	7.0	---	6.8	.00	.00	.00	.00	.00	16
31	1.0	---	4.0	9.0	---	6.1	---	.00	---	.00	.00	---
TOTAL	2.00	35.6	63.2	119.00	141.4	173.1	101.30	102.00	.00	203.20	766.50	948.00
MEAN	.065	1.19	2.04	3.84	5.05	5.58	3.38	3.29	.000	6.55	24.7	31.6
MAX	1.0	1.4	4.0	9.0	7.1	8.9	8.2	73	.00	40	112	358
MIN	.00	1.0	1.2	.40	3.0	4.1	.00	.00	.00	.00	.00	.00
AC-FT	4.0	71	125	236	280	343	201	202	.00	403	1520	1880

CAL YR 1976 TOTAL 1259.60 MEAN 3.44 MAX 254 MIN .00 AC-FT 2500
WTR YR 1977 TOTAL 2655.30 MEAN 7.27 MAX 358 MIN .00 AC-FT 5270

RIO GRANDE BASIN

08352500 RIO PUERCO AT RIO PUERCO, NM

LOCATION.--Lat 34°47'38", long 106°59'20", in NW¼ sec.31, T.7 N., R.1 W., Valencia County, Hydrologic Unit 13020204, in San Clemente Grant, on downstream end of pier nearest left abutment of the Atchison, Topeka and Santa Fe Railway Co. bridge, 7 mi (11 km) downstream from Rio San Jose, and at mile 36.2 (58.2 km).

DRAINAGE AREA.--6,590 mi² (17,070 km²), approximately, of which at least 1,130 mi² (2,930 km²) does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1909 to December 1912 (records fragmentary, gage heights only), March 1934 to December 1976 (discontinued). Records for January 1913 to December 1914 published in WSP 358, 388, and 408 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1512: 1937 (calendar year figures only), 1941, 1944. WSP 1712: 1958. WSP 1732: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,008.59 ft (1,526.618 m) above mean sea level.

REMARKS.--Records fair except those for December, which are poor. Diversions for irrigation of about 11,500 acres (47 km²) above station (includes 3,700 acres or 15.0 km² irrigated partly or entirely from wells). Several observations of water temperature were made during the period.

AVERAGE DISCHARGE.--42 years (water years 1935-76), 57.0 ft³/s (1.614 m³/s), 41,300 acre-ft/yr (50.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) Aug. 21, 1935, gage height, 7.24 ft (2.207 m), by computation of peak flow over dam; no flow many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--The damaging flood of Sept. 23, 1929, is the greatest since about 1880; it reached a stage of 18 ft (5.5 m) conditions prior to destruction of railroad bridge. Discharge, 37,700 ft³/s (1,070 m³/s), by weir formula, from reports of State Engineer. The flood of Aug. 12, 1929, reached a stage of about 16 ft or 4.9 m (discharge, 31,300 ft³/s or 886 m³/s, by weir formula, from reports of State Engineer). A flood on Oct. 4, 1913, reached a stage of 9.5 ft or 2.90 m (discharge not determined) prior to construction of the concrete control.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October to December 1976, 6.4 ft³/s (0.181 m³/s) Nov. 16, gage height, 0.56 ft (0.171 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.28	.00									
2	.00	.28	.00									
3	.00	.28	.00									
4	.00	.28	.00									
5	.00	.44	.00									
6	.00	.44	.00									
7	.00	.44	.00									
8	.00	.44	.00									
9	.00	.44	.00									
10	.00	.55	.00									
11	.00	.55	.00									
12	.00	.68	.00									
13	.00	1.4	.00									
14	.00	1.2	.00									
15	.00	2.6	.00									
16	.00	2.8	.00									
17	.00	2.2	.00									
18	.00	2.2	.00									
19	.00	2.6	.00									
20	.00	2.6	.00									
21	.00	2.4	.00									
22	.05	2.2	.00									
23	.11	2.2	.00									
24	.14	2.2	.00									
25	.22	2.0	.00									
26	.13	2.6	.00									
27	.14	1.0	.00									
28	.21	.00	.00									
29	.68	.00	.00									
30	.44	.00	.00									
31	.35	---	.00									
TOTAL	2.47	37.30	.00									
MEAN	.080	1.24	.000									
MAX	.68	2.8	.00									
MIN	.00	.00	.00									
AC-FT	4.9	74	.00									

CAL YR 1976 TOTAL 4686.20 MEAN 12.8 MAX 990 MIN .00 AC-FT 9300

08353000 RIO PUERCO NEAR BERNARDO, NM

LOCATION.--Lat 34°24'33", long 106°51'09", in SE¼ sec.8, T.2 N., R.1 E., Socorro County, Hydrologic Unit 13020204, on bridge on former U.S. Highway 85 and 0.2 mi (0.3 km) upstream from Interstate Highway 25, 1.2 mi (1.9 km) southwest of Bernardo, 3 mi (4.8 km) upstream from mouth, and 18 mi (29 km) south of Belen.

DRAINAGE AREA.--7,350 mi² (19,040 km²), approximately, of which at least 1,130 mi² (2,930 km²) does not contribute directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1939 to current year. Fragmentary gage height record and footnotes concerning no flow for the period September 1910 to August 1914, published in WSP 358 and 388, are in error and should not be used.

REVISED RECORDS.--WSP 1512: 1941-42, 1944-45, 1946(P), 1947-49. WSP 1632: 1957. WSP 1732: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 4,722.34 ft (1,439.369 m) above mean sea level. Prior to Jan. 24, 1969, at datum 3.10 ft (0.945 m) higher.

REMARKS.--Water-discharge records poor. Diversions for irrigation of about 11,500 acres (47 km²) above station (includes 3,700 acres or 15.0 km² irrigated wholly or partly from wells).

AVERAGE DISCHARGE.--37 years (water years 1941-77), 48.7 ft³/s (1.379 m³/s), 35,280 acre-ft/yr (43.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,800 ft³/s (532 m³/s) Sept. 23, 1941, from rating curve extended above 7,800 ft³/s (221 m³/s); maximum gage height, 16.9 ft (5.15 m) present datum, Aug. 12, 1955; no flow for extended periods.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since about 1880 occurred Sept. 23, 1929, from information by local residents (discharge, about 35,000 ft³/s or 991 m³/s, estimated on basis of peak at Rio Puerco). Another flood occurred Aug. 12, 1929 (discharge, 30,600 ft³/s or 867 m³/s, by slope-area method, from reports of State Engineer).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Aug. 13	1900	*3,010 85.2	10.80 3.292
Aug. 19	1200	2,070 58.6	9.88 3.011

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
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	1.0	10
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.0
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	303
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	444
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	599
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	255
7	.00	.00	.00	.00	.00	.00	.00	20	.00	65	.00	60
8	.00	.00	.00	.00	.00	.00	.00	1.0	.00	25	.00	27
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	10	11	16
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.0	8.0	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	3.0	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	10	25	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.0	1290	3.0
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	1180	15
15	.00	.00	.00	.00	.00	.00	.00	30	.00	1.0	668	10
16	.00	.00	.00	.00	.00	.00	.00	3.0	.00	1.0	220	18
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	120	1180	2.0
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	71	500	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	30	1270	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0	389	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	100	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	327	620	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	789	162	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	200	30	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	100	10	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	240	2.0	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	250	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	50	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	10	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.0	280	.00
31	.00	---	.00	.00	---	.00	---	.00	---	1.0	30	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	54.00	.00	2321.00	7979.00	1767.00
MEAN	.0000	.0000	.0000	.0000	.0000	.0000	.0000	1.74	.0000	74.9	257	58.9
MAX	.00	.00	.00	.00	.00	.00	.00	30	.00	789	1290	599
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	107	.00	4600	15830	3500

CAL YR 1976	TOTAL	4009.50	MEAN	11.0	MAX	896	MIN	.00	AC-FT	7950
WTR YR 1977	TOTAL	12121.00	MEAN	33.2	MAX	1290	MIN	.00	AC-FT	24040

RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1956 to current year.

WATER TEMPERATURES: October 1964 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1947 to current year.

REMARKS.--Chemical analyses are run on composite samples collected during the day of period indicated. Samples are collected when flow is observed on this ephemeral stream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 11,400 micromhos June 10, 1968; minimum daily, 238 micromhos July 30, 1969.

WATER TEMPERATURES: Maximum, 32.0°C July 29, 1977; minimum, 0.0°C Dec. 30, 1971.

SEDIMENT CONCENTRATIONS: Maximum daily, 267,000 mg/L July 26, 1957; minimum daily, no flow on many days of each year.

SEDIMENT LOADS: Maximum daily, 2,240,000 tons (2,030,000 tonnes) Aug. 7, 1957; minimum daily, 0 tons (0 tonnes) on many days of each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,870 micromhos July 7; minimum daily, 573 micromhos Aug. 30.

WATER TEMPERATURES: Maximum, 32.0°C July 29; minimum, 9.0°C May 15.

SEDIMENT CONCENTRATIONS: Maximum daily, 196,000 mg/L July 23; minimum daily, no flow on many days.

SEDIMENT LOADS: Maximum daily, 506,000 tons (459,000 tonnes) Aug. 17; minimum daily, 0 tons (0 tonnes) on many days.

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)
JUL												
07...	65	4870	7.2	1300	1100	420	55	670	8.2	17	220	0
08-18	23	3230	7.3	1200	900	360	63	430	5.5	12	310	0
19-23	230	2670	7.5	890	700	270	52	330	4.8	12	230	0
24-27	198	2000	7.8	600	500	180	37	250	4.4	9.4	130	0
28-29	30	2430	7.7	970	860	300	53	230	3.2	12	130	0
AUG												
10...	8.0	1070	7.6	350	160	110	19	120	2.8	6.3	230	0
12...	25	1850	7.6	560	360	170	34	230	4.2	8.8	250	0
13...	1350	3030	7.7	1100	950	330	59	360	4.8	11	140	0
14-25	523	1910	7.4	670	500	210	35	200	3.4	8.1	200	0
30-31	155	766	8.0	230	120	77	9.1	75	2.2	5.6	130	0
SEP												
04-05	522	1560	7.4	570	400	180	30	130	2.4	7.2	210	0
06...	255	1070	7.7	360	230	110	20	92	2.1	6.7	150	0
07-09	34	1330	7.6	420	280	130	23	130	2.8	7.9	170	0
13...	3.0	1930	7.0	580	360	180	31	220	4.0	8.6	270	0
14...	15	1090	7.3	320	150	100	17	120	2.9	7.0	210	0
15-16	14	1900	7.3	610	410	190	34	190	3.3	8.2	250	0
WTD. AVG.	--	2080	7.5	722	557	223	39	230	3.7	8.9	191	0
TIME WTD.												
AVG.	235	2240	7.5	774	583	237	42	265	4.1	9.6	218	0
TOT. LOAD (TONS)	--	--	--	--	--	7070	1230	7280	--	281	6070	0

08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED RESI- DUE AT 180 C (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUEENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
JUL												
07...	2200	150	.8	13	--	3640	4.95	639	.31	--	--	--
08-18	1700	100	.6	17	--	2840	3.86	176	.49	.01	--	--
19-23	1300	62	.6	14	--	2160	2.94	1340	.63	.01	--	--
24-27	920	35	.7	13	--	1510	2.05	807	.85	.01	--	--
28-29	1300	44	.7	11	--	2020	2.75	164	1.1	.00	--	--
AUG												
10...	350	27	.8	17	--	763	1.04	16.5	--	--	--	--
12...	640	150	.7	16	--	1370	1.86	92.5	--	--	--	--
13...	1300	240	.7	14	--	2380	3.24	8680	--	--	--	--
14-25	810	65	.8	13	--	1440	1.96	2030	--	--	--	--
30-31	210	45	.7	12	--	498	.68	208	--	--	--	--
SEP												
04-05	650	39	.6	15	1200	1160	1.58	1640	--	--	250	10
06...	390	34	.8	13	766	741	1.01	510	--	--	210	20
07-09	490	48	.8	13	950	927	1.26	85.1	--	--	290	10
13...	680	110	.7	17	1430	1380	1.88	11.2	--	--	480	10
14...	340	43	.7	15	754	746	1.01	30.2	--	--	240	20
15-16	740	55	.6	16	1390	1360	1.85	51.4	--	--	250	20
WTD. AVG.	908	80	.7	13	--	1600	2.17	--	--	--	--	--
TIME WTD.												
AVG.	1040	72	.7	14	--	1780	2.43	--	--	--	--	--
TOT. LOAD (TONS)	28800	2550	23	427	--	50600	--	--	--	--	--	--

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS OIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)
MAY										
15...	0600	16	2840	--	9.0	--	--	--	--	--
15...	0800	16	2680	--	10.0	--	--	--	--	--
15...	1830	16	2330	--	22.0	--	--	--	--	--
16...	1500	3.0	2520	--	24.0	--	--	--	--	--
17...	1630	.10	2490	--	24.0	--	--	--	--	--
AUG										
14...	1050	1180	1871	6.9	21.0	650	520	200	37	180

DATE	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF TUEENTS) (MG/L) (70301)
MAY									
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
AUG									
14...	3.1	9.1	160	0	870	33	.7	12	1420

RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT CHARGE (MG/L) (80154)	SUS- PENDE SEDIM- ENT CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN (70337)	SUS. SED. FALL DIAM. % FINER THAN (70338)	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. FALL DIAM. % FINER THAN (70343)	SUS. SED. FALL DIAM. % FINER THAN (70344)
MAY											
07...	1630	20	24.5	34600	1870	84	96	97	98	100	--
15...	0600	16	9.0	94000	4060	76	89	99	100	--	--
15...	0800	16	10.0	93400	4030	73	88	99	100	--	--
15...	1830	16	22.0	86200	3720	79	91	98	100	--	--
16...	1500	3.0	24.0	77400	627	84	96	100	--	--	--
JUL											
07...	1250	124	26.0	198000	66300	57	78	96	100	--	--
22...	1015	309	21.0	96600	80600	55	62	82	97	99	100
22...	1115	309	22.0	276000	230000	56	65	82	97	99	100
23...	0800	705	21.0	196000	373000	49	57	73	95	99	100
25...	1445	100	30.0	115000	31100	64	81	94	99	99	100
AUG											
13...	2000	2640	22.0	87900	627000	57	66	80	99	100	--
14...	0630	1000	20.0	105000	284000	49	56	68	97	100	--
19...	1730	1190	24.0	145000	466000	46	53	64	90	100	--
SEP											
16...	1130	18	21.0	99800	4850	75	89	99	100	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---		---	---	---
2								---		---	---	---
3								---		---	---	---
4								---		---	---	1630
5								---		---	---	1490
6								---		---	---	1070
7								---		---	---	1270
8								---		3330	---	1310
9								---		3040	---	1400
10								---		---	1080	---
11								---		3310	---	---
12								---		4520	1980	---
13								---		---	3000	1930
14								---		---	1800	1090
15								2620		---	1660	1520
16								2520		---	1920	2090
17								2490		3230	2280	---
18								---		3420	1660	---
19								---		2590	1950	---
20								---		2580	1820	---
21								---		3140	1990	---
22								---		2680	1900	---
23								---		2670	1780	---
24								---		2080	1670	---
25								---		1890	1740	---
26								---		2260	---	---
27								---		1870	---	---
28								---		2510	---	---
29								---		2440	---	---
30								---		---	573	---
31								---		---	941	---
MEAN								2540		2800	1750	1480
WTR YR 1977	MEAN	2120		MAX	4520		MIN	573				

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

RIO GRANDE BASIN

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08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---		---	---	---
2								---		---	---	---
3								---		---	---	---
4								---		---	---	19.0
5								---		---	---	19.0
6								---		---	---	18.0
7								---		---	---	18.0
8								---		27.0	---	17.5
9								---		19.0	---	17.0
10								---		---	24.0	---
11								---		28.0	---	---
12								---		29.0	25.5	---
13								---		---	22.5	22.0
14								---		---	21.0	15.0
15								13.5		---	24.0	23.0
16								24.0		---	21.0	21.5
17								24.5		28.0	23.0	---
18								---		26.0	22.0	---
19								---		29.0	24.0	---
20								---		26.0	21.0	---
21								---		29.0	24.0	---
22								---		23.0	21.0	---
23								---		21.0	21.0	---
24								---		23.0	21.0	---
25								---		24.5	20.0	---
26								---		29.0	---	---
27								---		26.0	---	---
28								---		29.0	---	---
29								---		32.0	---	---
30								---		---	17.0	---
31								---		---	19.0	---
MEAN								20.5		26.5	22.0	19.0
WTR YR 1977	MEAN	23.0		MAX	32.0		MIN	13.5				

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
2	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
3	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
4	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
5	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
6	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
7	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
8	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
9	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
10	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
11	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
12	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
13	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
14	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
15	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
16	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
17	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
18	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
19	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
20	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
21	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
22	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
23	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
24	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
25	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
26	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
27	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
28	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
29	0	.00	0	.00	0	.00	0	.00	---	---	0	.00	---	---	0	.00	---	---	0	.00
30	0	.00	0	.00	0	.00	0	.00	---	---	0	.00	---	---	0	.00	---	---	0	.00
31	0	.00	---	---	0	.00	0	.00	---	---	0	.00	---	---	0	.00	---	---	0	.00
TOTAL	---	0.00	---	0.00	---	0.00	---	0.00	---	0.00	---	0.00	---	0.00	---	0.00	---	0.00	---	0.00
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER									
1	0	.00	0	.00	0	.00	0	0	45000	121	5850	158								
2	0	.00	0	.00	0	.00	0	0	0	0	5100	69								
3	0	.00	0	.00	0	.00	0	0	0	0	73600	152000								
4	0	.00	0	.00	0	.00	0	0	0	0	104000	129000								
5	0	.00	0	.00	0	.00	0	0	0	0	57000	92200								
6	0	.00	0	.00	0	.00	0	0	0	0	36000	24800								
7	0	.00	22200	1200	0	.00	112000	35200	0	0	26000	4210								
8	0	.00	20400	55	0	.00	146000	9850	0	0	24700	1800								
9	0	.00	0	.00	0	.00	134000	3620	7920	5450	22700	981								
10	0	.00	0	.00	0	.00	148000	2000	85000	1840	0	.0								
11	0	.00	0	.00	0	.00	153000	413	95500	774	0	.0								
12	0	.00	0	.00	0	.00	151000	4080	88000	5940	0	.0								
13	0	.00	0	.00	0	.00	178000	2400	118000	486000	44500	360								
14	0	.00	0	.00	0	.00	181000	489	119000	379000	46700	1890								
15	0	.00	83500	6760	0	.00	181000	489	110000	177000	63600	1720								
16	0	.00	78000	632	0	.00	183000	494	131000	77800	104000	5050								
17	0	.00	0	.00	0	.00	183000	59300	156000	506000	132000	713								
18	0	.00	0	.00	0	.00	172000	33000	123000	166000	0	.0								
19	0	.00	0	.00	0	.00	166000	13400	146000	501000	0	.0								
20	0	.00	0	.00	0	.00	137000	1110	156000	164000	0	.0								
21	0	.00	0	.00	0	.00	135000	364	71000	19200	0	.0								
22	0	.00	0	.00	0	.00	186000	193000	120000	213000	0	.0								
23	0	.00	0	.00	0	.00	196000	460000	93000	40700	0	.0								
24	0	.00	0	.00	0	.00	141000	76100	75000	6070	0	.0								
25	0	.00	0	.00	0	.00	144000	38900	70100	1890	0	.0								
26	0	.00	0	.00	0	.00	176000	134000	56000	302	0	.0								
27	0	.00	0	.00	0	.00	121000	81700	0	0	0	.0								
28	0	.00	0	.00	0	.00	93000	12600	0	0	0	.0								
29	0	.00	0	.00	0	.00	85100	2300	0	0	0	.0								
30	0	.00	0	.00	0	.00	69000	931	8320	13400	0	.0								
31	---	---	0	.00	---	---	54000	146	9100	737	---	---								
TOTAL	---	0.00	---	8647.00	---	0.00	---	1165886	---	2766224	---	414951.0								
TOTAL LOAD FOR YEAR: 4355708.00 TONS.																				

08354000 RIO SALADO NEAR SAN ACACIA, NM

LOCATION.--Lat 34°17'50", long 106°53'59", in NW¼ sec.24, T.1 N., R.1 W., Socorro County, Hydrologic Unit 13020209, at former bridge site 0.3 mi (0.5 km) upstream from bridge on Interstate Highway 25, 3.1 mi (5.0 km) upstream from mouth, 2.9 mi (4.7 km) north of San Acacia, and 15 mi (24 km) north of Socorro.

DRAINAGE AREA.--1,380 mi² (3,570 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 1512: 1948-49, 1955. WSP 1632: 1953.

GAGE.--Water-stage recorder. Altitude of gage is 4,765 ft (1,452.4 m), from topographic map. Prior to Sept. 14, 1966, at site 1.7 mi (2.7 km) downstream at different datum.

REMARKS.--Water-discharge records poor. Diversions for irrigation of about 100 acres (40 km²) above station.

AVERAGE DISCHARGE.--30 years, 15.9 ft³/s (0.450 m³/s), 11,520 acre-ft/yr (14.2 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,200 ft³/s (1,030 m³/s) July 31, 1965, gage height, 5.54 ft (1.689 m), from flood-marks, present site and datum, from rating curve extended above 900 ft³/s (26 m³/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 ft³/s or 776 m³/s, by slope-area method), from reports of State Engineer.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,000 ft³/s (312 m³/s) at 1600 hours Aug. 14, gage height, 4.15 ft (1.265 m), no other peak above base of 3,000 ft³/s (85.0 m³/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
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	5.0	.00	36
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	10
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	247
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	340
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	81
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	70
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	10
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	500	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	700	1.0
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	150	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1380	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1000	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	434	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	202	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	160	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	20	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.0	2.0	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	25	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.0	20	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	2.0	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	200	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	50	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	10	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	300	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.0	.00	13
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	50	.00	3.5	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	7.2	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	50.00	597.00	4580.70	809.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	1.67	19.3	148	27.0
MAX	.00	.00	.00	.00	.00	.00	.00	.00	50	300	1380	340
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	99	1180	9090	1600

CAL YR 1976 TOTAL 343.00 MEAN .94 MAX 70 MIN .00 AC-FT 680
WTR YR 1977 TOTAL 6036.70 MEAN 16.5 MAX 1380 MIN .00 AC-FT 11970

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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
JUL 20...	1430	2.4	1620	7.2	32.0	400	210	120	25	190	4.1	7.4
AUG 11...	1315	201	1008	6.6	24.0	290	70	87	18	100	2.6	5.1
SEP 28...	1330	79	2130	7.4	29.0	680	490	200	43	230	3.8	8.5

DATE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED
			SULFATE (SO4) (MG/L) (00945)	CHLO- RIDE (CL) (MG/L) (00940)	FLUO- RIDE (F) (MG/L) (00950)	SILICA (SIO2) (MG/L) (00955)	(RESI- DUE AT 180 C) (MG/L) (70300)	(SUM OF CONSTI- TUENTS) (MG/L) (70301)	NITRIE PLUS NITRATE (N) (MG/L) (00631)	ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	BORON (B) (UG/L) (01020)	IRON (FE) (UG/L) (01046)
JUL 20...	230	0	250	260	.5	27	--	996	.37	.12	190	30
AUG 11...	270	0	250	36	.7	17	--	649	.36	.00	150	20
SEP 28...	230	0	740	180	.6	18	1610	1530	.19	.00	260	10

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)
JUL 20...	1430	2.4	32.0	73300	475	68	84	100	--	--	--
21...	1415	24	27.0	56900	3690	73	86	97	99	100	--
27...	1015	151	24.0	91200	37200	--	--	--	--	--	--
AUG 12...	1445	372	27.0	92100	92500	--	--	--	--	--	--
16...	1415	61	29.0	33600	5530	--	--	--	--	--	--
SEP 12...	1315	.90	23.0	45300	110	--	--	--	--	--	--
28...	1330	79	29.0	115000	24500	48	62	87	94	97	100

LOCATION.--Lat 34°15'17", long 106°53'43", in SE¼NW¼ sec.1, T.1 S., R.1 W., Socorro County, Hydrologic Unit 13020203, on right bank at San Acacia, and 0.5 mi (0.8 km) downstream from point of diversion.

REVISÉD RECORDS.--WSP 1242: 1951.

GAGE.--Water-stage recorder. Datum of gage is 4,660.16 ft (1,420.417 m) above mean sea level. Prior to Mar. 8, 1958, at site 300 ft (90 m) upstream (in old channel) at datum 0.42 ft (0.128 m) lower.

REMARKS.--Records poor. This canal is 1 of 3 channels (stations 08354800, 08354900) carrying flow in valley cross section. For combined monthly flow in acre-ft of this canal, conveyance channel, and floodway, see tabulation below daily table for 08354900. Canal diverts water from right bank of Rio Grande for irrigation of about 8,000 acres (32 km²). Alamillo Acequia and 3 other smaller ditches divert water from canal above station for irrigation of about 400 acres (2 km²). Discharge records collected at the canal heading from October 1964 to September 1965 indicate that 7,770 acre-ft (9.58 hm³) 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, 263 ft³/s (7.45 m³/s) June 16, 1976; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	66	.00	26	40	51	198	85	34	143	154	121
2	150	39	.00	26	.00	87	199	87	32	131	138	123
3	134	.00	.00	26	.00	96	198	73	34	137	108	124
4	140	.00	.00	26	.00	112	218	69	34	130	98	115
5	154	.00	.00	27	.00	159	234	82	33	140	80	104
6	158	.00	.00	47	.00	186	241	82	31	127	80	102
7	171	.00	.00	23	.00	178	243	74	32	137	78	122
8	181	.00	.00	14	.00	180	221	67	30	169	76	115
9	176	.00	.00	14	.00	188	186	59	30	143	116	122
10	127	.00	.00	26	.00	201	144	47	28	128	118	135
11	168	.00	.00	25	.00	207	119	66	27	130	102	114
12	181	.00	.00	49	.00	209	133	63	33	166	62	134
13	166	.00	.00	57	.00	213	127	87	33	169	66	146
14	165	.00	.00	37	.00	218	120	80	30	153	66	147
15	156	.00	.00	35	.00	226	120	104	31	109	85	143
16	150	.00	.00	34	.00	231	118	113	27	123	84	135
17	139	.00	.00	33	.00	224	126	111	30	106	102	130
18	176	.00	.00	33	.00	221	118	95	24	163	109	133
19	140	.00	.00	47	.00	212	114	95	29	165	115	136
20	147	.00	.00	50	.00	211	118	98	36	132	126	138
21	149	.00	17	59	.00	217	131	102	42	94	148	136
22	149	.00	30	70	.00	217	135	99	62	130	150	114
23	144	.00	28	78	.00	218	136	95	71	122	135	114
24	144	.00	28	73	.00	217	128	98	81	116	135	104
25	145	.00	28	45	21	217	119	110	96	118	152	94
26	138	.00	27	47	12	216	122	100	113	120	161	84
27	153	.00	26	50	11	213	120	94	105	116	140	95
28	155	.00	25	69	8.8	211	118	59	95	119	135	110
29	158	.00	24	62	---	200	115	40	101	113	130	118
30	145	.00	24	59	---	199	91	39	113	116	123	116
31	83	---	25	59	---	196	---	38	---	140	134	---
TOTAL	4700	105.00	282.00	1326	92.80	5931	4510	2511	1497	4105	3506	3624
MEAN	152	3.50	9.10	42.8	3.31	191	150	81.0	49.9	132	113	121
MAX	181	66	30	78	40	231	243	113	113	169	161	147
MIN	83	.00	.00	14	.00	51	91	38	24	94	62	84
AC-FT	9320	208	559	2630	184	11760	8950	4980	2970	8140	6950	7190
CAL YR 1976	TOTAL	47956.30	MEAN	131	MAX 263	MIN .00	AC-FT	95120				
WTR YR 1977	TOTAL	32189.80	MEAN	88.2	MAX 243	MIN .00	AC-FT	63850				

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, in right bank 75 ft (23 m) upstream from railway crossing, 0.5 mi (0.8 km) south of San Acacia, and 1.2 mi (1.9 km) downstream from San Acacia diversion dam.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to September 1964 included in composite flow of station "08355000 Rio Grande at San Acacia," October 1960 to September 1964 (monthly discharge published in WSP 1923 with records for station 08355000), October 1964 to current year. Daily records 1958-64 are available in files at district office.

GAGE.--Water-stage recorder. Datum of gage is 4,652.5 ft (1,418.08 m) above mean sea level (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 ft³/s (57 m³/s). For combined monthly flow in acre-ft of this channel, floodway, and Socorro main canal north see tabulation below daily table for station 08354900.

EXTREMES FOR PERIOD OF RECORD: Maximum daily discharge, 1,950 ft³/s (55.2 m³/s) May 12, 13, 1966; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340	254	512	555	600	645	145	20	9.9	7.7	4.0	118
2	512	230	492	558	655	555	170	19	9.8	4.5	3.5	83
3	382	356	464	555	674	461	115	20	10	3.5	4.8	317
4	218	520	459	605	648	350	140	19	10	3.2	3.2	1000
5	141	577	546	635	641	305	95	20	10	2.6	3.2	726
6	65	660	564	652	653	342	84	21	10	2.6	2.9	475
7	32	713	596	652	663	356	38	22	10	2.6	2.4	127
8	25	743	608	605	669	312	28	19	10	2.9	2.5	93
9	29	743	597	612	624	223	25	18	9.4	2.4	2.1	65
10	105	751	617	565	638	178	21	17	9.8	2.2	1.6	20
11	65	672	610	490	641	175	20	19	11	1.3	274	15
12	45	626	588	445	615	172	25	18	10	1.4	480	15
13	51	639	596	469	607	132	23	19	9.6	1.6	577	20
14	41	619	620	465	607	122	23	18	8.0	1.5	1190	38
15	58	584	652	445	614	82	23	19	8.7	1.3	923	56
16	51	573	641	448	640	77	22	17	8.1	1.2	662	79
17	42	568	590	457	650	74	24	16	8.6	1.2	1260	63
18	23	558	596	490	649	54	24	16	7.6	.95	1150	59
19	244	569	628	501	650	91	22	16	7.2	.95	1330	53
20	95	563	687	483	631	111	22	17	7.4	1.1	1070	27
21	56	554	751	563	615	93	22	16	8.3	80	933	24
22	17	551	805	589	639	70	23	15	8.2	210	1260	10
23	29	569	813	596	695	50	25	14	8.4	464	724	2.1
24	71	607	859	602	679	41	23	13	8.7	434	310	2.2
25	86	591	800	625	645	57	23	12	8.4	191	113	2.0
26	98	556	799	666	638	43	23	11	9.0	122	9.1	1.7
27	103	556	818	683	693	102	24	11	9.3	486	2.6	.40
28	151	500	605	655	697	219	23	11	15	147	2.0	.50
29	231	480	525	634	---	429	23	11	15	85	2.2	.75
30	197	482	515	642	---	245	20	11	16	93	36	2.0
31	248	---	555	625	---	194	---	10	---	132	163	---
TOTAL	3851	16964	19508	17567	18070	6360	1318	505	291.4	2490.70	12501.1	3494.65
MEAN	124	565	629	567	645	205	43.9	16.3	9.71	80.3	403	116
MAX	512	751	859	683	697	645	170	22	16	486	1330	1000
MIN	17	230	459	445	600	41	20	10	7.2	.95	1.6	.40
AC-FT	7640	33650	38690	34840	35840	12620	2610	1000	578	4940	24800	6930

CAL YR 1976 TOTAL 155190.39 MEAN 424 MAX 1740 MIN .43 AC-FT 307800
WTR YR 1977 TOTAL 102920.85 MEAN 282 MAX 1330 MIN .40 AC-FT 204100

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM -- Continued

WATER-QUALITY RECORDS

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; minimum, 0.0°C on several days during 1967-1969, 1971-1976.

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, 2,520 micromhos July 22; minimum daily, 557 micromhos Mar. 29.

WATER TEMPERATURES: Maximum, 30.0°C June 16, 18, 19, July 30, Aug. 1; minimum, 0.0°C Nov. 27.

SEDIMENT CONCENTRATIONS: Maximum daily, 100,000 mg/L Aug. 19; minimum daily, 43 mg/L Apr. 23.

SEDIMENT LOADS: Maximum daily, 359,000 tons (326,000 tonnes) Aug. 19; minimum daily, 0.12 ton (0.11 tonne) Sept. 27.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	AIR TEMPERATURE (DEG C) (00020)	TEMPERATURE (DEG C) (00010)	TURBIDITY (JTU) (00070)	DISSOLVED OXYGEN (MG/L) (00300)
OCT								
12...	1200	80	784	7.4	19.0	11.0	40	9.4
NOV								
03...	1234	455	860	8.0	18.0	13.0	240	9.4
DEC								
06...	1717	578	660	8.1	.0	6.5	240	10.8
JAN								
26...	1212	692	730	8.1	7.0	5.5	170	11.0
FEB								
23...	1111	710	660	7.9	11.0	6.0	190	10.8
MAR								
24...	1700	78	710	8.3	19.0	17.0	45	8.7
APR								
22...	1040	23	820	8.3	18.0	16.0	15	9.3
MAY								
19...	1745	19	820	8.2	23.0	20.5	75	8.0
JUN								
23...	1212	8.3	1190	8.0	27.5	19.5	110	8.2
JUL								
29...	1111	156	1110	7.8	29.5	24.0	88	6.9
AUG								
25...	1616	118	800	7.8	32.0	28.0	3900	6.0
SEP								
22...	1111	21	950	8.0	23.0	18.5	160	8.0

DATE	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DISSOLVED NITRITE NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITROGEN (N) (MG/L) (00610)	TOTAL ORGANIC NITROGEN (N) (MG/L) (00605)	TOTAL NITROGEN (N) (MG/L) (00600)	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L) (00671)
OCT								
12...	--	.22	.16	.04	.31	.57	.25	.14
NOV								
03...	--	.37	.25	.01	1.1	1.5	.46	.15
DEC								
06...	--	.71	.66	.19	.67	1.6	.86	.36
JAN								
26...	--	.75	.72	.09	.77	1.6	.75	.39
FEB								
23...	--	.77	.75	.00	.97	1.7	.42	.35
MAR								

RIO GRANDE BASIN

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)
24...	--	.56	.54	.05	.40	1.0	.48	.37
APR 22...	--	.08	.08	.00	.42	.50	.18	.14
MAY 19...	--	.28	.23	.01	.81	1.1	.23	.13
JUN 23...	--	.35	.35	.06	.93	1.3	.37	.13
JUL 29...	310	1.2	1.1	.01	14	15	6.0	.07
AUG 25...	140	.87	.79	.03	4.2	5.1	2.7	.17
SEP 22...	31	.17	.14	.10	.19	.46	.32	.07

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)
AUG 25...	1616	3470
SEP 22...	1111	165

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL MERCURY (HG) (UG/L) (71900)
SEP 22...	1111	6	10	10	20	<100	.0

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM 7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
OCT 12...	1200	200	480	--
NOV 03...	1234	600	2800	--
DEC 06...	1717	400	1600	--
JAN 26...	1212	160	650	--
FEB 23...	1111	340	1600	--
MAR 24...	1700	8	--	420
APR 22...	1040	29	--	220
MAY 19...	1745	30	--	100
JUN 23...	1212	210	--	1400
JUL 29...	1111	29000	--	9800
AUG 25...	1616	10000	--	7700
SEP 22...	1111	190	--	620

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)
NOV										
03...	1234	455	13.0	5200	6390	7	9	12	20	30
10...	1715	738	14.0	5720	11400	10	12	16	32	57
DEC										
06...	1717	578	6.5	4980	7770	7	8	12	24	36
27...	1610	802	8.0	3870	8380	9	12	16	32	54
JAN										
26...	1212	692	5.5	2010	3760	10	13	20	31	51
MAR										
24...	1700	78	17.0	203	43	31	36	43	--	--
MAY										
15...	1845	20	20.0	15000	810	79	92	99	100	--
JUN										
23...	1111	11	20.0	120	3.6	--	--	--	--	--
23...	1212	8.3	19.5	205	4.6	--	--	--	--	--
JUL										
04...	1725	3.2	16.0	343	3.0	74	87	97	--	--
25...	2010	48	27.0	56900	7370	73	83	99	100	--
AUG										
12...	0945	795	19.0	115000	247000	46	52	71	92	99
12...	1715	335	25.0	75400	68200	53	62	82	97	100
13...	0900	449	20.0	61300	74300	52	60	79	93	98
14...	1715	1230	24.0	64100	213000	55	64	82	92	98
16...	1000	630	23.0	66100	112000	61	69	82	94	99
17...	1015	1460	25.0	79100	312000	48	54	67	90	98
18...	1615	930	28.0	62000	156000	47	52	67	90	98
22...	1935	1670	27.0	58500	264000	42	54	68	87	98
24...	1710	255	26.0	11600	7990	53	59	67	80	90
SEP										
03...	1335	453	25.0	94500	116000	46	51	69	91	98
04...	1850	762	25.0	68200	140000	51	60	72	90	98
17...	0855	66	17.0	13700	2440	59	70	77	84	95

DATE	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. FALL DIAM. % FINER THAN (70346)	SUS. SED. FALL DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70332)	SUS. SED. FALL DIAM. % FINER THAN (70333)	SUS. SED. FALL DIAM. % FINER THAN (70334)	SUS. SED. FALL DIAM. % FINER THAN (70335)	SUS. SED. FALL DIAM. % FINER THAN (70336)
NOV									
03...	79	96	100	--	--	--	--	--	--
10...	94	100	--	--	--	--	--	--	--
DEC									
06...	78	98	100	--	--	--	--	--	--
27...	88	99	100	--	--	--	--	--	--
JAN									
26...	87	100	--	--	--	--	--	--	--
MAR									
24...	--	--	--	44	47	65	87	98	100
MAY									
15...	--	--	--	--	--	--	--	--	--
JUN									
23...	--	--	--	97	--	--	--	--	--
23...	--	--	--	89	--	--	--	--	--
JUL									
04...	--	--	--	98	99	100	--	--	--
25...	--	--	--	--	--	--	--	--	--
AUG									
12...	100	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
13...	100	--	--	--	--	--	--	--	--
14...	100	--	--	--	--	--	--	--	--
16...	100	--	--	--	--	--	--	--	--
17...	100	--	--	--	--	--	--	--	--
18...	100	--	--	--	--	--	--	--	--
22...	100	--	--	--	--	--	--	--	--
24...	99	100	--	--	--	--	--	--	--
SEP									
03...	100	--	--	--	--	--	--	--	--
04...	100	--	--	--	--	--	--	--	--
17...	100	--	--	--	--	--	--	--	--

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	586	805	730	715	673	588	657	944	858	1360	919	777
2	585	698	689	699	698	720	642	892	859	1060	964	800
3	604	769	808	733	685	609	639	928	883	1060	979	906
4	639	765	759	697	670	609	638	943	895	1070	---	1160
5	683	786	733	699	692	604	678	959	918	1080	1170	1320
6	707	676	710	716	682	605	671	948	893	1050	1010	953
7	766	659	712	686	674	572	707	942	927	1040	1020	807
8	720	651	655	704	668	599	755	952	920	1580	1270	877
9	734	648	659	702	683	615	776	924	907	1260	1200	773
10	697	664	656	717	668	624	848	954	923	1230	1150	769
11	709	655	657	766	657	628	834	893	875	1220	1060	966
12	720	682	640	744	678	621	821	933	879	1210	915	809
13	740	678	682	746	690	613	798	866	909	1210	1000	794
14	714	659	649	713	684	632	825	916	907	1150	1160	864
15	745	667	648	733	687	673	822	1220	915	1180	1180	845
16	739	661	636	727	630	663	819	880	910	1200	1370	858
17	758	668	619	739	667	680	821	858	970	1270	1240	889
18	679	686	639	723	668	693	832	894	950	1250	1040	755
19	696	704	634	718	671	672	858	827	921	1260	1560	797
20	691	718	615	691	676	630	759	801	880	1760	971	791
21	691	725	608	696	671	668	806	803	905	1150	757	819
22	692	714	587	694	670	676	845	810	910	2520	1140	927
23	680	708	598	687	648	707	855	804	915	1800	930	959
24	681	725	585	694	663	709	851	811	886	1820	765	733
25	689	683	583	696	644	713	857	775	875	1420	792	1040
26	679	704	587	692	655	704	797	821	852	1140	786	1090
27	698	650	591	704	647	679	859	814	890	1360	1230	1070
28	651	701	643	698	661	653	859	830	877	1650	1290	1130
29	655	761	712	691	---	557	895	860	870	1100	1290	1360
30	801	767	725	677	---	605	932	857	876	959	1260	1130
31	798	---	711	696	---	640	---	869	---	928	792	---
MEAN	698	701	660	709	670	644	792	888	899	1300	1070	926

WTR YR 1977 MEAN 831 MAX 2520 MIN 557
 WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	15.0	3.0	8.0	9.0	10.0	14.0	23.0	27.0	24.0	30.0	23.0
2	21.0	15.0	3.5	11.0	7.0	9.0	14.0	21.0	26.0	23.0	29.0	23.0
3	21.0	15.0	5.0	9.0	10.5	8.0	11.0	18.0	24.0	21.0	28.0	25.0
4	22.0	16.0	7.0	7.0	11.0	10.0	15.0	23.0	25.0	16.0	---	25.0
5	19.0	15.0	5.0	5.0	10.0	8.0	19.0	24.0	26.0	18.0	26.0	23.0
6	21.0	16.0	6.0	6.0	12.0	12.0	20.0	24.5	25.0	26.0	27.0	25.0
7	17.0	15.0	6.5	6.5	12.5	15.0	19.0	23.0	27.0	23.0	25.0	27.0
8	17.0	15.0	8.0	4.0	13.0	15.0	22.0	22.0	25.0	16.0	25.0	25.0
9	19.0	14.0	6.5	3.0	11.0	16.0	20.0	24.0	26.0	16.0	26.0	27.0
10	18.0	14.0	6.0	2.0	8.0	10.5	19.0	25.0	26.5	17.0	25.0	18.0
11	18.0	13.0	8.0	3.0	12.0	10.0	17.0	23.0	28.0	16.0	23.0	22.0
12	20.0	5.0	7.0	1.0	13.0	12.0	21.0	20.0	26.0	23.0	25.0	23.0
13	18.0	7.0	8.0	4.0	13.0	14.0	20.0	---	27.0	20.0	20.0	26.0
14	17.0	9.0	8.0	5.0	13.0	13.0	18.0	20.0	27.0	14.0	24.0	25.0
15	19.0	10.0	8.5	6.0	12.0	15.0	19.0	20.0	28.0	16.0	26.0	25.0
16	19.0	9.0	8.0	6.5	14.5	12.0	22.0	23.0	30.0	15.0	23.0	23.0
17	17.0	10.0	8.0	7.0	15.0	12.0	23.0	23.0	29.0	15.0	25.0	17.0
18	17.0	12.0	8.5	8.0	16.0	15.0	23.0	23.0	30.0	14.0	28.0	22.0
19	17.0	13.0	9.0	8.5	16.0	15.0	18.0	22.0	30.0	15.0	28.0	25.0
20	16.0	12.0	9.0	8.0	15.0	15.0	15.0	24.0	16.0	15.0	25.0	24.0
21	15.0	11.5	7.0	8.0	14.0	16.0	21.0	22.0	12.5	26.0	26.0	24.0
22	16.0	12.0	7.5	9.0	10.0	17.0	23.0	23.0	14.0	24.0	27.0	20.0
23	16.0	11.0	6.0	11.0	11.0	17.0	21.0	23.0	16.0	27.0	26.0	15.0
24	17.0	12.0	7.0	12.0	12.0	17.0	20.0	22.0	16.0	27.0	26.0	15.0
25	17.0	11.0	7.0	10.0	8.0	15.0	23.0	21.0	18.0	27.0	28.0	24.0
26	16.0	12.0	6.0	10.0	12.0	13.0	26.0	22.0	15.0	28.0	28.0	24.0
27	7.0	0	8.0	9.0	10.5	10.0	22.5	23.0	24.0	26.0	27.0	22.0
28	8.0	1.0	7.0	10.0	11.0	12.0	23.0	23.5	23.0	27.0	26.0	25.0
29	11.0	1.0	7.0	7.0	---	12.0	25.0	24.0	23.0	27.0	26.0	28.0
30	15.0	1.5	9.0	10.0	---	16.0	24.0	24.0	22.0	30.0	24.0	26.0
31	15.0	---	9.0	10.0	---	17.0	---	24.0	---	29.0	25.0	---
MEAN	17.0	11.0	7.0	7.0	12.0	13.0	20.0	22.5	23.5	21.5	26.0	23.0

WTR YR 1977 MEAN 17.0 MAX 30.0 MIN .0

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	4180	3840	3120	2140	7700	10600	4780	7160	3570	5780	2970	5170				
2	1970	2720	2950	1830	6010	7980	5050	7610	3220	5690	1350	2020				
3	1680	1730	2900	2850	5000	6260	4670	7000	3770	6860	3890	4840				
4	2100	1240	5280	7680	4610	5710	4620	7550	3900	6820	3550	3350				
5	1700	647	2880	4490	4410	6500	4630	7940	3600	6230	2680	2210				
6	1030	181	9850	17600	4620	7040	3780	6650	3120	5500	3420	3160				
7	312	27	9870	19000	4690	7550	3020	5320	2750	4920	2890	2780				
8	694	47	8830	17700	4350	7140	3070	5010	2890	5220	1870	1580				
9	508	40	4040	8100	4140	6670	3360	5550	3350	5640	1650	993				
10	388	110	5490	11100	4300	7160	3720	5670	3210	5530	2400	1150				
11	282	49	7160	13000	3680	6060	4410	5830	2790	4830	1930	912				
12	366	44	5210	8810	4170	6620	4380	5260	1620	2690	4360	2020				
13	332	46	8060	13900	4610	7420	4370	5530	2530	4150	3250	1160				
14	181	20	7750	13000	3860	6460	4470	5610	2670	4380	2430	800				
15	298	47	6880	10800	3220	5670	5320	6390	3260	5400	1160	257				
16	129	18	7850	12100	3990	6910	4320	5230	790	1370	1020	212				
17	171	19	7160	11000	3830	6100	5130	6330	1940	3400	835	167				
18	345	21	5840	8800	4150	6680	4760	6300	2040	3570	745	109				
19	740	488	6950	10700	4300	7290	3250	4400	1430	2510	922	227				
20	165	42	6470	9840	3760	6970	2910	3790	1030	1750	1040	312				
21	344	52	6450	9650	4900	9940	2850	4330	2180	3620	775	195				
22	252	12	5300	7880	5000	10900	2690	4280	2920	5040	244	46				
23	268	21	5310	8160	5260	11500	2580	4150	2550	4790	186	25				
24	322	62	5000	8190	4630	10700	2530	4110	2060	3780	200	22				
25	384	89	7210	11500	5210	11300	2550	4300	2280	3970	270	42				
26	384	102	5770	8660	4600	9920	2250	4050	2600	4480	210	24				
27	356	99	9030	13600	3900	8610	3660	6750	2610	4880	322	89				
28	775	316	9080	12300	4820	7870	3710	6560	2670	5020	585	346				
29	910	568	9090	11800	5350	7580	3590	6150	---	---	845	979				
30	2080	1110	9600	12500	5120	7120	3200	5550	---	---	490	324				
31	2650	1770	---	---	4310	6460	3120	5260	---	---	372	195				
TOTAL	---	15577	---	308680	---	240690	---	175620	---	127820	---	35716				
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER					
1	443	173	83	4.5	100	2.7	680	14	379	4.1	34200	13600				
2	434	199	53	2.7	142	3.8	285	3.5	270	2.6	7100	1590				
3	527	164	46	2.5	132	3.6	160	1.5	173	2.2	49800	54000				
4	293	111	49	2.5	133	3.6	286	2.5	148	1.3	94400	255000				
5	135	35	143	7.7	122	3.3	128	.90	97	.84	55300	108000				
6	566	128	119	6.7	124	3.3	322	2.3	119	.93	44500	64700				
7	101	10	95	9.6	116	3.1	210	1.5	128	.83	10600	3630				
8	84	6.4	85	4.4	123	3.3	400	3.1	109	.74	10100	2540				
9	120	8.1	77	3.7	122	3.1	350	2.3	128	.73	9690	1700				
10	115	6.5	84	3.9	120	3.2	135	.80	89	.38	3290	178				
11	116	6.3	73	3.7	115	3.4	113	.40	78800	62900	4580	185				
12	96	6.5	60	2.9	113	3.1	106	.40	79800	108000	3590	145				
13	114	7.1	81	4.2	158	4.1	136	.59	56500	91700	1870	101				
14	82	5.1	50	2.4	165	3.6	126	.51	70400	226000	12600	1290				
15	78	4.8	7700	395	146	3.4	138	.48	60000	150000	8590	1300				
16	69	4.1	1350	62	185	4.0	121	.39	61500	110000	10900	2320				
17	62	4.0	720	31	168	3.9	64	.21	72000	245000	9900	1680				
18	56	3.6	413	18	161	3.3	86	.22	67000	208000	1620	258				
19	46	2.7	248	11	227	4.4	129	.33	100000	359000	1540	220				
20	52	3.1	280	13	184	3.7	26300	78	55000	159000	1270	93				
21	46	2.7	207	8.9	183	4.1	47000	15200	32400	81600	683	44				
22	51	3.2	160	6.5	169	3.7	79300	69800	58000	197000	307	8.3				
23	43	2.9	179	6.8	162	3.7	57900	84300	35000	68400	322	1.8				
24	66	4.1	315	11	168	3.9	46300	52900	15000	12600	505	3.0				
25	105	6.5	258	8.4	155	3.5	56400	28600	8500	2590	82	.44				
26	102	6.3	212	6.3	152	3.7	49000	16100	338	8.3	60	.28				
27	78	5.1	196	5.8	175	4.4	77300	106000	189	1.3	116	.12				
28	72	4.5	176	5.2	166	6.7	46400	18400	172	.93	93	.13				
29	83	5.2	138	4.1	177	7.2	19000	4360	206	1.2	191	.39				
30	112	6.0	110	3.3	160	6.9	11190	299	13800	8990	361	1.9				
31	---	---	103	2.8	---	---	579	219	41200	19500	---	---				
TOTAL	---	934.8	---	656.5	---	117.7	---	396291.93	---	2110306.38	---	512590.36				
TOTAL LOAD FOR YEAR: 3925000.67 TONS.																

RIO GRANDE BASIN

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM
(Surveillance network)

LOCATION.--Lat 34°15'23", long 106°53'18", Socorro County, Hydrologic Unit 13020203, in Sevillita Grant, on right bank 0.2 mi (0.3 km) below San Acacia diversion dam, 0.3 mi (0.5 km) east of San Acacia, 2 mi (3 km) downstream from Rio Salado, and at mile 1,472.6 (2,369.4 km).

DRAINAGE AREA.--26,770 mi² (69,330 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1936 to September 1958 (prior to construction of conveyance channel), October 1958 to September 1964 (flow in conveyance channel included), October 1964 to current year. Prior to October 1964 published as "08355000 Rio Grande at San Acacia" and records are not equivalent.

REVISED RECORDS.--WSP 1242: 1951. WSP 1732: 1958(M). WRD 1969: 1967.

GAGE.--Water-stage recorder. Datum of gage is 4,654.50 ft (1,418.692 m) above mean sea level. Aug. 19, 1965 to Aug. 15, 1967 at same site at datum 1.89 ft (0.576 m) higher. Prior to Mar. 19, 1953, at several sites 0.1 mi (0.2 km) upstream at different datums. Mar. 19, 1953 to Aug. 19, 1965, at site 0.4 mi (0.6 km) downstream at datum 3.60 ft (1.097 m) higher. Floodway is bypassed by Socorro main canal north and since Oct. 1958, by conveyance channel.

REMARKS.--Water-discharge records poor. Floodway is 1 of 3 channels (stations 08354500, 08354800) carrying flow in valley cross section. For combined monthly flow in acre-ft of floodway, conveyance channel, and Socorro main canal north see tabulation below. Normal plan is for floodway to carry flow when combined capacities of conveyance channel (about 2,000 ft³/s or 57 m³/s) and Socorro main canal north (about 200 ft³/s or 6 m³/s) is exceeded, during periods of silt sluicing, and when river silt load is excessive. Diversions above station for irrigation of about 760,000 acres (3,100 km²); this includes Socorro main canal north which bypasses station and irrigates about 8,000 acres (32 km²).

AVERAGE DISCHARGE.--22 years (water years 1937-58), 1,192 ft³/s (33.76 m³/s), 863,000 acre-ft/yr (1,060 hm³/yr), prior to construction of conveyance channel; does not include Socorro main canal north.

19 years (water years 1959-77), 899 ft³/s (25.46 m³/s), 651,300 acre-ft/yr (803 hm³/yr), combined flow of floodway, conveyance channel and Socorro main canal north.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft³/s (776 m³/s) Aug. 5, 1936, gage height, 10.75 ft (3.277 m), site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,700 ft³/s (275 m³/s) Aug. 14 gage height, 11.28 ft (3.438 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	7.3	.12	.20	.03	.47	74	18	7.3	3.2	4.0	101
2	21	1.5	.12	.20	.13	.35	62	18	7.3	1.6	3.8	8.4
3	8.1	5.3	.02	.20	.09	.05	60	18	7.4	2.6	3.2	518
4	6.6	3.8	.06	.10	.05	23	66	15	7.3	3.8	2.9	322
5	9.9	3.9	.15	.21	.05	40	60	10	7.4	3.8	2.3	55
6	8.2	5.2	.14	.20	.09	41	62	8.4	7.3	3.5	3.8	15
7	9.7	4.0	.15	.19	.10	33	47	9.2	7.1	3.8	6.5	32
8	6.6	2.9	.16	.15	.09	27	45	12	6.6	40	8.5	13
9	5.6	2.2	.21	.18	.02	31	44	14	6.8	2.9	25	16
10	5.0	1.8	.17	.12	.19	41	40	12	7.1	1.3	9.0	15
11	8.9	.75	.21	.12	.10	36	36	11	7.0	2.2	382	8.6
12	13	.39	.20	.25	.15	36	36	12	7.1	13	472	9.6
13	6.4	.85	.17	.25	.11	49	30	14	6.7	15	555	22
14	4.7	1.1	.24	.24	.09	45	28	13	6.1	1.0	3460	31
15	4.2	.74	.25	.21	.07	40	28	12	6.0	.00	1440	14
16	4.3	.57	.28	.22	.14	45	27	11	4.1	.00	127	16
17	8.8	.48	.16	.20	.10	48	28	13	3.7	.00	736	14
18	8.2	.46	.16	.21	.08	44	27	12	3.8	37	75	9.6
19	13	.49	.20	.21	.12	42	26	13	3.8	5.9	88	11
20	12	.45	.21	.20	.10	43	29	15	3.9	3.4	29	17
21	21	.37	.23	.30	.09	45	31	16	4.0	99	15	9.6
22	13	.40	.11	.41	.39	46	34	17	4.8	39	110	7.3
23	12	.38	.17	.40	.25	53	38	17	4.7	145	11	7.4
24	18	.41	.25	.20	.44	50	38	16	4.1	32	29	3.7
25	15	.33	.09	.23	.41	52	35	11	3.8	36	19	5.5
26	19	.43	.06	1.5	.34	49	35	10	3.7	44	15	5.4
27	20	.65	.10	1.0	.50	57	28	8.7	3.8	249	14	3.1
28	20	.39	.00	.20	.53	75	20	7.1	7.1	19	11	9.0
29	17	.26	.07	.18	---	61	19	8.7	9.5	17	14	5.4
30	17	.12	.01	.25	---	64	17	9.6	11	22	121	8.4
31	16	---	.04	.07	---	61	---	9.5	---	20	31	---
TOTAL	493.2	47.92	4.51	8.60	4.85	1277.87	1150	391.2	180.3	866.00	7823.0	1313.0
MEAN	15.9	1.60	.15	.28	.17	41.2	38.3	12.6	6.01	27.9	252	43.8
MAX	141	7.3	.28	1.5	.53	75	74	18	11	249	3460	518
MIN	4.2	.12	.00	.07	.02	.05	17	7.1	3.7	.00	2.3	3.1
AC-FT	978	95	8.9	17	9.6	2530	2280	776	358	1720	15520	2600
(†)	17940	33950	39260	37490	36030	26910	13840	6760	3910	14800	47270	16720
CAL YR 1976 TOTAL	71875.36			196		2640		MIN .00	AC-FT 142600	(†)	MEAN 751	AC-FT 545500
WTR YR 1977 TOTAL	13560.45			37.2		3460		MIN .00	AC-FT 26900	(†)	MEAN 407	AC-FT 294900

(†) COMBINED FLOW, IN ACRE-FT AND MEAN IN FT³/S, OF FLOODWAY, CONVEYANCE CHANNEL, AND SOCORRO MAIN CANAL NORTH.

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM --- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.---Water years 1937-56, 1959 to current year.

PERIOD OF DAILY RECORD.---

SPECIFIC CONDUCTANCE: July to December 1937, March 1939 to September 1956, October 1964 to current year.

WATER TEMPERATURES: October 1947 to August 1956, January 1959 to current year.

SUSPENDED SEDIMENT DISCHARGE: July 1946 to June 1956, January 1959 to current year.

REMARKS.---Additional sediment total discharge determinations were made bi-weekly when needed. When there is insufficient flow to sample 08354800 Rio Grande Conveyance Channel at San Acacia NM or 08354900 Rio Grande Floodway at San Acacia NM, samples are taken from 08354500 Socorro Main Canal North at San Acacia, NM.

EXTREMES FOR PERIOD OF DAILY RECORD.---

SPECIFIC CONDUCTANCE (1937, 1939-56, 1964-77): 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, 1964-77), 0.0°C on many days during winter months of most years.

SEDIMENT CONCENTRATIONS: Maximum daily, 223,000 mg/L Aug. 11 1946; minimum daily, no flow on many days of most years.

SEDIMENT LOADS: Maximum daily, 1,760,000 tons (1,600,000 tonnes) Aug. 12, 1955; minimum daily, 0 tons (0 tonnes) on many days of most years.

EXTREMES FOR CURRENT YEAR.---

SPECIFIC CONDUCTANCE: Maximum daily, 2,540 micromhos July 22; minimum daily, 575 micromhos Mar. 2.

WATER TEMPERATURES: Maximum, 30.0°C June 16, 18, 19, July 30, Aug. 1; minimum, 0.0°C Nov. 27.

SEDIMENT CONCENTRATIONS: Maximum daily, 86,400 mg/L July 27; minimum daily, no flow Dec. 28, July 15-17.

SEDIMENT LOADS: Maximum daily, 581,000 tons (527,000 tonnes) Aug. 14; minimum daily, 0 tons (0 tonnes) on several days in December, January, February, and July.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE DI- MENT (MG/L) (80154)	SUS- PENDE DI- MENT (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)
OCT								
01...	1655	36	18.0	1450	141	58	73	94
JAN								
26...	1625	3.5	10.0	338	3.2	58	73	91
MAR								
24...	1744	47	16.0	194	25	41	45	49
MAY								
15...	1830	11	20.0	11400	339	78	95	100
JUN								
23...	1100	4.1	20.5	79	.8	--	--	--
JUL								
01...	1520	.90	24.0	1150	2.8	59	74	97
08...	1855	8.6	16.0	30000	697	--	61	96
19...	1900	4.0	15.0	52500	567	73	84	98
23...	1820	570	26.0	78400	121000	66	77	96
AUG								
12...	0930	60	19.0	94300	15300	52	57	84
14...	1700	8190	24.0	65300	440000	56	67	84
17...	1000	637	25.0	68300	117000	48	61	78
SEP								
03...	1320	448	25.0	83700	101000	44	59	80
08...	1830	10	25.0	8580	232	65	70	79
28...	1730	21	25.0	33600	1910	60	70	90

RIO GRANDE BASIN

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70345)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70332)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70333)
OCT							
01...	100	--	--	--	--	--	--
JAN							
26...	100	--	--	--	--	--	--
MAR							
24...	--	--	--	--	58	86	100
MAY							
15...	--	--	--	--	--	--	--
JUN							
23...	--	--	--	--	97	--	--
JUL							
01...	100	--	--	--	--	--	--
08...	100	--	--	--	--	--	--
19...	100	--	--	--	--	--	--
23...	100	--	--	--	--	--	--
AUG							
12...	99	100	--	--	--	--	--
14...	94	98	99	100	--	--	--
17...	97	100	--	--	--	--	--
SEP							
03...	98	100	--	--	--	--	--
08...	88	98	100	--	--	--	--
28...	97	100	--	--	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	603	707	752	748	707	730	642	884	876	860	823	758
2	579	758	741	732	700	575	609	880	860	850	783	772
3	611	708	757	755	724	734	645	927	869	855	873	903
4	652	685	747	755	714	616	620	934	897	853	---	1140
5	682	648	761	752	746	618	660	948	922	853	862	1320
6	696	626	748	748	740	611	651	923	880	855	836	950
7	729	612	754	669	743	579	665	914	897	833	855	797
8	673	608	728	693	740	603	720	917	912	1370	1410	875
9	682	622	691	710	744	614	745	921	890	894	1220	748
10	689	615	701	713	737	623	832	972	907	1700	1160	761
11	686	674	694	719	720	627	807	862	878	---	1080	851
12	685	686	686	715	734	620	782	907	872	---	937	768
13	715	674	692	717	746	612	796	845	906	---	1040	756
14	695	674	695	693	771	628	761	906	900	---	1170	849
15	704	695	690	698	762	640	797	1190	899	---	1180	776
16	687	691	697	706	757	636	792	860	920	---	1360	846
17	705	694	684	720	776	648	788	805	960	---	1230	866
18	676	686	704	686	731	655	807	865	937	---	1010	792
19	691	735	688	685	726	651	825	802	900	1790	1580	745
20	650	725	683	659	751	609	749	809	865	1900	969	742
21	717	761	675	724	731	641	789	758	885	1240	747	746
22	678	758	693	717	800	628	825	766	868	2540	1060	754
23	681	755	678	726	770	663	832	764	890	1900	917	769
24	668	751	684	721	808	649	834	793	859	1830	759	947
25	683	765	684	749	800	675	843	750	815	1400	771	776
26	684	760	688	605	759	656	772	794	803	1150	792	776
27	684	750	688	695	720	661	842	785	855	1400	808	772
28	642	736	670	719	724	631	838	823	823	1650	745	1250
29	647	731	726	730	---	597	877	867	810	1080	748	838
30	706	716	741	712	---	582	914	872	855	877	753	783
31	711	---	745	730	---	625	---	885	---	830	780	---
MEAN	677	700	709	713	746	633	769	869	880	1280	975	848
WTR YR 1977	MEAN	807	MAX	2540	MIN	575						

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- CONTINUED

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	16.0	3.0	8.0	9.0	10.0	14.0	23.0	27.0	24.0	30.0	23.0
2	21.0	15.0	3.5	11.0	7.0	9.0	14.0	21.0	26.0	23.0	29.0	23.0
3	21.0	15.0	5.0	9.0	10.5	8.0	11.0	18.0	24.0	21.0	28.0	25.0
4	22.0	16.0	1.0	7.0	11.0	10.0	15.0	23.0	25.0	16.0	---	25.0
5	19.0	15.0	5.0	5.0	10.0	8.0	19.0	24.0	26.0	18.0	26.0	23.0
6	21.0	16.0	6.0	6.0	12.0	12.0	20.0	24.5	25.0	26.0	27.0	25.0
7	17.0	15.0	6.5	6.5	12.5	15.0	19.0	23.0	27.0	23.0	25.0	27.0
8	17.0	15.0	8.0	4.0	13.0	15.0	22.0	22.0	25.0	16.0	25.0	25.0
9	19.0	14.0	6.5	3.0	11.0	16.0	20.0	24.0	26.0	16.0	26.0	27.0
10	18.0	14.0	6.0	2.0	8.0	10.5	19.0	25.0	26.5	17.0	25.0	18.0
11	20.0	13.0	8.0	3.0	12.0	10.0	17.0	23.0	28.0	---	23.0	22.0
12	20.0	5.0	7.0	1.0	13.0	12.0	21.0	20.0	26.0	---	25.0	23.0
13	18.0	7.0	8.0	4.0	13.0	14.0	20.0	21.0	27.0	---	20.0	26.0
14	17.0	9.0	8.0	5.0	13.0	13.0	18.0	20.0	27.0	---	24.0	25.0
15	19.0	10.0	8.5	6.0	12.0	15.0	19.0	20.0	28.0	---	26.0	25.0
16	19.0	9.0	8.0	6.5	14.5	12.0	22.0	23.0	30.0	---	23.0	23.0
17	17.0	10.0	8.0	7.0	15.0	12.0	23.0	23.0	29.0	---	25.0	17.0
18	17.0	12.0	8.5	8.0	16.0	15.0	23.0	23.0	30.0	---	28.0	22.0
19	17.0	13.0	9.0	8.5	14.0	15.0	18.0	22.0	30.0	15.0	28.0	25.0
20	16.0	12.0	9.0	8.0	15.0	15.0	15.0	24.0	16.0	15.0	25.0	24.0
21	16.0	11.5	7.0	8.0	14.0	16.0	21.0	22.0	12.5	---	26.0	24.0
22	16.0	12.0	7.5	9.0	10.0	17.0	23.0	23.0	14.0	24.0	27.0	20.0
23	16.0	11.0	6.0	11.0	11.0	17.0	21.0	23.0	16.0	26.0	26.0	15.0
24	17.0	12.0	7.0	12.0	12.0	17.0	20.0	22.0	16.0	27.0	26.0	14.0
25	17.0	11.0	7.0	10.0	8.0	15.0	23.0	21.0	18.0	27.0	26.0	24.0
26	16.0	12.0	6.0	10.0	12.0	13.0	26.0	22.0	15.0	28.0	27.0	24.0
27	7.0	.0	8.0	9.0	10.5	10.0	22.5	23.0	24.0	26.0	27.0	22.0
28	8.0	1.0	7.0	10.0	11.0	12.0	23.0	23.5	23.0	27.0	26.0	25.0
29	11.0	1.0	7.0	7.0	---	12.0	25.0	24.0	23.0	27.0	26.0	28.0
30	15.0	1.5	9.0	10.0	---	16.0	24.0	24.0	22.0	30.0	24.0	26.0
31	15.0	---	9.0	10.0	---	17.0	---	24.0	---	29.0	25.0	---
MEAN	17.0	11.0	7.0	7.0	12.0	13.0	20.0	22.5	23.5	23.0	26.0	23.0
WTR YR 1977	MEAN	17.0		MAX	30.0	MIN	.0					

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)	
	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	
OCTOBER												
1	2510	1080	391	7.7	37	.01	16	.01	18	.00	256	.32
2	3340	189	493	2.0	35	.01	13	.01	36	.01	2610	2.5
3	1300	28	644	9.2	29	.00	24	.01	39	.01	530	.07
4	343	6.1	328	3.4	22	.00	17	.00	888	.12	930	64
5	279	7.5	534	5.6	29	.01	20	.01	24	.00	521	56
6	188	4.2	720	10	81	.03	13	.01	20	.00	372	41
7	269	6.4	670	7.2	29	.01	18	.01	22	.01	320	29
8	161	2.9	584	4.6	26	.01	29	.01	19	.00	287	21
9	129	2.0	491	2.9	39	.02	32	.02	35	.00	279	23
10	145	2.0	396	1.9	46	.02	32	.01	30	.02	320	35
11	142	4.7	242	.49	41	.02	30	.01	21	.01	334	32
12	150	5.6	107	.11	28	.02	57	.04	18	.01	375	36
13	128	2.2	122	.28	30	.01	25	.02	20	.01	618	82
14	118	1.5	111	.33	24	.02	31	.02	37	.01	348	42
15	141	1.6	48	.10	25	.02	22	.01	23	.00	221	24
16	121	1.4	38	.06	28	.02	23	.01	52	.02	214	26
17	155	4.6	37	.05	10	.00	25	.01	128	.03	271	35
18	197	4.4	26	.03	21	.01	20	.01	163	.04	177	21
19	192	6.7	21	.03	29	.02	21	.01	110	.04	170	19
20	193	6.3	27	.03	24	.01	28	.02	87	.02	163	19
21	360	20	25	.02	31	.02	24	.02	77	.02	163	20
22	195	6.8	36	.04	28	.01	20	.02	206	.22	156	19
23	175	5.7	25	.03	23	.01	19	.02	209	.14	138	20
24	194	9.0	20	.02	21	.01	22	.01	199	.24	193	26
25	242	9.8	43	.04	23	.01	22	.01	200	.22	262	37
26	226	11	71	.08	23	.00	175	.71	93	.09	210	28
27	215	12	20	.04	28	.01	144	.39	49	.07	193	30
28	283	15	17	.02	0	.00	26	.01	120	.17	246	50
29	313	14	25	.02	91	.02	92	.04	---	---	303	50
30	365	17	25	.01	48	.00	47	.03	---	---	233	40
31	392	17	---	---	20	.00	16	.00	---	---	190	31
TOTAL	---	1504.4	---	56.33	---	0.36	---	1.52	---	1.53	---	958.89
APRIL												
1	524	105	70	3.4	137	2.7	600	5.2	1230	13	35300	12700
2	270	45	61	3.0	160	3.2	423	1.8	540	5.5	5000	113
3	242	39	59	2.9	240	4.8	233	1.6	454	3.9	56900	119000
4	163	29	68	2.8	216	4.3	209	2.1	478	3.7	82300	143000
5	102	17	127	3.4	192	3.8	215	2.2	470	2.9	48000	7130
6	115	19	117	2.7	188	3.7	248	2.3	233	2.5	25800	1040
7	107	14	98	2.4	177	3.4	229	2.3	124	2.2	4520	391
8	114	14	77	2.5	187	3.3	7400	5620	125	2.9	8100	284
9	130	15	86	3.3	171	3.1	4200	33	360	29	4090	177
10	186	20	100	3.2	204	3.9	5900	21	165	4.0	2410	98
11	166	16	93	2.8	155	2.9	6500	39	79700	123000	3390	79
12	129	13	81	2.6	147	2.8	5850	205	72200	94700	2720	71
13	115	9.3	97	3.7	231	4.2	3700	150	83100	75700	3000	178
14	84	6.4	53	1.9	243	4.0	1700	4.6	70700	581000	15900	1330
15	84	6.4	6000	194	185	3.0	0	.0	65100	318000	9800	370
16	83	6.1	1110	33	190	2.1	0	.0	62500	21400	11200	484
17	82	6.2	471	17	163	1.6	0	.0	74900	177000	10500	397
18	83	6.1	321	10	131	1.3	74100	8810	62600	17800	6100	158
19	77	5.4	245	8.6	148	1.5	56500	900	86300	15600	1420	42
20	73	5.7	196	7.9	121	1.3	48500	445	60400	5060	2300	106
21	66	5.5	167	7.2	120	1.3	45600	29900	22200	899	1400	36
22	71	6.5	242	11	113	1.5	70900	9820	79000	25600	760	15
23	66	6.8	275	13	107	1.4	85000	33300	20000	594	700	14
24	86	8.8	375	16	102	1.1	76000	6570	19200	1470	345	3.4
25	103	9.7	322	9.6	128	1.3	70000	6800	7200	369	550	8.2
26	79	7.5	264	7.1	130	1.3	67000	7960	3680	149	535	7.8
27	64	4.8	254	6.0	141	1.4	86400	100000	2580	91	435	3.6
28	79	4.3	192	3.7	138	2.6	41000	2100	1400	42	11900	522
29	67	3.4	199	4.7	161	4.1	12700	583	700	26	3430	50
30	74	3.4	169	4.4	191	5.7	8000	475	16500	37500	1910	43
31	---	---	200	5.1	---	---	13900	751	33400	3770	---	---
TOTAL	---	458.3	---	398.9	---	82.6	---	214504.1	---	1499839.6	---	287851.0
TOTAL LOAD FOR YEAR: 2005657.53 TONS.												

08355300 ARROYO DE LA MATANZA AT SOCORRO, NM

LOCATION.--Lat 34°01'51", long 106°54'04", Socorro County, Hydrologic Unit 13020203, in Town of Socorro Grant, on left abutment of former highway bridge, and 1.9 mi (3.1 km) south of Socorro.

DRAINAGE AREA.--46.0 mi² (119 km²).

PERIOD OF RECORD.--January 1969 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 4,760 ft (1,451 m), from topographic map.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--8 years, 0.434 ft³/s (0.012 m³/s), 314 acre-ft/yr (387,200 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,580 ft³/s (44.7 m³/s) July 28, 1970, gage height, 6.20 ft (1.890 m), from rating curve extended above 60 ft³/s (1.70 m³/s) on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 169 ft³/s (4.79 m³/s) at 1530 hours Aug. 11, gage height, 4.24 ft (1.292 m), no peak above base of 175 ft³/s (4.96 m³/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

July 21	0.06	August 17	0.44	September 11	0.1
August 11	7.1	August 18	0.48	September 28	1.6
August 12	0.13	August 22	0.52		
August 14	0.68	August 24	0.08		

Month	cfs-days	Maximum	Minimum	Mean	Runoff in Acre-feet
July	0.06	0.06	0	0.002	0.1
August	9.43	7.1	0	0.30	19
September	4.20	2.6	0	0.14	8.3
CAL YR 1976	93.61	28	0	0.26	186
WTR YR 1977	13.69	7.1	0	0.038	27

NOTE.--During the 1977 Water Year flow occurred only on the days listed above.

RIO GRANDE BASIN

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM
(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 33°41'07", long 106°59'40", Socorro County, Hydrologic Unit 13020203, in Pedro Armendaris Grant No. 34, on right bank 0.4 mi (0.6 km) northwest of Atchison, Topeka and Santa Fe Railway Co. bridge over floodway channel, 1.0 mi (1.6 km) southwest of former site of San Marcial, 3.5 mi (5.6 km) downstream from railroad bridge near Tiffany siding, and 51 mi (82 km) downstream from heading at San Acacia.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to September 1959, October 1969 to current year. Prior to October 1964 monthly discharge only published with record for Rio Grande at San Marcial (station 08358500).

GAGE.--Water-stage recorder. Datum of gage is 4,454.00 ft (1,357.579 m) above mean sea level (levels by Bureau of Reclamation). Prior to Apr. 29, 1958, at datum 4.19 ft (1.277 m) higher.

REMARKS.--No flow during the water year. Original design and plan was for conveyance channel to carry all flows up to about 2,000 ft³/s (57 m³/s). Conveyance channel is 1 of 2 channels (station 08358400) carrying flow in valley cross section. For combined monthly flow in acre-ft of this channel and floodway see tabulation below daily table for station 08358400.

EXTREMES FOR PERIOD OF RECORD (SINCE 1954).--Maximum daily discharge, 2,200 ft³/s (62.3 m³/s) May 14, 1966; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CAL YR 1976	TOTAL	211.55	MEAN	.58	MAX	16	MIN	.00	AC-FT	420		
WTR YR 1977	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC-FT	.00		

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.

REMARKS.--No flow during 1977 water year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,860 micromhos Oct. 25, 1956; minimum daily, 353 micromhos Jan. 8, 1963.

WATER TEMPERATURES: Maximum, 35.0°C on several days during 1955, 1963, and 1971; 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, not determined; minimum daily, not determined.

WATER TEMPERATURES: Maximum, not determined; minimum, not determined.

SEDIMENT CONCENTRATIONS: Maximum daily, not determined; minimum daily, not determined.

SEDIMENT LOADS: Maximum daily, not determined; minimum daily, not determined.

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM

(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 33°40'50", long 106°59'30", Socorro County, Hydrologic Unit 13020203, in Pedro Armendaris Grant No. 33, on pier of the Atchison, Topeka, and Santa Fe Railway Co. bridge, 1.1 mi (1.8 km) downstream from former site of San Marcial, 18.5 mi (29.8 km) southwest of San Antonio, and at mile 1,425.2 (2,293.1 km).

DRAINAGE AREA.--27,700 mi² (71,740 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year. Records collected at this site January 1895 to September 1964 represented total flow of the river and were published as Rio Grande at San Marcial (station 08358500). Records of daily discharge for floodway only April 1950 to September 1964 are available in files of district office.

GAGE.--Water-stage recorder. Datum of gage is 4,455.19 ft (1,357.942 m) above mean sea level.

REMARKS.--Water-discharge records fair. Floodway is 1 of 2 channels (station 08358300) carrying flow in valley cross section. Prior to 1950 all flow was in floodway channel. Normal plan is for floodway to carry flow when capacity of conveyance channel (about 2,000 ft³/s or 57 m³/s) is exceeded. Combined monthly discharge in acre-ft is given at end of each year table. Diversion for irrigation of about 775,000 acres (3,100 km²) above station (includes about 13,800 acre-ft or 17.0 hm³ diverted from conveyance channel, as based on weekly measurements, data furnished by Bureau of Reclamation).

AVERAGE DISCHARGE.--13 years (water years 1965-77), 278 ft³/s (7.873 m³/s), 201,400 acre-ft/yr (248 hm³/yr).

Total flow of river.--82 years (water years 1895-77), 1,234 ft³/s (34.95 m³/s), 894,000 acre-ft/yr (1,102 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, since January 1895 about 50,000 ft³/s (1,420 m³/s) Oct. 11, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,230 ft³/s (91.5 m³/s) Aug. 15, gage height, 11.14 ft (3.400 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	308	346	460	532	630	645	361	80	11	.00	142	165
2	490	308	452	519	610	615	353	72	8.5	.00	51	193
3	473	293	439	532	650	565	338	44	5.1	.00	8.6	248
4	346	422	439	590	655	490	319	39	3.0	.00	3.0	939
5	260	473	490	600	635	464	323	42	2.0	.00	2.0	1050
6	204	469	527	620	615	481	263	39	1.0	.00	1.0	634
7	147	511	560	620	670	473	293	25	1.9	.00	.00	244
8	131	600	580	615	660	477	263	28	.00	.00	.00	153
9	158	625	585	610	635	439	201	31	.00	.00	.00	109
10	166	635	575	595	635	418	182	34	.00	.00	.00	68
11	204	635	590	555	660	406	190	30	.00	.00	123	32
12	163	615	595	515	630	403	126	23	.00	.00	429	108
13	179	635	570	493	610	387	95	30	.00	.00	596	111
14	158	625	555	493	590	376	89	42	.00	.00	1330	121
15	150	595	565	443	585	349	93	58	.00	.00	2520	86
16	163	570	605	431	580	323	113	60	.00	.00	2290	88
17	176	555	615	427	580	319	126	72	.00	.00	1410	100
18	155	565	630	443	600	297	136	81	.00	.00	2090	93
19	150	565	640	473	620	273	136	83	.00	.00	1490	98
20	168	565	705	494	635	257	136	89	.00	.00	1440	103
21	138	555	765	498	620	254	136	93	.00	.00	1240	75
22	150	527	825	536	625	257	160	91	.00	.00	1190	56
23	182	481	835	580	665	220	173	80	.00	270	1040	50
24	187	523	825	585	640	213	166	92	.00	627	563	41
25	213	540	825	600	620	223	158	81	.00	369	304	23
26	210	540	795	620	595	241	155	77	.00	261	208	29
27	213	530	815	640	645	260	140	70	.00	481	140	19
28	260	510	685	665	635	330	82	53	.00	381	105	13
29	330	500	555	625	---	469	91	35	.00	211	86	29
30	380	480	532	620	---	418	84	28	.00	167	61	65
31	311	---	540	635	---	387	---	18	---	141	128	---
TOTAL	6923	15793	19174	17204	17530	11729	5481	1720	32.50	2908.00	18990.60	5143
MEAN	223	526	619	555	626	378	183	55.5	1.08	93.8	613	171
MAX	490	635	835	665	670	645	361	93	11	627	2520	1050
MIN	131	293	439	427	580	213	82	18	.00	.00	.00	13
AC-FT	13730	31330	38030	34120	34770	23260	10870	3410	64	5770	37670	10200
(†)	13730	31330	38030	34120	34770	23260	10870	3410	64	5770	37670	10200

CAL YR 1976 TOTAL 230868.00 MEAN 631 MAX 2730 MIN 64 AC-FT 457900 (†) MEAN 631 AC-FT 458300
WTR YR 1977 TOTAL 122628.10 MEAN 336 MAX 2520 MIN .00 AC-FT 243200 (†) MEAN 336 AC-FT 243200

(†) COMBINED FLOW, IN ACRE-FT AND MEAN, IN FT³/S, OF FLOODWAY AND CONVEYANCE CHANNEL.

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1905-07, 1946 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1905 to April 1907, July 1946 to current year.

WATER TEMPERATURES: January 1949 to current year.

SUSPENDED SEDIMENT 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. No flow Oct. 3 to Nov. 2, Nov. 8 to Dec. 17. 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, 293 micromhos June 20, 1967.

WATER TEMPERATURES: Maximum, 36.0°C Aug. 11, 1951; minimum, 0.0°C on many days of most years.

SEDIMENT CONCENTRATIONS: Maximum daily, 135,000 mg/L July 23, 1977; minimum daily, no flow on many days each year.

SEDIMENT LOADS: Maximum daily, 966,000 tons (876,000 tonnes) Oct. 22, 1957; minimum daily, 0 tons (0 tonnes) many days each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,690 micromhos July 23; minimum daily, 500 micromhos Oct. 12.

WATER TEMPERATURES: Maximum, 30.0°C June 3; minimum, 0.0°C on Nov. 27-30, Dec. 6.

SEDIMENT CONCENTRATIONS: Maximum daily, 135,000 mg/L July 23; minimum daily, no flow on many days.

SEDIMENT LOADS: Maximum daily, 444,000 tons (403,000 tonnes) Aug. 15; minimum daily, 0 tons (0 tonnes) on many days.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	AIR TEMPERATURE (DEG C) (00020)	TEMPERATURE (DEG C) (00010)	TURBIDITY (JTU) (00070)	DISSOLVED OXYGEN (MG/L) (00300)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARDNESS (CA, MG/L) (00900)
OCT										
03...	1700	456	662	--	--	21.0	550	--	--	--
11...	1500	204	891	--	--	19.5	110	--	--	--
12...	1410	163	500	7.8	32.5	15.0	90	9.2	33	270
13...	1030	180	902	8.3	--	14.0	--	--	--	--
17...	1400	176	934	--	--	18.0	65	--	--	--
24...	1340	187	893	--	--	15.5	70	--	--	--
30...	1225	380	843	--	--	8.5	150	--	--	--
NOV										
03...	1300	280	994	8.0	--	14.0	--	--	--	--
03...	1551	281	1000	8.0	18.5	14.0	270	9.2	47	270
06...	1025	481	838	--	--	13.0	420	--	--	--
09...	1330	614	743	7.7	--	12.5	--	--	--	--
14...	1330	625	778	--	--	4.0	340	--	--	--
20...	0830	565	756	--	--	9.0	320	--	--	--
26...	1200	540	773	--	--	9.5	320	--	--	--
DEC										
02...	1245	452	752	7.8	--	1.0	--	--	--	--
05...	1200	490	823	--	--	4.5	230	--	--	--
07...	1001	540	897	8.1	10.0	4.5	260	11.2	40	210
12...	1640	595	736	--	--	9.5	190	--	--	--
13...	1100	570	736	8.0	--	4.5	--	--	--	--
19...	1525	640	771	--	--	6.5	330	--	--	--
22...	1200	835	680	7.3	--	5.0	--	--	--	--
26...	1420	795	695	--	--	8.0	8	--	--	--
JAN										
03...	2025	532	753	--	--	3.0	140	--	--	--
09...	1230	610	734	--	--	2.5	160	--	--	--
16...	1420	431	801	--	--	5.5	110	--	--	--
17...	1000	439	782	8.0	--	4.0	--	--	--	--
23...	0845	580	735	--	--	7.0	160	--	--	--
26...	1515	620	710	8.2	13.5	8.0	190	10.9	23	200
30...	1130	620	--	--	--	5.0	150	--	--	--
31...	1320	650	708	7.7	--	7.0	--	--	--	--
FEB										
06...	1045	615	728	--	--	7.5	150	--	--	--
08...	1530	658	672	--	--	10.0	210	--	--	--
13...	1640	610	738	--	--	6.5	150	--	--	--
15...	0915	584	717	8.0	--	8.5	--	--	--	--
21...	1410	620	715	--	--	10.5	140	--	--	--
23...	1456	695	790	8.0	17.0	9.0	210	10.8	58	200
28...	1020	635	695	--	--	5.0	40	--	--	--
MAR										
01...	1430	650	672	8.0	--	10.0	--	--	--	--
07...	0935	620	695	--	--	8.0	280	--	--	--

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	TUR- BID- ITY (NTU) (00076)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)
MAR										
14...	0745	376	780	--	--	8.0	150	--	--	--
15...	1415	360	711	7.8	--	14.0	--	--	--	--
20...	1520	257	840	--	--	9.0	130	--	--	--
24...	1221	360	869	8.4	21.0	13.0	7	--	9.6	31
27...	1245	260	860	--	--	9.5	95	--	--	--
28...	0945	301	779	8.5	--	10.0	--	--	--	--
APR										
03...	1710	319	780	--	--	10.0	95	--	--	--
11...	0930	190	928	--	--	13.5	60	--	--	--
18...	1600	136	1070	8.2	--	13.5	--	--	--	--
19...	0730	348	1100	--	--	18.0	65	--	--	--
19...	1234	124	1120	8.4	19.5	19.5	100	--	8.1	14
24...	1145	372	1090	--	--	14.5	70	--	--	--
MAY										
01...	1130	80	1190	--	--	21.0	70	--	--	--
03...	1000	45	1160	8.3	--	16.0	--	--	--	--
10...	1700	34	--	--	--	18.0	6	--	--	--
15...	1015	58	--	--	--	19.0	45	--	--	--
15...	1830	--	--	--	--	19.5	--	620	--	--
17...	0930	75	1150	7.9	--	15.0	--	--	--	--
19...	1331	90	1110	8.2	23.5	21.5	140	--	8.5	19
22...	1015	91	--	--	--	17.5	40	--	--	--
28...	1030	53	--	--	--	19.0	35	--	--	--
JUN										
02...	1000	8.5	1330	8.2	--	21.0	--	14	--	--
05...	0945	2.0	--	--	--	19.0	6	--	--	--
JUL										
25...	1225	369	1750	--	--	27.0	45000	--	--	--
26...	1100	214	1520	7.2	--	24.0	63000	--	--	--
27...	1414	430	1600	7.8	32.0	26.0	47000	--	4.4	1700
AUG										
01...	0645	142	1160	--	--	22.0	17000	--	--	--
12...	0930	320	1020	6.8	--	21.0	--	--	--	--
15...	1800	3200	1000	7.0	--	24.0	--	--	--	--
16...	1700	2290	1090	--	--	23.0	31000	--	--	--
22...	1900	1190	1110	--	--	25.0	19000	--	--	--
23...	1331	924	790	7.7	33.5	26.0	28000	--	6.4	610
24...	1100	578	949	7.8	--	28.0	--	--	--	--
29...	1220	86	1160	--	--	26.5	380	--	--	--
SEP										
07...	1125	220	980	--	--	23.0	13000	--	--	--
08...	1045	136	1030	8.0	--	22.0	--	--	--	--
12...	1250	108	957	--	--	23.0	2100	--	--	--
20...	1245	103	962	--	--	23.0	850	--	--	--
21...	1729	70	1000	8.1	29.0	24.5	500	--	7.1	45
DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)
SEP										
26...	1320	29	1120	28.0	170	.01	.00	.15	.16	.23

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

DATE	HARD- NESS (CA+MG) (000900)	NON- CAR- BONATE HARD- NESS (MG/L) (000902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (000915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (000925)	DIS- SOLVED SODIUM (NA) (MG/L) (000930)	SODIUM AD- SORP- TION RATIO (000931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (000935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
MAR										
14...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
24...	240	55	74	14	90	2.5	6.1	226	0	180
27...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	300	100	90	18	130	3.3	7.0	240	0	230
24...	--	--	--	--	--	--	--	--	--	--
MAY										
01...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
19...	330	120	100	19	130	3.1	7.7	260	0	250
22...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JUN										
02...	330	130	95	22	160	3.8	8.3	240	0	260
05...	--	--	--	--	--	--	--	--	--	--
JUL										
25...	--	--	--	--	--	--	--	--	--	--
26...	480	210	140	31	170	3.4	6.0	320	0	530
27...	330	110	100	19	130	3.1	7.4	270	0	290
AUG										
01...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
23...	350	220	110	18	110	2.6	7.0	160	0	390
24...	280	120	88	15	94	2.4	5.8	200	0	270
29...	--	--	--	--	--	--	--	--	--	--
SEP										
07...	--	--	--	--	--	--	--	--	--	--
08...	290	150	90	17	100	2.5	5.9	180	0	300
12...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
21...	320	110	97	18	99	2.4	6.4	250	0	230

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)
OCT									
03...	--	--	--	--	--	.71	--	.10	1.8
11...	--	--	--	--	--	4.1	--	.08	1.2
12...	58	.6	30	605	604	.19	.19	.01	.59
13...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	.01	--	.01	.52
24...	--	--	--	--	--	.13	--	.00	.58
30...	--	--	--	--	--	.01	--	.00	1.1
NOV									
03...	--	--	--	--	--	--	--	--	--
03...	70	.6	26	659	654	.33	.33	.00	.80
06...	--	--	--	--	--	.88	--	.00	1.6
09...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	.17	--	.00	1.5
20...	--	--	--	--	--	.90	--	.15	1.8
26...	--	--	--	--	--	.96	--	.22	1.2
DEC									
02...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	.75	--	.31	1.5
07...	48	.4	28	479	471	.76	.76	.22	.68
12...	--	--	--	--	--	.85	--	.13	.55
13...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	.63	--	.10	.80
22...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	.10	--	.00	.39
JAN									
03...	--	--	--	--	--	.62	--	.09	1.0
09...	--	--	--	--	--	.95	--	.13	.87
16...	--	--	--	--	--	.71	--	.19	.61
17...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	.76	--	.14	.50
26...	43	.6	26	453	443	.89	.86	.04	1.1
30...	--	--	--	--	--	.76	--	.09	.11
31...	--	--	--	--	--	--	--	--	--
FEB									
06...	--	--	--	--	--	.64	--	.09	1.1
08...	--	--	--	--	--	.71	--	.09	.72
13...	--	--	--	--	--	.74	--	.11	.75
15...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	.62	--	.06	1.1
23...	43	.5	26	449	446	.77	.77	.00	.72
28...	--	--	--	--	--	.63	--	.02	.12
MAR									
01...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	.63	--	.07	1.0

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)
MAR									
14...	--	--	--	--	--	.50	--	.05	13
15...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	.51	--	.01	.67
24...	63	.7	25	578	567	.35	.35	.08	.40
27...	--	--	--	--	--	.15	--	.02	.59
28...	--	--	--	--	--	--	--	--	--
APR									
03...	--	--	--	--	--	.48	--	.05	.62
11...	--	--	--	--	--	.16	--	.01	1.1
18...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	.12	--	.02	.33
19...	87	.7	26	716	708	.12	.12	.01	.46
24...	--	--	--	--	--	.00	--	.01	.60
MAY									
01...	--	--	--	--	--	.09	--	.01	.32
03...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	.01	--	.02	.60
15...	--	--	--	--	--	.04	--	.00	.94
15...	--	--	--	--	--	.46	--	.01	1.3
17...	--	--	--	--	--	--	--	--	--
19...	99	.6	26	775	762	.21	.21	.04	.17
22...	--	--	--	--	--	.07	--	.01	.44
28...	--	--	--	--	--	.01	--	.02	.81
JUN									
02...	150	.6	31	851	845	--	--	--	--
05...	--	--	--	--	--	.01	--	.02	.51
JUL									
25...	--	--	--	--	--	2.0	--	.01	59
26...	61	.6	17	--	1110	--	--	--	--
27...	64	.8	19	833	768	1.0	1.1	.03	120
AUG									
01...	--	--	--	--	--	1.2	--	.00	17
12...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	1.7	--	.17	33
22...	--	--	--	--	--	1.1	--	.02	20
23...	46	.9	17	797	782	1.1	.95	.03	19
24...	24	.7	17	--	616	--	.63	--	--
29...	--	--	--	--	--	.20	--	.03	.97
SEP									
07...	--	--	--	--	--	1.1	--	.00	17
08...	32	.8	18	--	658	--	1.1	--	--
12...	--	--	--	--	--	.38	--	.01	2.8
20...	--	--	--	--	--	.35	--	.03	1.9
21...	61	.6	28	643	664	.18	.16	.16	.35

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRO- GEN (N) (00600)	TOTAL PHOS- PHORUS (P) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (00671)	DIS- SOLVED BORON (B) (01020)	DIS- SOLVED IRON (FE) (01046)	DIS- SOLVED MAN- GANESE (MN) (01056)	TOTAL ORGANIC CARBON (C) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (00681)	SUS- PENDED ORGANIC CARBON (C) (00689)
OCT									
03...	2.6	1.2	--	--	--	--	--	--	--
11...	5.4	.49	--	--	--	--	--	--	--
12...	.61	.35	.17	160	10	--	--	2.7	.7
13...	--	--	--	--	--	--	--	--	--
17...	.54	.28	--	--	--	--	--	--	--
24...	.71	.27	--	--	--	--	--	--	--
30...	1.1	.50	--	--	--	--	--	--	--
NOV									
03...	--	--	--	--	--	--	--	--	--
03...	1.1	.69	.14	190	20	--	--	3.3	.8
06...	2.5	5.6	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
14...	1.7	1.3	--	--	--	--	--	--	--
20...	2.8	.89	--	--	--	--	--	--	--
26...	2.4	1.1	--	--	--	--	--	--	--
DEC									
02...	--	--	--	--	--	--	--	--	--
05...	2.6	.88	--	--	--	--	--	--	--
07...	1.7	.97	.38	150	0	10	--	3.3	<4.0
12...	1.5	.94	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
19...	1.5	.04	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
26...	.49	.03	--	--	--	--	--	--	--
JAN									
03...	1.7	.79	--	--	--	--	--	--	--
09...	2.0	.83	--	--	--	--	--	--	--
16...	1.5	.72	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
23...	1.4	.90	--	--	--	--	--	--	--
26...	2.0	.90	.51	150	0	--	--	3.6	>4.0
30...	.96	.79	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
FEB									
06...	1.8	.75	--	--	--	--	--	--	--
08...	1.5	.78	--	--	--	--	--	--	--
13...	1.6	.66	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
21...	1.8	.75	--	--	--	--	--	--	--
23...	1.5	.47	.41	140	10	--	8.1	--	--
28...	.77	.45	--	--	--	--	--	--	--
MAR									
01...	--	--	--	--	--	--	--	--	--
07...	1.7	.95	--	--	--	--	--	--	--

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRO- GEN (N) (MG/L) (006600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO, PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDE D ORGANIC CARBON (C) (MG/L) (00689)
MAR									
14...	14	.60	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
20...	1.2	.60	--	--	--	--	--	--	--
24...	.83	.49	.25	170	0	0	5.2	2.6	<4.0
27...	.76	.45	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
APR									
03...	1.2	.49	--	--	--	--	--	--	--
11...	1.3	.36	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
19...	.47	.25	--	--	--	--	--	--	--
19...	.59	.15	.15	200	20	--	--	3.0	2.2
24...	.61	.14	--	--	--	--	--	--	--
MAY									
01...	.42	.15	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
10...	.63	.06	--	--	--	--	--	--	--
15...	.98	.16	--	--	--	--	--	--	--
15...	1.8	.95	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
19...	.42	.33	.12	200	20	--	--	2.4	1.2
22...	.52	.18	--	--	--	--	--	--	--
28...	.84	.16	--	--	--	--	--	--	--
JUN									
02...	--	--	--	--	--	--	--	--	--
05...	.54	.07	--	--	--	--	--	--	--
JUL									
25...	61	8.6	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
27...	120	23	.05	190	10	8	631	3.0	<33
AUG									
01...	18	5.2	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
16...	35	5.7	--	--	--	--	--	--	--
22...	21	8.4	--	--	--	--	--	--	--
23...	20	8.3	.07	200	20	--	--	3.5	>50
24...	--	5.3	.05	160	10	--	--	--	--
29...	1.2	.04	--	--	--	--	--	--	--
SEP									
07...	18	10	--	--	--	--	--	--	--
08...	--	.09	.04	200	20	--	--	--	--
12...	3.2	5.0	--	--	--	--	--	--	--
20...	2.3	4.5	--	--	--	--	--	--	--
21...	.69	.60	.10	180	10	10	8.8	2.7	--

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CH) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CH) (UG/L) (01030)
OCT								
12...	1410	--	--	160	--	--	--	--
NOV								
03...	1551	--	--	190	--	--	--	--
DEC								
07...	1001	20	8	150	<10	1	0	0
JAN								
26...	1515	--	--	150	--	--	--	--
FEB								
23...	1456	--	--	140	--	--	--	--
MAR								
24...	1221	9	5	170	<10	0	0	0
APR								
19...	1234	--	--	200	--	--	--	--
MAY								
19...	1331	--	--	200	--	--	--	--
JUN								
02...	1000	--	--	--	--	--	--	--
JUL								
27...	1414	470	1	190	30	3	320	0
AUG								
23...	1331	--	--	200	--	--	--	--
SEP								
21...	1729	3	7	180	10	1	20	0

DATE	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)
OCT									
12...	--	--	--	--	--	10	--	--	--
NOV									
03...	--	--	--	--	--	20	--	--	--
DEC									
07...	<50	0	30	1	18000	0	<100	3	330
JAN									
26...	--	--	--	--	--	0	--	--	--
FEB									
23...	--	--	--	--	--	10	--	--	--
MAR									
24...	<50	0	10	29	7300	0	100	2	360
APR									
19...	--	--	--	--	--	20	--	--	--
MAY									
19...	--	--	--	--	--	20	--	--	--
JUN									
02...	--	--	--	--	--	--	--	--	--
JUL									
27...	500	0	840	2	480000	10	1000	19	22000
AUG									
23...	--	--	--	--	--	20	--	--	--
SEP									
21...	<50	0	30	0	20000	10	<100	5	530

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL MOLYB- DENUM (MO) (UG/L) (01062)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT 12...	--	--	--	7	--	--	--	--
NOV 03...	--	--	--	8	--	--	--	--
DEC 07...	10	.3	.0	6	0	0	80	10
JAN 26...	--	--	--	5	--	--	--	--
FEB 23...	--	--	--	6	--	--	--	--
MAR 24...	0	.0	.0	7	1	0	50	0
APR 19...	--	--	--	5	--	--	--	--
MAY 19...	--	--	--	5	--	--	--	--
JUN 02...	--	--	--	13	--	--	--	--
JUL 27...	8	2.0	.0	0	1	1	2200	6
AUG 23...	--	--	--	0	--	--	--	--
SEP 21...	10	.0	.0	5	0	0	90	0

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NITRITE PLUS NITRATE IN BOT- TOM MA- TERIAL (MG/KG) (00633)	TOTAL PHOS- PHORUS IN BOT- TOM MA- TERIAL (MG/KG) (00668)	TOTAL ARSENIC IN BOT- TOM MA- TERIAL (UG/G) (01003)	TOTAL CADMIUM IN BOT- TOM MA- TERIAL (UG/G) (01028)	TOTAL CHRO- MIUM IN BOTTOM MA- TERIAL (UG/G) (01029)	TOTAL COBALT IN BOT- TOM MA- TERIAL (UG/G) (01038)	TOTAL COPPER IN BOT- TOM MA- TERIAL (UG/G) (01043)
OCT 12...	1410	37	140	2	<1	1	5	1
DATE		TOTAL IRON IN BOT- TOM MA- TERIAL (UG/G) (01170)	TOTAL LEAD IN BOT- TOM MA- TERIAL (UG/G) (01052)	TOTAL MANGA- NESE IN BOTTOM MA- TERIAL (UG/G) (01053)	TOTAL MERCURY IN BOT- TOM MA- TERIAL (UG/G) (01221)	TOTAL SELE- NIUM IN BOTTOM MA- TERIAL (UG/G) (01148)	TOTAL ZINC IN BOT- TOM MA- TERIAL (UG/G) (01093)	ORGANIC CARBON IN BOT- TOM MA- TERIAL (G/KG) (00687)
OCT 12...		870	<10	90	.0	1	5	.3

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM 7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
OCT 12...	1410	360	250	--
NOV 03...	1551	7800	3200	--
DEC 07...	1001	180	1400	--
JAN 26...	1515	90	870	--
FEB 23...	1456	410	1700	--
MAR 24...	1221	47	--	100
APR 19...	1234	40	--	350
MAY 19...	1331	240	--	160
JUL 27...	1414	18000	--	34000
AUG 23...	1331	8000	--	16000
SEP 21...	1729	160	--	750

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	OCT 12,76 1410	NOV 3,76 1551	DEC 7,76 1001	JAN 26,77 1515	FEB 23,77 1456	MAR 24,77 1221				
TOTAL CELLS/ML	1400	280	210	940	2200	3900				
DIVERSITY: DIVISION	0.0	0.0	0.7	0.6	0.8	0.9				
..CLASS	0.0	0.0	0.7	0.6	0.8	1.3				
...ORDER	1.0	0.7	0.8	0.6	0.8	1.9				
...FAMILY	1.6	2.3	2.7	2.1	2.8	2.1				
....GENUS	1.6	2.3	2.7	2.5	3.2	2.1				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	--	-	--	-	--	-
....OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	--	-	--	-	59	1
....OOCYSTIS	--	-	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	3	1	--	-	--	-
....SCENEDESMACEAE										
....CRUCIGENIA	--	-	--	-	--	-	--	-	--	-
....SCENEDESMUS	--	-	--	-	--	-	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	--	-	14	1	1100#	27
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	650#	48	--	-	3	1	--	-	1800#	45
....MELOSIRA	--	-	56#	20	--	-	*	0	--	-
...PENNALES										
....ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	3	1	--	-	59	1
....COCONEIS	--	-	--	-	6	3	130	14	55	2
....RHOICOSPHEA	--	-	--	-	--	-	--	-	27	1
....CYMBELLACEAE										
....CYMBELLA	--	-	--	-	22	11	--	-	--	-
....EPITHEMIA	--	-	--	-	--	-	27	1	--	-
....RHOPALODIA	--	-	--	-	--	-	14	1	--	-
...DIATOMACEAE										
....DIATOMA	--	-	56#	20	11	5	130	14	270	13
....FRAGILARIACEAE										
....FRAGILARIA	--	-	--	-	--	-	--	-	220	10
....SYNEDRA	--	-	--	-	8	4	--	-	--	-
...GOMPHONEMACEAE										
....GOMPHONEMA	--	-	56#	20	--	-	--	-	--	-
...NAVICULACEAE										
....CALONEIS	--	-	*	0	--	-	--	-	41	2
....GYROSIGMA	--	-	--	-	--	-	--	-	--	-
....NAVICULA	160	12	56#	20	69#	33	270#	29	410#	19
....STAURONEIS	--	-	--	-	--	-	130	14	--	-
...NITZSCHACEAE										
....NANTZSCHIA	--	-	--	-	--	-	--	-	--	-
....NITZSCHIA	490#	36	56#	20	50#	24	--	-	250	11
....SURIPELLACEAE										
....CYMATOPLEURA	--	-	--	-	--	-	--	-	41	2
....SURIPELLA	55	4	*	0	6	3	130	14	300	14
CHRYSTOPHYCEAE										
...CHRYSONOMADALES										
...CHROMULINACEAE										
....CHRYSOCOCCUS	--	-	--	-	--	-	--	-	470	12

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	OCT 12,76 1410	NOV 3,76 1551	DEC 7,76 1001	JAN 26,77 1515	FEB 23,77 1456	MAR 24,77 1221
TOTAL CELLS/ML	1400	280	210	940	2200	3900
DIVERSITY: DIVISION	0.0	0.0	0.7	0.6	0.8	0.9
..CLASS	0.0	0.0	0.7	0.6	0.8	1.3
..ORDER	1.0	0.7	0.8	0.6	0.8	1.9
...FAMILY	1.6	2.3	2.7	2.1	2.8	2.1
....GENUS	1.6	2.3	2.7	2.5	3.2	2.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROCOCCALES												
....CHROCOCCACEAE												
.....ANACYSTIS	--	-	--	-	--	-	--	-	*	0	--	-
...HORMOGONALES												
....NOSTOCACEAE												
.....ANARAENA	--	-	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE												
....LYNGBYA	--	-	--	-	--	-	--	-	270	13	--	-
....OSCILLATORIA	--	-	--	-	28	13	--	-	250	11	--	-
EUGLENOPHYTA (EUGLENOIDS)												
..CRYPTOPHYCEAE												
...CRYPTOMONIDALES												
....CRYPTOMONODACEAE												
.....CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-	--	-
..EUGLENOPHYCEAE												
...EUGLENALES												
....EUGLENACEAE												
.....EUGLENA	--	-	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	130	14	--	-	--	-

DATE TIME	APR 19,77 1234	MAY 19,77 1331	JUL 27,77 1414	AUG 23,77 1331	SEP 21,77 1729
TOTAL CELLS/ML	1700	2900	1300	0	2700
DIVERSITY: DIVISION	0.9	1.3	0.0	0.0	0.9
..CLASS	0.9	1.3	0.0	0.0	0.9
..ORDER	1.6	2.1	0.0	0.0	1.4
...FAMILY	2.3	2.5	0.0	0.0	1.9
....GENUS	2.3	2.6	0.0	0.0	2.5

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE										
.....SCHROEDERIA	--	-	--	-	--	-	--	-	54	2
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	210	7	--	-	--	-	--	-
.....OOCYSTIS	--	-	--	-	--	-	--	-	180	6
...TETRAEDRON										
....SCENEDESMACEAE										
.....CRUCIGENIA	--	-	--	-	--	-	--	-	54	2
....SCENEDESMUS	79	5	--	-	--	-	--	-	240	9
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	APR 19,77 1234	MAY 19,77 1331	JUL 27,77 1414	AUG 23,77 1331	SEP 21,77 1729
TOTAL CELLS/ML	1700	2900	1300	0	2700
DIVERSITY: DIVISION	0.9	1.3	0.0	0.0	0.9
..CLASS	0.9	1.3	0.0	0.0	0.9
...ORDER	1.6	2.1	0.0	0.0	1.4
....FAMILY	2.3	2.5	0.0	0.0	1.9
.....GENUS	2.3	2.6	0.0	0.0	2.5
CHRYSTOPHYTA					
..BACILLARIOPHYCEAE					
...CENTRALES					
....COSCINOIDISCEAE					
.....CYCLOTELLA	410# 24	310 11	-- --	* 0	300 11
....MELOSIRA	-- --	-- --	-- --	-- --	82 3
..PENNALES					
...ACHNANTHACEAE					
....ACHNANTHES	-- --	-- --	-- --	-- --	-- --
....COCCONEIS	-- --	-- --	-- --	-- --	-- --
....RHOICOSPHEA	-- --	-- --	-- --	-- --	-- --
...CYMBELLACEAE					
....CYMBELLA	-- --	-- --	-- --	-- --	-- --
....EPITHEMIA	13 1	-- --	* 0	-- --	* 0
....RHOPALODIA	-- --	-- --	-- --	-- --	-- --
...DIATOMACEAE					
....DIATOMA	13 1	-- --	-- --	-- --	-- --
....FRAGILARIACEAE					
....FRAGILARIA	26 2	-- --	-- --	-- --	1400# 51
....SYNEDRA	-- --	-- --	-- --	-- --	270 10
...GOMPHONEMACEAE					
....GOMPHONEMA	-- --	-- --	-- --	-- --	-- --
...NAVICULACEAE					
....CALONEIS	-- --	-- --	1300#100	-- --	-- --
....GYROSIGMA	13 1	35 1	-- --	-- --	-- --
....NAVICULA	39 2	140 5	-- --	-- --	68 2
....STAURONEIS	13 1	-- --	-- --	-- --	-- --
...NITZSCHACEAE					
....HANTZSCHIA	-- --	17 1	-- --	-- --	-- --
....NITZSCHIA	810# 47	800# 28	-- --	-- --	-- --
...SURIPELLACEAE					
....CYMATOPLEURA	-- --	-- --	-- --	-- --	-- --
....SURIPELLA	79 5	140 5	-- --	-- --	-- --
..CHRYSTOPHYCEAE					
...CHRYSSOMONADALES					
....CHROMULINACEAE					
.....CHRYSSOCOCCUS	-- --	-- --	-- --	-- --	-- --
CYANOPHYTA (BLUE-GREEN ALGAE)					
..CYANOPHYCEAE					
...CHROCOCCOCALES					
....CHROCOCCOCEAE					
.....ANACYSTIS	-- --	570# 20	-- --	-- --	-- --
...HORMOGONALES					
....NOSTOCAEAE					
.....ANABAENA	200 11	-- --	-- --	-- --	-- --
...OSCILLATORIACEAE					
....LYNGBYA	-- --	-- --	-- --	-- --	-- --
.....OSCILLATORIA	-- --	660# 23	-- --	-- --	-- --
EUGLENOPHYTA (EUGLENOIDS)					
..CRYPTOPHYCEAE					
...CRYPTOMONIDALES					
....CRYPTOMONADACEAE					
.....CRYPTOMONAS	13 1	-- --	-- --	-- --	-- --
...EUGLENOPHYCEAE					
....EUGLENALES					
.....EUGLENACEAE					
.....EUGLENA	13 1	-- --	-- --	-- --	-- --
....TRACHELOMONAS	-- --	-- --	-- --	-- --	68 2

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

DATE	TIME	LENGTH OF EXPOSURE (DAYS)	CHLOR-A PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) (70955)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-B PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) (70956)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70958)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS) (70950)	SAMPLING METHOD
OCT 12...	1410	28	.037	--	.023	--	8324	Polyethylene strip
MAR 24...	1221	29	--	.002	--	.001	132000	"
MAY 19...	1331	30	--	.141	--	.047	3901	"
SEP 21...	1729	29	--	5.21	--	2.66	15.0	"

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)
OCT 13...	1030	180	14.0	558	271	21	26	36
NOV 03...	1300	280	14.0	935	707	--	--	--
03...	1551	281	14.0	1280	971	20	26	40
09...	1330	614	12.5	3220	5340	22	24	37
DEC 02...	1145	445	1.0	2010	2420	19	22	35
13...	1100	570	4.5	1880	2890	14	16	23
22...	1200	835	5.0	2530	5700	18	23	33
JAN 17...	1000	439	4.0	1070	1270	13	16	24
25...	1515	574	8.0	1860	2880	10	14	21
31...	1320	650	7.0	942	1650	28	31	40
FEB 15...	0915	584	8.5	1470	2320	4	7	13
23...	1456	695	9.0	1740	3270	12	15	22
MAR 01...	1430	650	10.0	1220	2140	15	20	26
15...	1415	360	14.0	848	824	26	32	44
24...	1221	360	13.0	818	795	17	22	31
28...	0945	301	10.0	733	596	16	19	25
APR 12...	1234	117	19.5	313	99	33	41	52
18...	1600	136	13.5	169	62	41	45	58
MAY 03...	1000	45	16.0	49	6.0	41	50	55
17...	0930	75	15.0	214	43	39	46	63
19...	1331	90	21.5	322	78	61	72	85
JUL 26...	1100	214	24.0	59900	34600	64	79	96
27...	1414	430	26.0	118000	137000	59	67	88
31...	0645	536	22.0	17900	25900	71	89	99
AUG 12...	0930	320	21.0	56900	49200	64	76	93
15...	1250	3200	25.0	64000	553000	54	65	82
18...	0645	2080	22.5	81600	458000	50	59	69
23...	1331	924	26.0	33600	83800	40	55	67
24...	1100	578	28.0	25300	39500	56	67	79
SEP 08...	1045	136	22.0	15500	5690	68	81	88

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

		SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. FALL DIAM. % FINER THAN (70343)	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. SIEVE DIAM. % FINER THAN (70331)	SUS. SED. SIEVE DIAM. % FINER THAN (70332)	SUS. SED. SIEVE DIAM. % FINER THAN (70333)	SUS. SED. SIEVE DIAM. % FINER THAN (70334)		
DATE		.062 MM (70342)	.125 MM (70343)	.250 MM (70344)	.500 MM (70345)	.062 MM (70331)	.125 MM (70332)	.250 MM (70333)	.500 MM (70334)		
OCT											
13...		64	83	100	--	--	--	--	--		
NOV											
03...		--	--	--	--	91	--	--	--		
03...		69	83	100	--	--	--	--	--		
09...		77	95	100	--	--	--	--	--		
DEC											
02...		82	98	100	--	--	--	--	--		
13...		50	72	98	100	--	--	--	--		
22...		72	92	100	--	--	--	--	--		
JAN											
17...		45	82	100	--	--	--	--	--		
25...		42	79	100	--	--	--	--	--		
31...		65	87	99	100	--	--	--	--		
FEB											
15...		38	76	100	--	--	--	--	--		
23...		40	71	99	100	--	--	--	--		
MAR											
01...		44	69	99	100	--	--	--	--		
15...		70	93	100	--	--	--	--	--		
24...		46	76	100	--	--	--	--	--		
28...		52	74	100	--	--	--	--	--		
APR											
12...		--	--	--	--	67	80	96	100		
18...		--	--	--	--	82	93	99	100		
MAY											
03...		--	--	--	--	66	84	97	100		
17...		--	--	--	--	74	86	99	100		
19...		--	--	--	--	92	97	100	--		
JUL											
26...		99	100	--	--	--	--	--	--		
27...		97	99	100	--	--	--	--	--		
31...		100	--	--	--	--	--	--	--		
AUG											
12...		100	--	--	--	--	--	--	--		
15...		99	100	--	--	--	--	--	--		
18...		95	99	100	--	--	--	--	--		
23...		91	99	100	--	--	--	--	--		
24...		96	99	100	--	--	--	--	--		
SEP											
08...		94	99	100	--	--	--	--	--		
DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)
SEP											
21...	1729	70	24.5	1040	197	48	63	75	89	96	100

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDI- MENT CHARGE (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)
OCT									
13...	1030	180	558	271	2	14	78	99	100
NOV									
03...	1551	281	1280	971	1	5	77	100	--
09...	1330	614	3220	5340	3	28	93	100	--
DEC									
02...	1145	445	2010	2420	3	24	97	100	--
13...	1100	570	1880	2890	1	9	76	99	100
22...	1200	835	2530	5700	1	7	66	99	100
JAN									
17...	1000	439	1070	1270	2	16	89	100	--
31...	1320	650	942	1650	1	4	39	99	100
FEB									
15...	0915	584	1470	2320	2	8	88	99	100
MAR									
01...	1430	650	1220	2140	1	10	95	100	--
15...	1415	360	848	824	1	9	77	100	--
28...	0945	301	733	596	1	5	87	100	--
APR									
18...	1600	136	169	62	4	11	50	94	100
MAY									
03...	1000	45	49	6.0	1	5	72	100	--
17...	0930	75	214	43	1	2	82	100	--
JUL									
26...	1100	214	59900	34600	8	28	93	100	--
AUG									
12...	0930	320	56900	49200	7	15	72	100	--
24...	1100	578	25300	39500	6	20	91	100	--
SEP									
08...	1045	136	15500	5690	5	31	93	100	--

TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT CHARGE (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	TOTAL SEDI- MENT DIS- CHARGE (T/DAY) (80156)	STREAM WIDTH (FT) (00004)	MEAN DEPTH (FT) (00064)	STREAM VELOC- ITY (FPS) (00055)
OCT									
13...	1030	180	14.0	558	271	357	90	1.1	1.9
NOV									
03...	1551	281	14.0	1280	971	1400	100	1.5	1.8
09...	1330	614	12.5	3220	5340	6240	110	1.8	3.1
DEC									
02...	1145	445	1.0	2010	2420	3050	106	1.5	2.9
13...	1100	570	4.5	1880	2890	3100	113	1.9	2.7
22...	1200	835	5.0	2530	5700	7260	100	2.3	3.7
JAN									
17...	1000	439	4.0	1070	1270	1900	100	1.4	3.2
25...	1515	574	8.0	1860	2880	4260	96	2.0	3.0
31...	1320	650	7.0	942	1650	2810	100	1.9	3.4
FEB									
15...	0915	584	8.5	1470	2320	4370	150	1.1	3.4
MAR									
01...	1430	650	10.0	1220	2140	2890	150	1.3	3.3
15...	1415	360	14.0	848	824	1240	92	1.5	2.6
28...	0945	301	10.0	733	596	1010	96	1.6	2.0
APR									
18...	1600	136	13.5	169	62	82	48	1.5	1.8
MAY									
03...	1000	45	16.0	49	6.0	12	27	1.2	1.4
17...	0930	75	15.0	214	43	69	63	.81	1.5
JUL									
26...	1100	214	24.0	59900	34600	34900	50	1.6	2.6
AUG									
12...	0930	320	21.0	56900	49200	49700	65	1.4	3.4
15...	1250	3200	25.0	64000	553000	559000	150	4.2	5.1
24...	1100	578	28.0	25300	39500	42100	100	1.5	3.8
SEP									
08...	1045	136	22.0	15500	5690	6290	46	1.0	3.0

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	754	906	801	726	745	664	789	1140	1360	---	1220	930
2	660	913	762	750	730	681	774	1180	1230	---	1060	1150
3	673	980	799	761	740	681	797	1120	1210	---	1100	1150
4	664	802	795	757	742	725	870	1140	1360	---	1180	1070
5	764	803	802	751	747	---	848	1150	1350	---	1290	1140
6	801	737	763	739	713	---	874	1310	1320	---	1260	1030
7	884	729	751	707	731	---	879	1340	1330	---	---	1050
8	912	703	762	729	726	---	846	1190	---	---	---	1030
9	909	705	697	746	695	752	922	1320	---	---	---	939
10	902	690	712	731	712	717	960	1340	---	---	---	931
11	880	694	740	756	724	778	990	1220	---	---	1450	928
12	884	709	728	781	727	775	1080	1260	---	---	1040	938
13	911	710	771	820	741	785	1060	1140	---	---	1470	949
14	873	707	718	806	741	815	1080	1150	---	---	1450	918
15	966	710	726	822	725	812	1110	1130	---	---	1220	1010
16	920	723	676	810	727	814	1100	1070	---	---	1200	---
17	972	720	730	799	729	838	1100	1080	---	---	1180	939
18	946	735	709	759	725	863	1120	1080	---	---	1670	933
19	934	709	725	766	690	868	1100	1120	---	---	1650	943
20	890	711	696	735	710	793	1100	1100	---	---	1060	955
21	905	663	697	713	750	842	1160	1080	---	---	996	969
22	884	745	664	709	722	881	1130	1030	---	---	1070	1020
23	880	766	662	719	713	861	1080	1170	---	2690	1100	1020
24	875	748	662	722	662	882	1060	1120	---	2220	959	1090
25	899	756	642	694	702	909	1100	1200	---	1900	993	1030
26	880	759	653	747	696	885	1090	1050	---	1620	975	1090
27	864	858	656	737	697	852	1090	1070	---	1750	986	1060
28	910	801	665	710	694	850	1070	1140	---	1600	983	1060
29	809	815	737	716	---	784	1150	1130	---	1420	1120	1060
30	814	817	755	701	---	779	1140	1150	---	1190	803	1050
31	918	---	747	717	---	782	---	---	---	1220	811	---
MEAN	862	761	723	746	720	803	1020	1160	1310	1730	1160	1010
WTR YR 1977	MEAN	928	MAX	2690	MIN	642						

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	14.0	4.0	3.5	7.5	7.0	12.5	24.0	20.0	---	29.0	23.0
2	19.0	14.5	1.0	5.0	6.0	5.0	10.5	19.0	20.0	---	24.0	26.0
3	21.0	14.0	5.5	3.0	7.0	8.0	10.5	17.0	30.0	---	24.0	24.5
4	16.0	13.0	7.0	4.0	7.0	10.0	10.5	19.0	24.0	---	23.0	26.0
5	20.0	13.0	4.5	4.5	7.0	8.5	10.0	24.0	22.5	---	26.0	25.0
6	21.0	12.0	.0	2.5	7.5	8.0	10.0	18.5	26.0	---	24.5	23.0
7	20.0	10.0	4.5	4.0	9.0	8.0	12.0	19.0	25.0	---	---	24.0
8	21.0	12.0	4.0	4.0	15.0	8.0	13.5	22.5	---	---	---	23.5
9	17.0	12.5	6.5	2.5	8.5	8.0	12.0	17.0	---	---	---	22.5
10	18.5	12.0	4.0	3.0	7.0	8.0	13.5	17.0	---	---	---	23.0
11	19.5	12.0	7.5	2.0	7.5	8.5	13.0	19.5	---	---	23.0	23.5
12	19.0	8.0	6.0	3.5	7.0	9.0	14.0	22.0	---	---	21.0	23.0
13	14.0	4.0	4.5	4.0	9.0	7.5	14.0	20.0	---	---	26.0	22.0
14	19.5	4.0	7.0	4.0	9.5	7.0	16.5	20.0	---	---	25.5	21.5
15	18.0	4.0	6.0	5.5	9.0	9.0	17.0	19.5	---	---	25.0	23.0
16	18.5	7.0	7.0	4.5	9.5	11.5	17.0	15.0	---	---	25.0	---
17	18.0	12.0	6.5	4.0	9.0	6.0	17.0	16.0	---	---	23.0	22.0
18	18.0	10.0	8.0	5.5	8.0	6.5	13.0	15.0	---	---	22.5	23.0
19	18.5	12.0	6.5	5.0	8.5	9.0	13.5	15.5	---	---	24.5	23.0
20	19.0	9.0	6.5	5.0	9.0	---	12.5	15.0	---	---	23.0	23.0
21	18.0	12.5	7.0	7.0	9.0	10.0	13.0	15.0	---	---	23.0	24.5
22	16.5	12.0	6.0	5.5	8.0	13.5	17.0	17.0	---	---	23.0	21.0
23	17.0	12.0	5.5	7.0	9.0	15.0	20.5	24.0	---	20.0	24.0	22.0
24	15.5	11.5	9.0	7.0	7.5	9.5	18.5	22.5	---	24.0	25.0	22.0
25	10.0	11.0	5.5	8.0	8.0	12.5	20.0	21.0	---	27.0	23.0	24.5
26	7.0	8.5	8.0	7.0	7.5	12.0	20.0	22.5	---	22.0	23.0	28.0
27	7.0	.0	7.0	9.0	12.5	10.0	20.0	22.0	---	25.0	23.0	21.0
28	4.5	.0	4.0	7.0	5.0	11.0	21.0	24.0	---	27.0	23.0	20.0
29	6.0	.0	5.5	8.5	---	7.0	19.5	24.5	---	28.0	26.5	20.0
30	6.5	.0	4.0	5.0	---	12.5	20.5	24.0	---	27.0	23.0	21.0
31	11.0	---	4.0	7.0	---	9.5	---	---	---	22.0	23.5	---
MEAN	16.0	9.0	5.5	5.0	8.5	9.0	15.0	19.5	24.0	24.5	24.0	23.0
WTR YR 1977	MEAN	14.0	MAX	30.0	MIN	.0						

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	950	790	1040	972	1750	2170	602	865	990	1680	1810	3150
2	2270	3000	1050	873	2000	2440	523	733	1170	1930	2260	3750
3	2540	3240	1180	933	1530	1810	525	754	812	1430	570	870
4	1520	1420	2450	2790	893	1060	872	1390	2270	4010	497	658
5	970	681	2250	2870	840	1110	664	1080	1410	2420	652	817
6	610	336	2720	3440	4100	5830	880	1470	767	1270	1250	1620
7	488	194	2560	3530	4450	6730	1370	2290	710	1280	1060	1350
8	418	148	2690	4360	3040	4760	933	1550	1950	3470	928	1200
9	825	352	3150	5320	2710	4280	1000	1650	1100	1890	708	839
10	390	175	4530	7770	3960	6150	1160	1860	510	874	702	792
11	2200	1210	2590	4440	1350	2150	601	901	555	989	840	921
12	667	294	864	1430	1720	2760	467	649	1190	2020	769	837
13	455	220	800	1370	1920	2950	430	572	585	963	526	550
14	391	167	917	1550	2530	3790	683	909	475	757	785	797
15	371	150	1040	1670	1670	2550	442	529	1340	2120	610	575
16	612	269	1520	2340	3300	5390	610	710	1330	2080	864	753
17	284	135	1250	1870	4930	8190	910	1050	817	1280	922	794
18	412	172	1440	2200	1150	1960	1150	1380	572	927	808	648
19	355	144	1440	2200	953	1650	720	920	387	648	624	460
20	331	150	953	1450	2890	5500	1340	1790	370	634	497	345
21	288	107	1870	2800	1530	3160	1290	1730	415	695	680	466
22	282	114	2060	2930	2060	4590	1560	2260	650	1100	440	305
23	300	147	2570	3340	4110	9270	830	1300	717	1290	411	244
24	322	163	2080	2940	2570	5720	1190	1880	700	1210	709	408
25	357	205	1840	2680	4030	8980	710	1150	623	1040	730	440
26	367	208	2310	3370	2090	4490	1270	2130	787	1260	464	302
27	310	178	1940	2780	3510	7720	1380	2380	655	1140	402	282
28	640	449	1800	2480	2320	4290	3070	5510	931	1600	849	756
29	960	855	1600	2160	3870	5800	1400	2360	---	---	512	648
30	939	963	2020	2620	1510	2170	915	1530	---	---	420	474
31	1170	982	---	---	548	799	1000	1710	---	---	325	340
TOTAL	---	17618	---	81478	---	30219	---	46992	---	42007	---	26391

RIO GRANDE BASIN

08358550 MILLIGAN GULCH NEAR SAN MARICAL, NM

LOCATION.--Lat 33°39'37", long 107°05'25", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.36, T.7 S., R.3 W., Socorro County, Hydrologic Unit 13020211, on left upstream side of bridge on old Highway 85, and 7.2 mi (11.6 km) southwest of San Marical.

DRAINAGE AREA.--413 mi² (1,070 km²).

PERIOD OF RECORD.--July 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,720 ft (1,439 m), from topographic map. Prior to July 1, 1971, gage located on downstream side of bridge.

REMARKS.--Records poor.

AVERAGE DISCHARGE--9 years, 0.494 ft³/s (0.014 m³/s), 358 acre-ft/yr (441,400 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s Sept. 11, 1972, gage height, 9.22 ft (2.810 m), from rating curve extended above 3 ft³/s (.08 m³/s) on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 480 ft³/s (13.6 m³/s) Aug. 12, gage height, 2.94 ft (0.896 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

July 22	0.11	August 11	0.15	September 12	2.5
July 25	0.11	August 12	4.9		

Month	cfs-days	Maximum	Minimum	Mean	Runoff in Acre-feet
July	0.22	0.11	0	0.007	0.4
August	5.05	4.9	0	0.16	10
September	2.50	2.5	0	0.083	5.0
CAL YR 1976	0.00	0	0	0.00	0
WTR YR 1977	7.77	4.9	0	0.021	15

NOTE.--During the 1977 Water Year flow occurred only on the days listed above.

08360500 ELEPHANT BUTTE RESERVOIR AT ELEPHANT BUTTE, NM

LOCATION.--Lat 33°09'15", long 107°11'28", in NW¼ sec.30, T.13 S., R.3 W., Sierra County, Hydrologic Unit 13020211, at dam on Rio Grande, 1 mi (1.6 km) west of Elephant Butte, 4 mi (6 km) northeast of Truth or Consequences (Hot Springs), N. Mex., and at mile 1,383.2 (2,225.6 km).

DRAINAGE AREA.--29,445 mi² (76,260 km²), approximately including 2,940 mi² (7,610 km²) 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 43.4 ft (13.20 m) above mean sea level. 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, 2,109,000 acre-ft (2.60 km³) survey of 1974 at gage height 4,407.0 ft (1,343.25 m) crest of spillway. Capacity by original survey was 2,638,900 acre-ft (3.25 km³). 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. Figures given herein represent usable contents and are computed from mean daily gage heights. Water is used for power development and irrigation on Rio Grande Project of Bureau of Reclamation. Lake is major recreational area.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 2,302,800 acre-ft (2,840 km³) June 16-18, 1942, gage height, 4,409.19 ft (1,343.921 m); minimum daily contents after initial filling, 9,900 acre-ft (12.2 km³) Aug. 6, 1954, gage height, 4,258.03 ft (1,297.848 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 356,000 acre-ft (439 km³) Apr. 17 gage height, 4,325.18 ft (1,318.315 m); minimum daily contents, 119,300 acre-ft (147 km³) Aug. 15 gage height, 4,295.78 ft (1,309.354 m).

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

4,270	26.02	4,290	89.90	4,310	216.1	4,330	409.4	4,350	679.0
4,275	37.81	4,295	115.0	4,315	258.5	4,335	469.6	4,355	760.2
4,280	51.76	4,300	144.2	4,320	304.2	4,340	534.3	4,360	848.6
4,285	68.82	4,305	177.7	4,325	354.1	4,345	604.0	4,365	944.1

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	299700	310700	329700	315900	317900	342700	351200	347800	302300	217700	135100	120900
2	300100	311500	328700	316600	318600	343600	351800	346300	300500	212800	133800	121300
3	300700	312000	327900	316700	319700	344100	352000	344200	298700	209800	132800	121700
4	301500	312700	328300	316600	320500	344600	352500	342700	296900	206500	131600	122800
5	302700	313500	329700	316400	321700	345200	353200	340600	295200	203500	130300	124000
6	303400	314300	330600	316000	323100	346000	353700	338700	293400	200000	129100	123300
7	303600	315600	330300	315900	323800	346400	354200	338500	291700	196900	127900	121600
8	303900	316500	329700	316400	324700	346800	354700	337700	288500	193900	126700	121100
9	304000	317500	329500	317300	325500	347300	355200	335700	285400	191000	125500	121400
10	304300	318600	329200	316600	326300	346800	355300	333800	282300	187900	124300	121600
11	304600	319800	329300	316100	327300	347300	355400	331800	279100	184500	123200	121700
12	304600	319700	330300	315100	328300	347800	355400	329800	276000	181600	121600	121800
13	304700	318700	330200	314500	329800	348300	355600	328400	273000	178100	120800	122000
14	304700	319500	328500	314500	330200	348700	355800	327700	269800	175100	119500	122200
15	304800	320700	326800	315400	331000	348600	355600	327500	266800	172000	119300	122300
16	304900	321800	325400	316300	331700	348400	355800	325500	263700	169100	119900	122400
17	305100	322800	324200	315700	332700	348700	356000	323900	260600	165900	120300	122600
18	305200	323900	323400	316200	333300	348400	355200	321700	257300	162800	120800	122700
19	305200	324700	324400	316000	334700	348800	354100	319700	254100	159400	121700	122900
20	305300	325700	325000	315400	335700	349000	353100	317700	251100	156500	123400	123100
21	305300	326800	323600	314700	336400	349200	352300	317500	247500	153500	124700	123200
22	305400	327600	322100	315900	337500	349200	351400	317600	244600	150200	125500	123200
23	305700	327900	321100	317000	337700	349100	351500	315700	241300	147500	126400	123300
24	306000	328300	319900	316500	338700	349000	351800	314200	238200	144900	126500	123400
25	306300	328500	319800	316300	338900	348900	351600	312100	235100	142900	126100	123400
26	306900	328900	320900	315900	340000	349200	350300	310100	232200	141300	125100	123300
27	307600	329500	321500	315400	341000	349700	349800	308200	229000	139400	124300	123500
28	308000	329800	320700	315100	342000	349800	348800	308100	226000	139000	123200	123600
29	308500	330200	319400	316400	---	349900	347700	308000	222700	138500	122000	123700
30	308900	330400	317500	317600	---	350300	347800	306300	219500	137200	120800	123600
31	309800	---	315800	317100	---	350900	---	304500	---	136100	120900	---
MAX	309800	330400	330600	317600	342000	350900	356000	347800	302300	217700	135100	124000
MIN	299700	310700	315800	314500	317900	342700	347700	304500	219500	136100	119300	120900
(†)	4320.59	4322.69	4321.21	4321.35	4323.83	4324.69	4324.40	4320.03	4310.41	4398.68	4296.06	4296.55
(‡)	+10300	+20600	-14600	+1300	+24900	+8900	-3100	-43300	-85000	-83400	-15200	+2700
CAL YR 1976	MAX	727700	MIN	285700	(†)	-134400						
WTR YR 1977	MAX	356000	MIN	119300	(‡)	-175900						

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

(‡) Change in contents, in acre-feet.

RIO GRANDE BASIN

08361000 RIO GRANDE BELOW ELEPHANT BUTTE DAM, NM

LOCATION.--Lat 33°08'54", long 107°12'22", Sierra County, Hydrologic Unit 13030101, in Pedro Armendaris Grant, on left bank 1.0 mi (1.6 km) downstream from dam, 1.5 mi (2.4 km) upstream from Cuchillo Negro River, and at mile 1,382.2 (2,224.0 km).

DRAINAGE AREA.--29,450 mi² (76,280 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--January 1915 to current year. Monthly or annual discharge only for some periods, published in WSP 1732. Figures of daily discharge, published in WSP 458 for October to December 1916, are unreliable.

REVISED RECORDS.--WSP 1562: 1920. WSP 1632: Drainage area. WSP 1732: 1917, 1920. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 4,242.09 ft (1,292.989 m) above mean sea level. See WSP 1732 for history of changes prior to Apr. 24, 1942.

REMARKS.--Water-discharge records good except those for August to September, which are fair. Flow regulated by Elephant Butte Reservoir (station 08360500). Diversion for irrigation of about 800,000 acres (3200 km²) above station.

AVERAGE DISCHARGE.--62 years, 980 ft³/s (27.75 m³/s), 710,000 acre-ft/yr (875 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 8,220 ft³/s (233 m³/s) May 22, 1942; no flow at times prior to 1929.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,660 ft³/s (47.0 m³/s) July 14; minimum daily, 7.3 ft³/s (0.206 m³/s) Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	636	20	253	224	22	18	840	1550	686	7.3
2	12	12	692	15	226	253	18	562	854	1540	700	11
3	12	11	690	470	223	249	18	888	833	1550	703	13
4	12	10	16	493	217	249	15	894	854	1550	708	12
5	12	10	8.3	864	15	19	13	912	845	1560	712	347
6	12	10	666	982	12	16	14	941	850	1550	715	641
7	13	9.5	676	860	220	244	13	36	861	1570	720	683
8	14	9.0	650	20	218	250	17	351	1520	1560	724	279
9	14	10	650	15	224	250	19	911	1510	1560	728	8.0
10	14	12	650	930	219	251	20	962	1510	1580	735	7.4
11	15	213	10	897	216	250	20	949	1520	1590	1170	8.0
12	15	1480	10	884	16	16	19	971	1510	1600	1190	8.1
13	16	51	1350	915	13	13	18	967	1520	1610	1210	7.5
14	17	18	1360	910	214	248	18	40	1510	1660	1210	8.7
15	17	16	1350	15	217	251	18	11	1510	1620	1210	9.1
16	17	15	1330	10	219	266	18	933	1520	1620	1220	10
17	17	14	1340	780	228	250	18	977	1520	1620	1230	11
18	14	173	30	790	239	252	527	964	1520	1620	1230	11
19	10	16	10	791	17	20	531	978	1520	1630	1260	11
20	10	13	1330	810	14	18	528	998	1520	1620	637	11
21	11	12	1360	815	217	249	531	41	1510	1610	631	11
22	13	425	1340	20	214	252	529	11	1520	1620	636	11
23	13	406	1350	14	222	251	27	937	1530	1610	636	11
24	50	395	1350	794	227	252	17	955	1520	1610	642	12
25	12	388	17	798	225	255	521	975	1560	1600	645	12
26	12	375	9.9	807	18	79	530	956	1550	1280	649	14
27	12	380	1320	818	15	13	529	969	1560	1260	652	15
28	12	150	1300	868	222	250	529	42	1550	678	653	16
29	12	160	1350	20	---	255	529	11	1560	669	656	16
30	12	380	1350	14	---	255	24	904	1560	672	650	13
31	12	---	1350	891	---	260	---	1220	---	676	47	---
TOTAL	445	5185.5	25551.2	17330	4640	5960	5650	21284	41067	45045	25195	2235.1
MEAN	14.4	173	824	559	166	192	188	687	1369	1453	813	74.5
MAX	50	1480	1360	982	274	266	531	1220	1560	1660	1260	683
MIN	10	9.0	8.3	10	12	13	13	11	833	669	47	7.3
AC-FT	883	10290	50680	34370	9200	11820	11210	42220	81460	89350	49970	4430
CAL YR 1976	TOTAL	360347.0	MEAN	985	MAX	2170	MIN	6.5	AC-FT	714700		
WTR YR 1977	TOTAL	199587.8	MEAN	547	MAX	1660	MIN	7.3	AC-FT	395900		

08361000 RIO GRANDE BELOW ELEPHANT BUTTE DAM, NM -- Continued

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)
OCT								
03...	1515	12	643	--	--	20.0	25	--
11...	1125	15	645	--	--	15.0	15	--
14...	1055	17	590	7.3	15.0	12.0	10	6.5
16...	1600	17	626	--	--	17.0	30	--
25...	1105	12	717	--	--	15.0	15	--
30...	1040	12	673	--	--	11.0	10	--
NOV								
04...	1001	12	700	7.8	14.0	14.0	9	8.5
06...	0900	10	699	--	--	11.0	10	--
12...	1700	1480	717	--	--	13.0	8	--
19...	1040	16	744	--	--	11.0	15	--
26...	1020	375	763	--	--	11.0	10	--
DEC								
05...	1020	8.3	745	--	--	5.0	9	--
07...	1545	1120	699	7.8	10.5	10.0	9	9.1
10...	1535	650	711	--	--	11.0	1	--
18...	0900	14	708	--	--	6.0	7	--
JAN								
03...	1715	470	708	--	--	7.0	9	--
08...	1030	20	744	--	--	6.0	5	--
15...	1030	15	730	--	--	4.0	7	--
22...	1020	13	769	--	--	5.5	3	--
27...	0919	800	740	8.6	7.0	6.0	5	10.9
29...	1500	14	702	--	--	9.0	9	--
FEB								
05...	0940	16	720	--	--	5.5	2	--
08...	1320	14	642	--	--	15.0	4	--
12...	1020	15	710	--	--	9.0	4	--
21...	1200	14	700	--	--	10.0	4	--
23...	1818	1280	770	8.4	13.5	7.0	9	10.8
28...	1150	6.6	715	--	--	12.0	3	--
MAR								
07...	1100	16	725	--	--	13.0	5	--
12...	1000	16	719	--	--	7.5	2	--
18...	1135	19	720	--	--	14.0	2	--
23...	2121	280	720	8.2	8.0	9.0	5	9.7
26...	1320	440	730	--	--	11.0	5	--
APR								
02...	1020	18	685	--	--	13.0	3	--
11...	1040	20	710	--	--	15.0	4	--
18...	1030	527	720	--	--	12.0	3	--
19...	1659	652	630	8.3	22.0	11.0	3	9.0
24...	1325	17	--	--	--	15.0	1	--
MAY								
01...	0900	18	--	--	--	24.0	2	--
10...	1610	962	--	--	--	19.0	3	--
15...	0835	11	--	--	--	18.0	4	--
19...	1040	670	699	8.0	18.0	13.5	5	6.9
22...	0830	11	--	--	--	16.0	4	--
28...	0900	42	--	--	--	15.0	7	--
JUN								
05...	0800	617	--	--	--	16.5	5	--
13...	1455	1520	758	--	--	19.0	10	--
19...	1100	1910	728	--	--	19.0	8	--
21...	1313	1880	760	7.8	37.5	18.5	6	3.3
27...	1145	1580	760	--	--	23.0	8	--
JUL								
05...	1300	1560	758	--	--	22.0	4	--
11...	1100	1940	765	--	--	27.0	6	--
18...	0950	1910	762	--	--	23.5	7	--
25...	1015	1980	775	--	--	26.0	5	--
27...	1919	1270	795	7.7	30.0	23.0	6	2.5
AUG								
01...	1135	690	786	--	--	26.0	9	--
08...	1020	730	776	--	--	25.5	1	--
16...	1125	1940	781	--	--	27.5	9	--
22...	2000	995	798	--	--	24.5	5	--
23...	2002	995	840	8.1	26.5	24.0	6	1.0
29...	0925	1100	857	--	--	24.5	5	--
SEP								
07...	0925	773	840	--	--	24.5	15	--
12...	1030	7.9	906	--	--	23.5	25	--
20...	1050	10	893	--	--	24.5	30	--
20...	1630	11	888	7.9	33.0	25.0	30	7.3
26...	1100	12	897	--	--	24.5	35	--

RIO GRANDE BASIN

08361000 RIO GRANDE BELOW ELEPHANT BUTTE DAM, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT								
03...	.08	--	.00	.58	.66	.00	--	--
11...	.08	--	.04	.67	.79	.04	--	--
14...	.15	.15	.07	.30	.52	.07	.04	40
16...	.03	--	.08	.67	.78	.13	--	--
25...	.24	--	.04	.56	.84	.05	--	--
30...	.32	--	.01	.44	.77	.02	--	--
NOV								
04...	.19	.15	.03	.15	.37	.03	.01	--
06...	.48	--	.06	.26	.80	.04	--	--
12...	.00	--	.00	.37	.37	.04	--	--
19...	.14	--	.04	.47	.65	.05	--	--
26...	.15	--	.01	.28	.44	.07	--	--
DEC								
05...	.11	--	.00	.18	.29	.02	--	--
07...	.18	.13	.03	.20	.41	.02	.02	--
10...	.13	--	.01	.49	.63	.05	--	--
18...	.61	--	.11	.89	1.6	.86	--	--
JAN								
03...	.01	--	.01	.33	.35	.03	--	--
08...	.00	--	.01	.48	.49	.03	--	--
15...	.01	--	.00	.17	.18	.06	--	--
22...	.01	--	.00	.07	.08	.01	--	--
27...	.03	.03	.01	.32	.36	.02	.01	--
29...	.01	--	.01	.38	.40	.03	--	--
FEB								
05...	.02	--	.00	.16	.18	.01	--	--
08...	.01	--	.00	.28	.29	.02	--	--
12...	.17	--	.01	.44	.62	.02	--	--
21...	.01	--	.01	.89	.91	.04	--	--
23...	.02	.02	.00	.30	.32	.01	.01	--
28...	.01	--	.01	.41	.43	.03	--	--
MAR								
07...	.05	--	.01	.39	.45	.02	--	--
12...	.05	--	.01	9.0	9.1	.00	--	--
18...	.01	--	.00	.69	.70	.02	--	--
23...	.01	.01	.01	.04	.06	.02	.02	--
26...	.00	--	.01	.25	.26	.03	--	--
APR								
02...	.00	--	.01	.34	.35	.01	--	--
11...	.03	--	.01	.81	.85	.04	--	--
18...	.01	--	.02	.18	.21	.04	--	--
19...	.09	.09	.00	.41	.50	.04	.04	--
24...	.00	--	.00	.31	.31	.06	--	--
MAY								
01...	.03	--	.01	.22	.26	.01	--	--
10...	.03	--	.01	.27	.31	.03	--	--
15...	.20	--	.01	1.7	1.9	.01	--	--
19...	.03	.02	.02	.39	.44	.02	.02	--
22...	.03	--	.00	.77	.80	.02	--	--
28...	.02	--	.01	.24	.27	.04	--	--
JUN								
05...	.01	--	.04	.19	.24	.04	--	--
13...	.05	--	.02	1.4	1.5	.06	--	--
19...	.07	--	.03	.30	.40	.08	--	--
21...	.10	.10	.11	.32	.53	.07	.03	--
27...	.05	--	.02	.41	.48	.10	--	--
JUL								
05...	.03	--	.07	.38	.48	.06	--	--
11...	.01	--	.04	.36	.41	.08	--	--
18...	.05	--	.08	.54	.67	.10	--	--
25...	.05	--	.07	.14	.26	.10	--	--
27...	.09	.09	.07	.35	.51	.10	.07	--
AUG								
01...	.02	--	.02	.42	.46	.07	--	--
08...	.01	--	.02	.53	.56	.07	--	--
16...	.01	--	.07	.70	.78	.07	--	--
22...	.05	--	.07	.57	.69	.07	--	--
23...	.07	.06	.06	.68	.81	.07	.04	--
29...	.07	--	.04	.24	.35	.08	--	--
SEP								
07...	.14	--	.00	.35	.49	.06	--	--
12...	.21	--	.01	1.1	1.3	.07	--	--
20...	.13	--	.07	.43	.63	.06	--	--
20...	.13	.10	.05	.55	.73	.09	.01	--
26...	.12	--	.04	.41	.57	.06	--	--

RIO GRANDE BASIN

271

08362000 CABALLO RESERVOIR NEAR ARREY, NM

LOCATION.--Lat 32°53'47", long 107°17'30", in SE¼SW¼ sec.19, T.16 S., R.4 W., Sierra County, Hydrologic Unit 13030101, in control tower of Caballo Dam on Rio Grande, 0.5 mi (0.8 km) downstream from mouth of Apache Canyon, 0.9 mi (1.4 km) upstream from Bojarquez Bridge, 2 mi (3 km) upstream from Percha diversion dam, 3.5 mi (5.6 km) northeast of Arrey, 5.2 mi (8.4 km) south of Caballo, and at mile 1,356.6 (2,182.8 km).

DRAINAGE AREA.--30,700 mi² (79,510 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--February 1938 to September 1965 (monthend contents only), October 1965 to current year.

REVISED RECORDS.--WSP 978: 1942. WSP 1632: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 43.3 ft (13.20 m) above mean sea level.

REMARKS.--Reservoir is formed by earthfill dam, completed Sept. 19, 1938. Storage began Feb. 8, 1938. Capacity by 1958 survey, 344,000 acre-ft (424 hm³) between gage heights 4,104 ft (1,250.9 m) bottom of tunnel entrance of gates and 4,182 ft (1,274.7 m) gage height above which spillway gates operate automatically. No dead storage. Storage held for flood control, 100,000 acre-ft (123 hm³). Figures given herein represent usable contents and are computed from mean daily gage heights. Water released from Elephant Butte Reservoir for power development is stored in Caballo Reservoir and released for irrigation on Rio Grande project for Bureau of Reclamation.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 347,000 acre-ft (428 hm³) Mar. 4, 1942, gage height, 4,182.06 ft (1,274.692 m); minimum daily contents, 118 acre-ft (0.145 hm³), Oct. 14, 1938, gage height, 4,108.1 ft (1,252.15 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 141,500 acre-ft (174 hm³) Mar. 2, 3, gage height, 4,159.98 ft (1,267.962 m); minimum daily contents, 8,420 acre-ft (10.4 hm³) Sept. 10, gage height, 4,126.29 ft (1,257.693 m).

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

4,122	3.41	4,130	14.70	4,138	34.19	4,146	62.50	4,154	102.2
4,124	5.47	4,132	18.88	4,140	40.31	4,148	71.28	4,156	114.5
4,126	8.00	4,134	23.52	4,142	47.03	4,150	80.76	4,158	127.7
4,128	11.06	4,136	28.61	4,144	54.42	4,152	91.03	4,160	141.7

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40940	44180	56080	104600	134100	141000	81110	43260	35960	41300	57700	20450
2	41070	44280	57340	104600	135200	141500	79070	42280	35690	41360	55480	17930
3	41260	44310	58780	105100	135200	141500	77430	42580	35390	41760	52870	15670
4	41430	44420	60020	105800	135300	140800	75470	42970	35120	42970	50240	13340
5	41560	44490	60400	107200	135600	139500	74030	43530	35090	44350	47680	11390
6	41590	44590	60680	108800	135900	138200	72400	43970	35090	45590	44970	10820
7	41620	44660	61680	110100	135900	137400	70790	43760	35180	46930	42610	10900
8	41660	44690	63020	110600	136200	136700	69360	42940	36290	48730	40090	11040
9	41820	44760	64400	110700	136700	135300	67700	42800	37840	50530	38150	9280
10	41890	44830	65860	111400	137400	133800	65950	43530	39370	52150	35420	8420
11	41950	44930	67170	112700	137500	131600	64220	44520	40770	53700	33880	8580
12	42080	45660	67260	114400	137600	129100	62500	45280	42080	55210	33850	8730
13	42120	48220	67520	115800	138000	126400	60850	46280	43330	56000	33960	8870
14	42250	48470	69580	117400	138100	123800	58950	46340	44310	56790	34310	8990
15	42380	48730	72310	117700	138100	121500	57460	45310	45380	57580	34790	9080
16	42410	48800	74540	117700	138400	118800	55920	44800	46310	58370	35630	9170
17	42510	48870	77280	118500	138800	116400	54420	45280	46690	59030	36290	9280
18	42610	48910	79310	119800	139500	114000	53360	45420	46690	59610	37060	9340
19	42670	49270	79550	121500	139300	111200	52830	45590	46590	60020	37810	9460
20	42710	49300	80130	122900	139400	108200	52150	45660	46380	60350	37650	9520
21	42800	49410	82320	124500	139500	105500	51770	44930	46650	60640	36880	9620
22	42870	49520	85080	125000	139600	102900	51430	43200	46000	61260	36350	9750
23	42940	50200	87570	125000	139600	100500	50640	41720	45660	62090	35540	9810
24	43030	51090	90140	125800	139800	98220	49200	41530	45040	63540	34190	9910
25	43230	51920	92230	127300	140200	95850	48080	40940	44620	65130	33080	9950
26	43430	52790	92290	128900	140400	93550	47360	40570	44010	65520	31620	10070
27	43760	54000	92670	130200	140800	91030	46760	40250	43870	65690	30050	10130
28	43940	54380	94920	131800	140500	88930	46340	40000	42900	65090	28560	10260
29	43940	54420	97480	132500	---	86830	45970	38250	41950	63450	27000	10320
30	43970	55170	99880	132700	---	84780	44930	36640	41560	61680	25310	10420
31	44110	---	102200	133600	---	82820	---	36290	---	59650	23050	---
MAX	44110	55170	102200	133600	140800	141500	81110	46340	46690	65690	57700	20450
MIN	40940	44180	56080	104600	134100	82820	44930	36290	35090	41300	23050	8420
(†)	4141.15	4144.19	4154.00	4158.86	4159.83	4150.41	4141.39	4138.70	4140.38	4145.31	4133.80	4127.60
(‡)	+3630	+11060	+47060	+31400	+6830	-57640	-37890	-8640	+5270	+18090	-36600	-12630

CAL YR 1976 MAX 102200 MIN 28090 (†) -85010
WTR YR 1977 MAX 141500 MIN 8420 (†) -30060

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

(‡) Change in contents, in acre-feet.

RIO GRANDE BASIN

08362500 RIO GRANDE BELOW CABALLO DAM, NM

LOCATION.--Lat 32°53'05", long 107°17'31", in NE¼SW¼ sec.30, T.16 S., R.4 W., Sierra County, Hydrologic Unit 13030102, on left bank 2,000 ft (600 m) upstream from Interstate Highway 25, 4,200 ft (1,300 m) downstream from Caballo Dam, 1.2 mi (1.9 km) downstream from Apache Canyon, 1.3 mi (2.1 km) upstream from Percha diversion dam, 3 mi (5 km) northeast of Arrey, 5 mi (8 km) south of Caballo, and at mile 1,355.6 (2,181.2 km).

DRAINAGE AREA.--30,700 mi² (79,510 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--January 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,140.9 ft (1,262.15 m) above mean sea level. Prior to Oct. 7, 1938, at datum 7.0 ft (2.13 m) higher, Oct. 7-12, 1938, at datum 6.0 ft (1.83 m) higher, and Oct. 13, 1938, to Dec. 31, 1945, at datum 5.0 ft (1.52 m) higher than present datum.

REMARKS.--Records good. Flow regulated by Caballo Reservoir (station 08362000) capacity, 344,000 acre-ft (424 hm³), 1958 survey and Elephant Butte Reservoir (station 08360500) capacity, 2,109,000 acre-ft (2.60 km³), 1974 survey. Diversions for irrigation of about 800,000 acres (3,200 km²) 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.--39 years, 857 ft³/s (24.27 m³/s), 620,900 acre-ft/yr (766 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 7,650 ft³/s (217 m³/s) May 20, 1942; minimum daily, 0.1 ft³/s (0.003 m³/s) Oct. 31 to Nov. 14, 1954, Nov. 7 to Dec. 31, 1955, Feb. 15-29, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,040 ft³/s (57.8 m³/s) Aug. 4; minimum daily, 2.0 ft³/s (0.057 m³/s) Oct. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	2.5	3.3	3.0	3.1	3.0	1050	885	1050	1540	1420	1390
2	3.6	2.6	3.3	3.0	3.1	3.0	965	862	972	1470	1720	1210
3	3.6	2.7	3.3	3.0	3.1	179	954	777	1010	1120	1950	1110
4	3.6	2.8	3.3	2.9	3.1	717	964	693	990	874	2040	1090
5	3.6	2.9	3.3	2.9	3.1	673	872	643	946	846	1960	1150
6	3.6	3.0	3.3	2.9	3.1	671	858	667	917	891	1980	1420
7	3.6	3.0	3.3	2.9	3.1	672	907	696	867	800	1850	1170
8	3.6	3.1	3.3	2.9	3.1	672	906	608	841	696	1700	908
9	3.6	3.2	3.3	2.9	3.1	889	915	589	844	596	1720	863
10	3.6	3.3	3.3	2.9	3.1	1300	941	568	878	700	1870	494
11	3.6	3.3	3.3	2.9	3.1	1340	940	481	896	700	1790	56
12	3.6	3.3	3.3	2.9	3.1	1370	930	437	915	843	1510	5.0
13	3.5	3.3	3.3	2.9	3.1	1370	929	519	893	1070	1280	3.0
14	3.4	3.3	3.3	2.8	3.0	1370	936	549	945	1090	1160	3.0
15	3.3	3.3	3.3	2.8	3.0	1500	888	537	1030	1190	1040	3.0
16	3.1	3.3	3.3	2.8	3.0	1520	813	577	1070	1220	1040	3.0
17	3.0	3.3	3.3	2.8	3.0	1410	789	699	1340	1190	1040	3.0
18	2.9	3.3	3.3	2.8	3.0	1450	725	787	1490	1240	1040	2.8
19	2.8	3.3	3.3	2.8	3.0	1480	783	820	1520	1370	1050	2.8
20	2.7	3.3	3.3	2.8	3.0	1470	811	882	1510	927	1050	2.7
21	2.6	3.3	3.3	2.8	3.0	1450	761	925	1560	1330	990	2.7
22	2.5	3.3	3.3	2.8	3.0	1390	762	903	1620	1240	919	2.6
23	2.3	3.3	3.3	2.8	3.0	1340	802	889	1650	1100	1040	2.6
24	2.2	3.3	3.3	2.9	3.0	1340	851	970	1710	873	1160	2.5
25	2.1	3.3	3.3	2.9	3.0	1470	864	1110	1800	840	1130	2.5
26	2.0	3.3	3.3	2.9	3.0	1430	856	1130	1750	943	1230	5.9
27	2.1	3.3	3.3	3.0	3.0	1280	801	992	1720	1020	1300	4.0
28	2.2	3.3	3.3	3.0	3.0	1280	759	851	1820	1070	1290	3.0
29	2.3	3.3	3.3	3.0	---	1240	818	891	1920	1350	1280	2.5
30	2.3	3.3	3.3	3.0	---	1190	887	983	1700	1490	1340	2.5
31	2.4	---	3.3	3.0	---	1230	---	1040	---	1480	1410	---
TOTAL	92.9	95.1	102.3	89.7	85.3	34699.0	26037	23960	38174	33109	43299	10920.1
MEAN	3.00	3.17	3.30	2.89	3.05	1119	868	773	1272	1068	1397	364
MAX	3.6	3.3	3.3	3.0	3.1	1520	1050	1130	1920	1540	2040	1420
MIN	2.0	2.5	3.3	2.8	3.0	3.0	725	437	841	596	919	2.5
AC-FT	184	189	203	178	169	68830	51640	47520	75720	65670	85880	21660
(†)	0	0	0	0	0	67	43	104	86	94	96	78
CAL YR 1976 TOTAL	342627.8			MEAN 936	MAX 2350	MIN 2.0	AC-FT 679600					
WTR YR 1977 TOTAL	210663.4			MEAN 577	MAX 2040	MIN 2.0	AC-FT 417900					

(†) 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

273

08363500 RIO GRANDE AT LEASBURG DAM, NEAR LAS CRUCES, NM

LOCATION.--Lat 32°28'36", long 106°55'03", in SW¼SW¼ sec. 14, T.21 S., R.01 W., Dona Ana County, Hydrologic Unit 13030102, 1.2 mi (1.9 km) upstream from USBR gaging station which is 2.0 mi (3.2 km) downstream from Leasburg Dam, and 1.8 mi (2.9 km) southeast of Radium Springs.

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

COOPERATION.--Data furnished by the New Mexico Environmental Improvement Agency.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DISSOLVED OXYGEN (MG/L) (00300)
MAR 24...	1330	794	7.8	13.5	9.1
APR 28...	1000	924	8.4	18.5	8.3
MAY 26...	--	897	8.3	17.0	8.2
JUN 27...	--	830	8.2	25.0	7.6
AUG 01...	--	825	8.2	25.0	7.8
25...	--	850	8.2	25.0	7.9

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM (COL. PER 100 ML) (31616)
MAR 24...	1330	10
APR 28...	1000	42
MAY 26...	--	27
JUN 27...	--	26
AUG 25...	--	80

RIO GRANDE BASIN

08363840 RIO GRANDE AT VINTON BRIDGE NEAR ANTHONY, TX

LOCATION.--Lat 31°57'32", long 106°36'17", El Paso County, Hydrologic Unit 13030102, at bridge on Farm Road 273, 480 ft (146 m) west of U.S. Highway 80, and 2.8 miles (4.5 km) south of Anthony.

DRAINAGE AREA.--28,680 mi² (74,280 km²), approximately.

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

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	AIR TEMPERATURE (DEG C) (00020)	TEMPERATURE (DEG C) (00010)	TURBIDITY (JTU) (00070)	DISSOLVED OXYGEN (MG/L) (00300)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (00340)	HARDNESS (CA+MG) (00900)
OCT 13...	0730	157	1840	7.8	17.5	12.0	20	8.6	33	470
MAR 23...	1616	651	800	8.0	23.0	16.5	65	8.7	35	240
APR 20...	1111	278	1180	8.2	19.5	17.0	40	8.8	18	290
MAY 18...	1716	163	1310	8.1	28.5	24.5	15	7.9	190	360
JUN 21...	1934	789	910	8.2	26.5	24.5	140	6.9	51	250
JUL 28...	1330	426	1110	8.3	35.0	27.0	140	8.7	38	290
AUG 24...	1221	333	1140	8.2	32.5	27.5	120	300	34	270
SEP 21...	1155	74	1980	8.0	--	23.0	15	9.0	22	500

DATE	NON-CARBONATE HARDNESS (MG/L) (00902)	DISSOLVED CALCIUM (CA) (MG/L) (00915)	DISSOLVED MAGNESIUM (MG) (MG/L) (00925)	DISSOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DISSOLVED PHOSPHATE (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DISSOLVED SULFATE (SO4) (MG/L) (00945)
OCT 13...	290	140	30	260	5.2	14	220	0	480
MAR 23...	82	71	15	95	2.7	6.8	191	0	190
APR 20...	100	85	19	140	3.6	9.8	230	0	240
MAY 18...	160	110	21	170	3.9	12	250	0	290
JUN 21...	85	75	15	99	2.7	7.5	200	0	200
JUL 28...	120	87	17	120	3.1	7.9	210	0	220
AUG 24...	90	82	16	140	3.7	8.6	220	0	230
SEP 21...	260	150	30	260	5.1	15	290	0	460

DATE	DISSOLVED CHLORIDE (CL) (MG/L) (00940)	DISSOLVED FLUORIDE (F) (MG/L) (00950)	DISSOLVED SILICA (SiO2) (MG/L) (00955)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITROGEN (N) (MG/L) (00610)	TOTAL ORGANIC NITROGEN (N) (MG/L) (00605)
OCT 13...	230	.7	24	1290	1290	.47	.47	.00	.29
MAR 23...	84	.7	4.6	574	563	.28	.27	.07	.54
APR 20...	110	.8	8.7	734	728	.19	.19	.03	.46
MAY 18...	150	.7	11	906	888	.06	.04	.03	.05
JUN 21...	70	.7	6.8	558	573	.12	.12	.08	1.5
JUL 28...	96	.7	10	648	662	.01	.01	.01	1.4
AUG 24...	110	.8	14	717	711	.09	.07	.06	1.1
SEP 21...	230	.8	25	1290	1320	.38	.34	.00	.37

08363840 RIO GRANDE AT VINTON BRIDGE NEAR ANTHONY, TX -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (R) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDED ORGANIC CARBON (C) (MG/L) (00689)
OCT 13...	.76	.07	.05	300	10	20	3.5	4.0	.3
MAR 23...	.89	.31	.07	150	70	10	5.0	3.6	--
APR 20...	.68	.10	.10	180	30	--	--	3.3	1.7
MAY 18...	.14	.13	.04	220	10	--	--	4.1	1.0
JUN 21...	1.7	.72	.04	160	0	0	11	3.5	>3.8
JUL 28...	1.4	.37	.04	180	0	--	--	3.3	2.4
AUG 24...	1.3	.37	.08	200	10	10	5.8	2.8	2.0
SEP 21...	.75	.07	.02	310	10	--	--	3.3	.9

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
OCT 13...	0730	3	2	300	<10	0	0	0
MAR 23...	1616	3	1	150	<10	1	0	0
JUN 21...	1934	4	3	160	<10	0	10	0
AUG 24...	1221	3	2	200	<10	2	30	0
SEP 21...	1155	--	--	310	--	--	--	--

DATE	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)
OCT 13...	<50	0	10	1	820	10	100	0	100
MAR 23...	<50	0	<10	0	3900	70	100	8	340
JUN 21...	<50	0	30	0	4900	0	<100	1	200
AUG 24...	<50	0	10	1	5700	10	<100	14	400
SEP 21...	--	--	--	--	--	10	--	--	--

DATE	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT 13...	20	.0	.0	0	0	--	10	0
MAR 23...	10	.1	.0	1	0	--	30	0
JUN 21...	0	.0	.0	1	1	--	50	0
AUG 24...	10	.0	.0	1	1	--	30	0
SEP 21...	--	--	--	--	--	8	--	--

RIO GRANDE BASIN

08363840 RIO GRANDE AT VINTON BRIDGE NEAR ANTHONY, TX -- Continued

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM (COL. PER 100 ML) (31616)	FECAL COLI- FORM (COL- TUM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
OCT 13...	0730	--	580	370	--
MAR 23...	1616	--	27	160	--
APR 20...	1111	--	390	5300	--
MAY 18...	1716	--	51	200	--
JUN 21...	1934	--	160	580	--
JUL 28...	1330	400	--	400	--
AUG 24...	1221	--	2800	--	1500
SEP 21...	1155	--	380	--	480

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 13...	0730	157	12.0	253	107	14
MAR 23...	1616	651	16.5	387	680	51
APR 20...	1111	278	17.0	146	110	56
MAY 18...	1716	163	24.5	149	66	29
JUN 21...	1934	789	24.5	715	1520	63
JUL 28...	1331	426	27.0	431	496	66
AUG 24...	1221	333	27.5	281	253	81
SEP 21...	1155	74	23.0	69	14	45

08364000 RIO GRANDE AT EL PASO, TX

LOCATION.--Lat 31°48'10", long 106°32'25", El Paso County, Hydrologic Unit 13030102, on downstream side of first pier from left abutment of Courchesne Bridge at El Paso, 1.7 mi (2.7 km) upstream from American Dam, 5.6 mi (9.0 km) upstream from Santa Fe Street-Juarez Avenue Bridge between El Paso and Cd. Juarez, Chihuahua, and at mile 1,249.9 (2,011.1 km).

DRAINAGE AREA.--32,207 mi² (83,415 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, CO.

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 L312 or L732.

GAGE.--Water-stage recorder. Datum of gage is 3,722.30 ft (1,134.557 m) above mean sea level (U.S.C. and G.S. datum). See WSP L312 or L732 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.--40 years (water years 1938-77), 512 ft³/s (14.50 m³/s), 370,900 acre-ft/yr (457 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft³/s (680 m³/s) June 12, 1905; no flow at times. Maximum discharge since construction of Elephant Butte Dam in 1915, 13,500 ft³/s (382 m³/s) Sept. 3, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,130 ft³/s (32.0 m³/s) Aug. 8, gage height, 4.48 ft (1.366 m); minimum 45.4 ft³/s (1.29 m³/s) Feb. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	335	194	151	146	98.0	48.8	540	355	401	717	704	490
2	278	192	173	147	98.2	51.0	522	366	454	761	764	587
3	309	188	196	143	101	51.7	502	359	420	714	712	642
4	308	177	193	142	96.8	52.4	452	310	358	608	733	721
5	371	172	185	142	96.1	51.7	438	299	402	864	641	570
6	273	172	177	140	96.4	53.8	371	285	443	648	661	641
7	254	169	168	139	91.4	193	308	253	461	391	804	437
8	249	168	164	145	88.6	440	269	250	418	492	1076	434
9	236	172	170	153	88.5	457	244	329	323	505	979	228
10	249	174	172	142	88.8	492	237	329	360	493	733	142
11	250	172	168	134	87.2	501	282	288	361	432	623	225
12	242	167	166	131	82.5	522	364	247	396	405	727	394
13	226	167	159	134	78.0	535	329	231	444	347	996	344
14	217	167	165	132	78.8	624	327	216	462	295	934	294
15	210	195	165	129	81.2	686	380	153	419	354	838	170
16	203	199	161	127	78.9	663	367	170	397	305	740	139
17	216	187	161	126	80.5	650	407	207	408	341	636	131
18	250	183	162	119	80.9	711	412	173	421	528	559	114
19	217	182	164	107	79.1	739	398	219	524	557	659	97.1
20	197	180	164	108	76.5	789	362	242	687	496	579	82.5
21	174	179	156	114	76.5	799	336	282	763	524	508	78.5
22	183	177	151	117	72.7	734	457	324	798	588	571	78.1
23	182	173	152	113	60.3	694	350	400	759	581	648	79.8
24	183	171	152	109	56.8	495	320	396	646	802	544	70.9
25	206	172	154	109	62.8	600	347	354	632	845	480	67.7
26	197	169	154	107	60.5	664	436	366	687	819	473	62.4
27	186	164	147	104	58.7	799	460	396	755	550	510	48.2
28	207	166	144	98.2	56.7	745	427	470	874	540	502	64.7
29	209	177	150	95.4	---	599	417	427	684	540	584	58.2
30	209	156	150	99.7	---	563	362	360	601	643	505	46.6
31	204	---	147	95.5	---	560	---	373	---	706	442	---
TOTAL	7230	5281	5041	3847.8	2252.4	15563.4	11423	9429	15758	17391	20865	7537.7
MEAN	233	176	163	124	80.4	502	381	304	525	561	673	251
MAX	371	199	196	153	101	799	540	470	874	864	1076	721
MIN	174	156	144	95.4	56.7	48.8	237	153	323	295	442	46.6
AC-FT	14340	10475	9999	7632	4468	30870	22657	18702	31256	34494	41385	14951

CAL YR 1976 TOTAL 203094 MEAN 555 MAX 1330 MIN 122 AC-FT 402831
WTR YR 1977 TOTAL 121619.3 MEAN 333 MAX 1076 MIN 46.6 AC-FT 241229

RIO GRANDE BASIN

08377900 RIO MORA NEAR TERRERO, NM
(Hydrologic bench-mark station)

LOCATION.--Lat 35°46'38", long 105°39'27", in ENE 1/4 sec. 22, T. 18 N., R. 12 E., San Miguel County, Hydrologic Unit 13060001, in Santa Fe National Forest, on left bank 450 ft (140 m) upstream from bridge on State Highway 63, 600 ft (180 m) upstream from mouth, and 2.6 mi (4.2 km) north of Terrero.

DRAINAGE AREA.--53.2 mi² (137.8 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,890 ft (2,450 m), from topographic map.

REMARKS.--Water-discharge records good except those for winter period, which are poor. About 90 percent of the drainage is in the Pecos Wilderness Area and not subject to development, watershed management, or the building of highways; there is limited cattle grazing by permit.

AVERAGE DISCHARGE.--14 years, 27.1 ft³/s (0.767 m³/s), 19,630 acre-ft/yr (24.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 726 ft³/s (20.6 m³/s) May 21, 1973, gage height, 3.68 ft (1.122 m); minimum determined, 0.90 ft³/s (0.025 m³/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 ft³/s (2.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 9	2230	*152 4.30	2.32 .707	June 7	0100	107 3.03	2.08 .634

Minimum discharge, 1.6 ft³/s (0.045 m³/s) Nov. 24, result of freezeup, but may have been less during periods of ice effect.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	6.4	5.4	3.4	3.5	3.5	6.0	45	50	15	18	12
2	11	6.6	5.8	3.4	3.5	3.3	5.8	52	48	17	18	16
3	11	7.4	5.8	3.4	3.2	3.3	5.3	58	45	17	17	19
4	12	6.9	5.4	3.3	3.3	3.2	6.0	54	43	27	16	15
5	11	6.5	5.0	3.2	3.3	3.2	7.5	61	40	41	16	19
6	11	6.6	4.8	3.2	3.3	3.5	8.4	69	43	27	15	19
7	10	6.6	4.6	3.3	3.3	3.8	11	86	77	25	15	15
8	10	6.3	4.5	3.2	3.4	4.0	12	106	64	25	15	14
9	11	6.3	4.4	3.1	3.4	3.8	15	113	57	26	13	13
10	10	6.9	4.3	3.0	3.4	3.5	22	122	52	22	14	12
11	9.5	7.0	4.2	3.0	3.5	3.5	25	110	48	20	17	12
12	9.1	5.7	4.2	3.1	3.5	3.8	25	97	45	19	22	12
13	9.0	5.5	4.4	3.1	3.5	4.0	25	102	41	18	17	12
14	8.7	5.5	4.6	3.1	3.3	4.5	22	112	37	18	14	12
15	8.7	5.5	4.6	3.1	3.2	4.0	20	96	35	17	16	11
16	8.4	4.9	4.6	3.1	3.3	4.5	19	93	32	18	21	10
17	8.2	5.0	4.5	3.1	3.3	5.0	18	90	29	17	18	9.5
18	8.3	5.4	4.4	3.2	3.3	5.2	19	89	27	16	22	9.0
19	7.2	5.8	4.3	3.2	3.4	5.3	26	81	26	16	19	8.5
20	6.8	6.0	4.2	3.2	3.5	5.4	24	68	24	19	25	8.2
21	7.3	5.8	4.1	3.3	3.5	5.7	21	60	23	20	22	7.7
22	8.9	5.6	4.0	3.4	3.4	6.1	22	58	21	19	20	7.6
23	8.3	5.8	4.0	3.5	3.3	7.1	24	60	23	20	19	9.0
24	8.1	5.6	3.9	3.5	3.3	7.5	25	62	27	19	20	7.7
25	7.8	5.6	4.0	3.5	3.2	8.1	33	61	23	22	17	7.1
26	7.7	5.8	4.2	3.5	3.2	8.4	39	56	20	30	16	6.7
27	6.7	5.4	3.7	3.5	3.2	8.2	38	52	19	28	15	6.8
28	8.4	4.5	3.7	3.5	3.3	6.9	44	51	19	24	14	7.5
29	6.4	4.5	3.5	3.5	---	5.9	44	52	18	23	14	6.7
30	6.2	5.0	3.3	3.5	---	5.8	37	51	16	22	13	6.3
31	6.0	---	3.3	3.5	---	6.7	---	51	---	20	13	---
TOTAL	274.7	176.4	135.7	101.9	93.8	156.7	649.0	2318	1072	667	531	331.3
MEAN	8.86	5.88	4.38	3.29	3.35	5.05	21.6	74.8	35.7	21.5	17.1	11.0
MAX	12	7.4	5.8	3.5	3.5	8.4	44	122	77	41	25	19
MIN	6.0	4.5	3.3	3.0	3.2	3.2	5.3	45	16	15	13	6.3
AC-FT	545	350	269	202	186	311	1290	4600	2130	1320	1050	657

CAL YR 1976 TOTAL 7401.0 MEAN 20.2 MAX 130 MIN 3.3 AC-FT 14680
WTR YR 1977 TOTAL 6507.5 MEAN 17.8 MAX 122 MIN 3.0 AC-FT 12910

NOTE.--No gage-height record Jan. 4 to Mar. 7.

RIO GRANDE BASIN

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08377900 RIO MORA NEAR TERRERO, NM -- Continued

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	HARD- NESS (CA+MG) (MG/L) (00900)
NOV 04...	1400	4.7	120	7.1	11.5	1.5	12.4	53
JAN 06...	1500	3.2	120	7.0	4.5	2.0	11.4	56
MAR 03...	1300	3.3	120	7.8	2.5	.5	10.6	59
MAY 12...	1200	93	60	7.8	17.0	6.5	12.1	30
JUL 15...	1300	18	85	7.4	20.0	16.0	7.2	38
SEP 14...	1600	19	88	7.8	18.0	13.5	8.0	42

DATE	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
NOV 04...	13	18	1.9	1.3	.1	.5	49	0	10
JAN 06...	5	19	2.1	1.6	.1	.4	62	0	11
MAR 03...	10	20	2.2	1.7	.1	.4	60	0	6.7
MAY 12...	9	10	1.2	.6	.0	.5	26	0	5.2
JUL 15...	5	13	1.3	1.0	.1	.4	40	0	--
SEP 14...	5	14	1.6	.8	.1	.5	45	0	4.4

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	CYANIDE (CN) (MG/L) (00720)
NOV 04...	.6	.2	5.7	72	62	.03	.02	--
JAN 06...	.8	.2	5.0	75	71	.11	.01	--
MAR 03...	.6	.2	5.8	70	67	.11	.01	.01
MAY 12...	.6	.1	4.5	44	36	.01	.02	--
JUL 15...	--	.1	5.8	46	--	.00	.00	--
SEP 14...	.4	.1	6.4	50	50	.05	.01	.00

RIO GRANDE BASIN

08377900 RIO MORA NEAR TERRERO, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL IRON (FE) (UG/L) (01045)
MAR 03...	1300	0	0	<10	0	<10	20
SEP 14...	1600	0	100	10	20	<10	130

DATE	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	TOTAL SILVER (AG) (UG/L) (01077)	TOTAL ZINC (ZN) (UG/L) (01092)
MAR 03...	<100	20	.2	0	<10	10
SEP 14...	<100	0	.0	0	<10	20

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDE D GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDE D GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS SR90 (PC/L) (80050)	SUS- PENDE D GROSS BETA AS SR90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED URANIUM (U) (UG/L) (80020)
SEP 14...	1600	2	1.1	<.4	1.3	<.4	1.0	<.4	.07	.18

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL PCB (UG/L) (39516)	PCB IN BOTTOM MA- TERIAL (UG/KG) (39519)	TOTAL ALDRIN (UG/L) (39330)	ALDRIN IN BOTTOM MA- TERIAL (UG/KG) (39333)	TOTAL CHLOR- DANE (UG/L) (39350)	CHLOR- DANE IN BOTTOM MA- TERIAL (UG/KG) (39351)	TOTAL DDD (UG/L) (39360)	DDD IN BOTTOM MA- TERIAL (UG/KG) (39363)	TOTAL DDE (UG/L) (39365)	DDE IN BOTTOM MA- TERIAL (UG/KG) (39368)
SEP 14...	1600	.0	0	.00	.0	.0	0	.00	1.1	.00	1.2

DATE	TIME	TOTAL DDT (UG/L) (39370)	DDT IN BOTTOM MA- TERIAL (UG/KG) (39373)	TOTAL DI- AZINON (UG/L) (39570)	DI- ELDRIN IN BOTTOM MA- TERIAL (UG/KG) (39380)	TOTAL ENDO- SULFAN (UG/L) (39388)	ENDO- SULFAN IN BOTTOM MA- TERIAL (UG/L) (39390)	TOTAL ENDRIN (UG/L) (39393)	ENDRIN IN BOTTOM MA- TERIAL (UG/KG) (39398)	TOTAL ETHION (UG/L) (39398)	HEPTA- CHLOR IN BOTTOM MA- TERIAL (UG/L) (39410)	HEPTA- CHLOR IN BOTTOM MA- TERIAL (UG/KG) (39413)
SEP 14...	.00	.9	.00	.00	.0	.00	.00	.0	.00	.00	.00	.0

DATE	TIME	TOTAL HEPTA- CHLOR EPOXIDE (UG/L) (39420)	HEPTA- CHLOR EPOXIDE IN BOT- TOM MA- TERIAL (UG/KG) (39423)	TOTAL LINDANE (UG/L) (39340)	LINDANE IN BOTTOM MA- TERIAL (UG/KG) (39343)	TOTAL MALA- THION (UG/L) (39530)	TOTAL METHYL PARA- THION (UG/L) (39600)	TOTAL METHYL TRI- THION (UG/L) (39790)	TOTAL PARA- THION (UG/L) (39540)	TOTAL TOX- APHENE (UG/L) (39400)	TOX- APHENE IN BOTTOM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THION (UG/L) (39786)
SEP 14...	.00	.0	.00	.0	.00	.00	.00	.00	.00	0	0	.00

RIO GRANDE BASIN

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08377900 RIO MORA NEAR TERRERO, NM -- Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL 2,4-D (UG/L) (39730)	TOTAL 2,4,5-T (UG/L) (39740)	TOTAL SILVEX (UG/L) (39760)
SEP 14...	1600	.00	.00	.00

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
NOV 04...	1400	0	0	11	--
JAN 06...	1500	0	0	0	--
MAR 03...	1300	0	0	--	0
MAY 12...	1200	43	0	--	14
JUL 15...	1300	9	8	--	4
SEP 14...	1600	8	8	--	10

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT DIS- CHARGE (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)
NOV 04...	1400	4.7	1.5	4	.05
NOV 05...	1200	5.4	.5	3	.04
DEC 03...	1120	5.8	.0	2	.03
DEC 29...	1110	2.6	.0	46	.32
JAN 25...	1230	3.5	.0	47	.44
FEB 24...	1505	3.3	.0	4	.04
MAR 03...	1300	3.3	.5	3	.03
APR 18...	1435	19	10.0	3	.15
MAY 12...	1200	93	6.5	20	5.0
MAY 19...	1120	83	--	5	1.1
JUL 15...	1130	18	13.0	3	.15
JUL 15...	1300	18	16.0	3	.15
AUG 11...	1425	16	13.0	2	.09
SEP 09...	1020	14	10.0	0	.00
SEP 14...	1600	19	13.5	7	.36

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 at downstream side of bridge on private road, 300 ft (91 m) upstream from Indian Creek, 2.4 mi (3.9 km) downstream from Holy Ghost Creek, 9.0 mi (14.5 km) north of Pecos, and at mile 896.6 (1,422.6 km).

DRAINAGE AREA.--189 mi² (490 km²).

PERIOD OF RECORD.--August 1919 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "near Cowles" 1919-25, "at Irvins Ranch" 1926-29, and as "at Irvins Ranch near Pecos" 1930-39.

REVISED RECORDS.--WSP 898: Drainage area. WSP 1312: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 7,502.94 ft (2,286.896 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 75 acres (30 km²), 1959 determination, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--58 years, 96.1 ft³/s (2.722 m³/s), 69,620 acre-ft/yr (85.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 4,500 ft³/s (130 m³/s) Sept. 21 or 22, 1929, gage height, 6.2 ft (1.89 m), from floodmark, from rating curve extended above 1,600 ft³/s (45 m³/s); minimum, 2.0 ft³/s (0.057 m³/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.--Maximum discharge, 288 ft³/s (8.16 m³/s), May 14, gage height, 3.03 ft (0.924 m), no peak above base of 310 ft³/s (8.8 m³/s); minimum, 14 ft³/s (0.40 m³/s) Apr. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	30	24	20	21	23	21	150	123	47	43	42
2	41	30	25	20	21	24	19	159	120	47	43	52
3	39	30	26	20	19	23	20	162	123	49	41	65
4	41	29	25	20	20	24	20	145	118	67	38	52
5	41	26	25	19	21	24	19	159	110	111	38	57
6	37	24	22	19	22	23	24	168	110	67	37	56
7	36	24	21	19	22	25	27	189	180	59	38	49
8	35	24	22	19	22	30	34	215	148	59	42	44
9	37	24	22	18	22	35	44	225	131	81	36	41
10	35	24	21	18	22	35	59	242	126	59	41	38
11	35	24	21	18	22	30	68	221	113	52	56	37
12	34	23	21	19	22	30	68	202	106	50	76	39
13	33	21	21	19	22	30	74	235	94	49	57	43
14	33	22	21	19	23	31	70	259	88	48	45	41
15	33	23	21	19	22	30	63	221	79	53	52	37
16	34	23	21	19	22	29	60	212	74	59	89	36
17	34	24	21	20	23	26	59	196	70	56	74	35
18	34	25	21	20	23	27	67	189	63	55	110	33
19	32	25	22	20	23	26	92	174	60	53	83	32
20	31	25	21	20	23	27	81	150	59	57	107	32
21	32	23	20	20	24	24	70	136	57	62	88	32
22	35	24	20	21	24	26	70	131	55	59	76	31
23	34	24	20	21	24	27	76	131	60	59	67	36
24	33	24	20	21	23	29	76	139	77	57	70	32
25	32	24	20	21	23	30	99	139	63	60	62	31
26	32	24	21	21	23	28	120	128	56	77	55	30
27	28	21	22	21	23	27	126	118	56	68	52	30
28	34	19	20	21	23	24	148	118	57	59	49	32
29	29	21	19	21	---	19	142	118	60	55	48	32
30	29	23	20	21	---	18	123	120	50	50	45	30
31	31	---	20	21	---	21	---	123	---	47	44	---
TOTAL	1067	727	666	615	624	825	2039	5274	2686	1831	1802	1177
MEAN	34.4	24.2	21.5	19.8	22.3	26.6	68.0	170	89.5	59.1	58.1	39.2
MAX	43	30	26	21	24	35	148	259	180	111	110	65
MIN	28	19	19	18	19	18	19	118	50	47	36	30
AC-FT	2120	1440	1320	1220	1240	1640	4040	10460	5330	3630	3570	2330

CAL YR 1976 TOTAL 24594 MEAN 67.2 MAX 299 MIN 19 AC-FT 48780
WTR YR 1977 TOTAL 19333 MEAN 53.0 MAX 259 MIN 18 AC-FT 38350

NOTE.--No gage-height record Jan. 13 to Feb. 18.

08379500 PECOS RIVER NEAR ANTON CHICO, NM

LOCATION.--Lat 35°10'44", long 105°06'30", Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, on right bank 2.1 mi (3.4 km) upstream from Cañon Blanco, 2.3 mi (3.7 km) southeast of Anton Chico, 9.7 mi (15.6 km) downstream from Tecolote Creek, and at mile 808.0 (1,300.1 km). Water-quality sampling site 0.5 mi (0.8 km) upstream.

DRAINAGE AREA.--1,050 mi² (2,720 km²), approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1910 to May 1916, October 1916 to September 1924, August to December 1925, January 1927 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1342: 1951(M), 1952-53. WSP 1512: 1912-14, 1931, 1933(M), 1935-36(M), 1938(P), 1939-40, 1941-42(P), 1945(M), 1946(P), 1949(P). WSP 1712: 1942(P).

GAGE.--Water-stage recorder. Altitude of gage is 5,130 ft (1,564 m) from river-profile map. See WSP 1312 for history of changes prior to June 21, 1951.

REMARKS.--Water-discharge records poor. Diversions above station for irrigation of about 4,900 acres (2.0 km²), 1959 determination, above and below station. Acequia del Bodo Juan Paiz (see table below), diverts water about 8 mi (13 km) above gage and bypasses this station on left bank; ditch flow not included in record. Discharge measurements made at point opposite regular gage. A portion of this flow may be returned to the river about 5.0 mi (8.0 km) downstream.

AVERAGE DISCHARGE.--64 years (1910-15, 1916-24, 1926-77), 129 ft³/s (3.653 m³/s), 93,460 acre-ft/yr (115 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,300 ft³/s (1,140 m³/s) June 1, 1937, gage height, 20.34 ft (6.200 m), from floodmarks, at site and datum then in use, by slope-area measurement; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since 1879 occurred Sept. 29, 1904, discharge about 73,000 ft³/s (2100 m³/s), from information by a local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,080 ft³/s (87.2 m³/s) at 0300 hours Aug. 22, gage height, 7.77 ft (2.368 m), no other peak above base of 3,000 ft³/s (85 m³/s); no flow Feb. 23, Mar. 11, 13.

Discharge measurements, in cubic feet per second, of Acequia del Bodo Juan Paiz, Water Year 1977

Oct. 7	24	Dec. 15	0	Feb. 24	18	Apr. 12	17	June 7	34	July 21	22
Oct. 19	7.6	Jan. 4	0	Mar. 17	23	Apr. 28	48	June 21	0	Aug. 4	11
Nov. 18	0	Jan. 25	0	Mar. 29	12	May 25	19	July 6	0	Sept. 21	6.3

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	15	28	16	4.2	.19	9.0	89	71	45	5.0	25
2	11	12	30	15	5.3	.14	9.0	81	88	29	6.2	193
3	13	5.3	30	7.5	6.0	.14	8.5	92	93	32	7.2	86
4	21	4.3	28	12	4.1	.12	3.9	105	98	29	8.2	44
5	14	3.0	28	7.0	5.0	.32	.77	89	81	186	6.3	30
6	13	4.2	28	8.0	4.3	.40	.48	89	49	174	.24	22
7	15	17	23	7.0	5.0	.24	3.2	91	71	71	.32	25
8	13	24	22	10	5.3	.53	.72	98	83	243	.40	22
9	15	22	31	20	4.6	.11	.99	106	96	476	.24	23
10	15	19	29	20	4.6	.06	3.8	107	80	134	.62	23
11	13	18	24	23	5.9	.00	3.1	127	59	90	245	16
12	11	17	25	22	5.3	.05	3.1	136	46	70	38	.48
13	16	23	24	22	4.3	.00	9.9	132	31	58	20	.24
14	16	26	24	20	3.6	.40	45	181	16	74	14	.40
15	17	25	19	22	.96	.72	49	188	8.5	62	12	4.6
16	19	30	17	20	.14	.55	30	157	8.6	61	90	.96
17	13	31	16	20	.07	.22	22	146	6.8	24	242	1.2
18	12	42	15	22	.04	.18	29	131	6.5	90	231	.80
19	10	19	17	23	.16	.24	17	116	4.7	121	105	.96
20	13	20	17	21	.40	.24	27	109	5.6	16	188	1.2
21	13	22	12	21	.24	3.0	71	92	4.3	15	144	1.6
22	13	21	10	29	.08	2.2	70	63	3.4	11	655	1.8
23	13	17	13	28	.00	.96	57	59	4.0	8.4	90	1.5
24	13	17	13	26	.11	1.4	56	43	9.5	12	140	2.8
25	12	15	11	21	.34	2.6	44	70	43	3.5	76	1.2
26	11	16	12	11	.30	3.3	55	55	22	1.0	21	1.4
27	9.8	15	17	4.3	.26	11	77	48	7.8	286	18	2.3
28	15	25	14	4.9	.34	13	79	35	3.9	89	20	1.5
29	17	28	11	3.8	---	1.9	93	28	91	32	55	.98
30	15	30	8.1	3.9	---	.89	103	30	60	42	63	.79
31	15	---	12	6.3	---	2.8	---	25	---	16	25	---
TOTAL	428.8	582.8	608.1	496.7	70.94	47.90	980.46	2918	1251.6	2600.9	2526.72	535.71
MEAN	13.8	19.4	19.6	16.0	2.53	1.55	32.7	94.1	41.7	83.9	81.5	17.9
MAX	21	42	31	29	6.0	13	103	188	98	476	655	193
MIN	9.8	3.0	8.1	3.8	.00	.00	.48	25	3.4	1.0	.24	.24
AC-FT	851	1160	1210	985	141	95	1940	5790	2480	5160	5010	1060
CAL YR 1976	TOTAL	17046.89	MEAN	46.6	MAX	688	MIN	.07	AC-FT	33810		
WTR YR 1977	TOTAL	13048.63	MEAN	35.7	MAX	655	MIN	.00	AC-FT	25880		

RIO GRANDE BASIN

08379500 PECOS RIVER NEAR ANTON CHICO, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to June 1977 (discontinued).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPECIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	FUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA, MG) (MG/L) (00900)
OCT										
01...	0930	12	325	7.8	15.5	12.5	25	9.6	9	160
18...	1230	13	340	8.0	14.0	13.0	3	9.2	9	170
NOV										
15...	1200	23	300	8.6	10.0	9.0	9	10.7	15	170
DEC										
13...	1200	13	360	8.6	11.0	4.0	20	11.0	5	180
JAN										
17...	1200	20	350	8.5	5.5	.5	25	10.6	18	180
FEB										
14...	1115	5.9	340	8.3	9.0	8.0	9	9.6	61	160
APR										
22...	0845	60	230	8.2	13.0	12.5	350	9.9	27	110
MAY										
23...	1230	64	270	8.7	30.5	21.5	30	7.7	18	110
JUN										
20...	1230	5.9	380	8.1	30.5	24.5	2	8.0	11	210

DATE	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
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OCT									
01...	14	53	6.3	4.9	.2	1.1	176	0	21
18...	21	56	7.7	5.6	.2	1.3	184	0	20
NOV									
15...	9	56	7.0	5.7	.2	1.0	195	0	20
DEC									
13...	20	59	8.2	6.8	.2	.9	196	0	25
JAN									
17...	20	59	7.9	7.0	.2	.9	195	0	26
FEB									
14...	23	53	7.3	6.8	.2	.9	170	0	25
APR									
22...	9	36	4.3	5.3	.2	1.0	120	0	18
MAY									
23...	11	38	3.5	3.0	.1	.9	120	0	16
JUN									
20...	24	66	9.7	6.7	.2	1.7	220	0	23

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)
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OCT									
01...	1.8	.2	8.3	182	184	.06	.04	.00	.14
18...	1.9	.3	7.5	187	191	.01	.00	.00	.00
NOV									
15...	2.3	.2	7.5	212	196	.06	.06	.00	.34
DEC									
13...	2.2	.2	8.7	207	208	.13	.13	.00	.12
JAN									
17...	2.6	.2	7.6	204	208	.16	.16	.00	.14
FEB									
14...	2.7	.2	5.6	199	185	.02	.02	.01	.05
APR									
22...	3.0	.3	6.8	127	134	.09	.09	.00	.55
MAY									
23...	1.6	.2	6.8	124	129	.05	.05	.02	.28
JUN									
20...	2.6	.3	9.8	216	229	.27	.27	.02	.15

08379500 PECOS RIVER NEAR ANTON CHICO, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRO- GEN (N) (MG/L) (006600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDED ORGANIC CARBON (C) (MG/L) (00689)
OCT									
01...	.20	.02	.00	20	30	--	--	--	.8
18...	.01	.01	.01	20	20	--	--	1.5	.6
NOV									
15...	.40	.03	.02	20	10	--	--	2.8	.6
DEC									
13...	.25	.03	.01	20	10	10	--	1.5	.5
JAN									
17...	.30	.04	.01	10	10	--	--	1.5	--
FEB									
14...	.08	.00	.00	10	20	--	1.0	--	--
APR									
22...	.64	.04	.04	20	20	0	6.9	3.8	1.6
MAY									
23...	.35	.06	.01	20	10	--	--	2.9	.3
JUN									
20...	.44	.01	.01	30	30	0	--	1.8	.6

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)
DEC												
13...	1200	1	0	20	<10	0	0	0	<50	0	<10	0
APR												
22...	0845	4	0	20	<10	0	10	0	<50	0	20	2
JUN												
20...	1230	0	0	30	<10	1	10	0	<50	1	20	2

DATE	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
DEC												
13...	540	10	<100	9	20	10	.2	.2	0	0	10	10
APR												
22...	5100	20	<100	0	310	0	.0	.0	1	0	40	0
JUN												
20...	120	30	<100	4	10	0	.0	.0	0	0	20	2

RIO GRANDE BASIN

08379500 PECOS RIVER NEAR ANTON CHICO, NM -- Continued

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
OCT				
01...	0930	120	490	--
18...	1230	12	250	--
NOV				
15...	1200	8	180	--
DEC				
13...	1200	18	68	--
JAN				
17...	1200	3	42	--
FEB				
14...	1115	2	38	--
APR				
22...	0845	400	--	2600
MAY				
23...	1230	40	--	260
JUN				
20...	1230	46	--	420

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT						
01...	0930	12	12.5	45	1.5	71
18...	1230	13	13.0	17	.60	51
NOV						
15...	1200	23	9.0	33	2.0	63
DEC						
13...	1200	13	4.0	64	2.2	52
JAN						
17...	1200	20	.5	74	4.0	79
FEB						
14...	1115	5.9	8.0	14	.22	83
APR						
22...	0845	60	12.5	487	79	79
MAY						
23...	1230	64	21.5	83	14	82
JUN						
20...	1230	5.9	24.5	3	.05	73

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 (3.9 km) west of Montezuma, 6.9 mi (11.1 km) northwest of Las Vegas, and at mile 74.4 (119.7 km).

DRAINAGE AREA.--84 mi² (220 km²), 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 (2,096 m), 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 (32 hm²), 1959 determination, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--61 years, 19.3 ft³/s (0.547 m³/s), 13,980 acre-ft/yr (17.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,120 ft³/s (202 m³/s) Aug. 2, 1966, gage height, 9.7 ft (2.96 m), from floodmarks, from rating curve extended above 500 ft³/s (14 m³/s) on basis of slope-area measurements at gage heights 5.25 ft (1.600 m), 8.25 ft (2.515 m), and 9.7 ft (2.96 m); minimum, 0.20 ft³/s (0.006 m³/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, 494 ft³/s (14.0 m³/s) at 1630 hours Aug. 10, gage height, 3.42 ft (1.042 m), no other peak above base of 200 ft³/s (5.7 m³/s); minimum, 1.4 ft³/s (0.040 m³/s) Feb. 16, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	3.7	2.7	2.8	3.0	2.5	4.2	36	13	3.2	3.2	4.0
2	4.9	3.6	3.0	2.8	2.8	2.5	3.8	33	9.3	3.3	3.0	4.8
3	4.5	3.6	3.2	2.8	2.5	2.8	4.3	31	8.3	3.3	2.8	5.4
4	4.5	3.6	3.1	2.7	2.6	3.0	3.9	29	8.0	4.3	2.6	5.0
5	4.8	3.5	3.0	2.6	2.7	2.8	4.4	27	7.2	16	2.5	4.7
6	4.9	3.3	2.9	2.6	2.7	3.2	4.4	26	6.3	19	1.9	4.6
7	5.4	3.3	2.8	2.8	2.7	3.2	4.7	24	7.2	10	1.9	4.0
8	5.1	3.2	3.0	2.7	2.8	3.2	5.3	23	6.9	7.7	2.0	3.5
9	5.2	3.3	3.0	2.5	2.8	3.3	7.0	23	6.0	6.6	2.2	3.1
10	5.1	3.3	2.9	2.5	2.8	3.8	11	22	5.3	5.5	33	2.9
11	4.8	3.4	2.9	2.5	2.8	3.2	16	21	5.1	4.5	9.0	2.8
12	4.5	3.4	3.0	2.6	2.8	3.2	15	21	4.9	3.9	10	2.9
13	4.3	3.3	3.0	2.6	2.8	3.6	14	34	4.3	3.7	10	3.2
14	4.3	3.3	3.1	2.6	2.7	4.1	16	41	3.9	3.4	6.5	3.2
15	4.3	3.2	3.0	2.6	2.5	4.0	16	36	3.6	3.6	5.3	3.0
16	4.2	3.2	3.1	2.6	2.6	4.1	17	30	2.9	6.2	5.3	2.7
17	4.1	3.3	3.0	2.6	2.7	3.9	17	26	2.9	5.6	11	2.5
18	4.0	3.3	3.0	2.7	2.6	3.3	17	23	2.7	5.0	11	2.2
19	3.9	3.3	2.9	2.7	2.5	3.4	19	20	2.4	5.3	16	2.2
20	3.9	3.3	2.8	2.7	2.5	3.6	22	18	2.6	4.7	23	2.1
21	3.7	3.2	2.7	2.8	2.4	4.0	22	17	2.5	4.7	16	1.9
22	3.7	3.0	2.7	2.9	2.7	3.9	23	14	3.1	5.1	20	1.8
23	3.7	2.9	2.7	3.0	2.4	4.3	22	13	3.1	5.1	11	1.6
24	3.7	2.8	2.8	3.0	2.5	4.5	23	13	3.9	4.5	9.5	1.8
25	3.6	2.8	2.7	3.0	2.6	4.6	44	13	4.4	5.7	8.0	1.8
26	3.6	2.7	3.0	3.0	2.4	4.6	56	12	3.7	7.6	6.3	1.6
27	3.6	2.5	3.2	3.0	2.8	5.1	47	11	3.3	4.9	5.3	1.6
28	3.8	2.0	3.0	3.0	3.3	4.6	44	9.6	3.3	4.5	4.7	1.6
29	3.7	2.2	2.9	3.0	---	3.9	42	8.6	3.6	3.9	4.5	1.6
30	3.7	2.4	2.9	3.0	---	3.2	37	7.5	3.3	4.3	4.2	1.5
31	3.8	---	2.8	3.0	---	4.2	---	9.4	---	3.6	3.8	---
TOTAL	132.6	93.9	90.8	85.7	75.0	113.6	582.0	672.1	147.0	178.7	255.5	85.6
MEAN	4.28	3.13	2.93	2.76	2.68	3.66	19.4	21.7	4.90	5.76	8.24	2.85
MAX	5.4	3.7	3.2	3.0	3.3	5.1	56	41	13	19	33	5.4
MIN	3.6	2.0	2.7	2.5	2.4	2.5	3.8	7.5	2.4	3.2	1.9	1.5
AC-FT	263	186	180	170	149	225	1150	1330	292	354	507	170

CAL YR 1976 TOTAL 2421.5 MEAN 6.62 MAX 56 MIN 1.9 AC-FT 4800
WTR YR 1977 TOTAL 2512.5 MEAN 6.88 MAX 56 MIN 1.5 AC-FT 4980

RIO GRANDE BASIN

08382500 GALLINAS RIVER NEAR COLONIAS, NM

LOCATION.--35°10'55", long 104°53'59", Guadalupe County, Hydrologic Unit 13060001, in Anton Chico and Preston Beck Grants, on right bank 2.3 mi (3.7 km) south of San Miguel-Guadalupe County line, 2.4 mi (3.9 km) upstream from mouth, 5.8 mi (9.3 km) northwest of Colonias, and 9.0 mi (14.5 km) east of Dilia. Mouth at Pecos River mile 789.2 (1,269.8 km).

DRAINAGE AREA.--610 mi² (1,580 km²), approximately.

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,944 ft (1,507 m) from topographic map.

REMARKS.--Records fair. Diversions for irrigation of about 7,000 acres (28 km²) 1959 determination, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--26 years, 17.0 ft³/s (0.481 m³/s), 12,320 acre-ft/yr (15.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,360 ft³/s (265 m³/s) June 16, 1963, gage height, 16.65 ft (5.075 m), from rating curve extended above 1,900 ft³/s (53.8 m³/s) on basis of slope-area measurements at gage heights 8.64 ft (2.633 m), 12.74 ft (3.883 m), 16.65 ft (5.075 m), and 27.2 ft (8.291 m); no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about June 1, 1937, reached a stage of about 27.2 ft (8.29 m); discharge determined as 26,700 ft³/s (756 m³/s) by slope-area measurement made in 1951. A flood of about the same magnitude occurred Sept. 29-30, 1904.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
May 13	0030	2,070	58.6	8.36	2.548
July 1	2030	*3,750	106	10.64	3.243
Aug. 11	0230	1,920	54.4	8.00	2.438
Aug. 22	0500	1,890	53.5	7.95	2.423

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.00	.00	.00	.00	.00	.00	.00	.00	308	.06	10
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	99	.00	51
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.0	.00	20
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.64	.00	18
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.28	.00	66
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.00	38
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.2	.00	16
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	17	94	9.1
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	96	8.4	5.7
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	37	47	3.8
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	10	544	2.9
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.6	64	2.1
13	.00	.00	.00	.00	.00	.00	.00	240	.00	.48	23	2.9
14	.00	.00	.00	.00	.00	.00	34	236	.00	.04	10	27
15	.00	.00	.00	.00	.00	.00	10	33	.00	.00	8.0	9.1
16	.00	.00	.00	.00	.00	.00	3.4	22	.00	.00	4.2	4.6
17	.00	.00	.00	.00	.00	.00	1.2	11	.00	.00	88	2.9
18	.00	.00	.00	.00	.00	.00	29	6.1	.00	.00	190	1.9
19	.00	.00	.00	.00	.00	.00	12	4.0	.00	.00	151	1.3
20	.00	.00	.00	.00	.00	.00	2.4	3.2	.80	.00	43	1.0
21	.00	.00	.00	.00	.00	.00	3.2	2.1	.03	.00	251	.48
22	.00	.00	.00	.00	.00	.00	6.9	1.7	.00	.00	413	.07
23	.00	.00	.00	.00	.00	.00	2.1	.60	.00	.00	53	.02
24	.00	.00	.00	.00	.00	.00	.48	.24	.00	.00	264	.00
25	.00	.00	.00	.00	.00	.00	.22	.05	.00	.00	42	.00
26	.00	.00	.00	.00	.00	.00	.06	.00	.00	.00	14	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	31	7.4	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	57	4.8	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	69	23	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.4	14	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.60	16	---
TOTAL	.04	.00	.00	.00	.00	.00	104.96	559.99	.83	741.24	2376.86	293.87
MEAN	.001	.000	.000	.000	.000	.000	3.50	18.1	.028	23.9	76.7	9.80
MAX	.04	.00	.00	.00	.00	.00	34	240	.80	308	544	66
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.08	.00	.00	.00	.00	.00	208	1110	1.6	1470	4710	583

CAL YR 1976 TOTAL 2920.30 MEAN 7.98 MAX 749 MIN .00 AC-FT 5790
WTR YR 1977 TOTAL 4077.79 MEAN 11.2 MAX 544 MIN .00 AC-FT 8090

08382600 PECOS RIVER ABOVE CAÑON DEL UTA NEAR COLONIAS, NM

LOCATION.--Lat 35°05'29", long 104°48'00", in T.10 N., R.20 E., Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, on right bank 0.4 mi (0.6 km) upstream from Cañon del Uta, 2.9 mi (4.7 km) southeast of Colonias, and at mile 775.8 (1,248.3 km).

DRAINAGE AREA.--2,330 mi² (6,030 km²), approximately.

PERIOD OF RECORD.--January 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,800 ft (1,463 m), from U.S. Corps of Engineers plans.

REMARKS.--Records poor. Diversions and ground-water withdrawals for irrigation for about 11,800 acres (48 km²), 1959 determination, above station; this includes the off channel Storrie Lake project on the Gallinas River above Las Vegas. Several observations of water temperature were made during the period.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,580 ft³/s (158 m³/s) at 0530 hours Aug. 29, gage height, 9.74 ft (2.969 m), no other peak above base of 3,000 ft³/s (85 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.78	.00	.00	.00	.00	.00	.00	29	.00	110	.00	.00
2	.58	.00	.00	.00	.00	.00	.00	18	1.3	156	.00	6.0
3	.20	.00	.00	.00	.00	.00	.00	8.6	8.8	.38	.00	26
4	.00	.00	.00	.00	.00	.00	.00	14	9.5	.00	.00	.67
5	.00	.00	.00	.00	.00	.00	.00	23	9.0	.00	.00	2.3
6	.00	.00	.00	.00	.00	.00	.00	23	3.8	104	.00	1.6
7	.00	.00	.00	.00	.00	.00	.00	22	.00	32	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	14	.00	9.7	9.6	.00
9	.00	.00	.00	.00	.00	.00	.00	16	.00	886	2.4	.00
10	.00	.00	.00	.00	.00	.00	.00	18	5.2	81	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	21	1.9	12	478	.00
12	.00	.00	.00	.00	.00	.00	.00	32	.00	4.1	134	.00
13	.00	.00	.00	.00	.00	.00	.00	214	.00	.00	50	.00
14	.00	.00	.00	.00	.00	.00	.00	349	.00	.00	2.7	.00
15	.00	.00	.00	.00	.00	.00	.00	133	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	104	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	70	.00	.00	13	.00
18	.00	.00	.00	.00	.00	.00	.00	61	.00	.00	443	.00
19	.00	.00	.00	.00	.00	.00	150	49	.00	4.9	201	.00
20	.00	.00	.00	.00	.00	.00	5.0	42	.00	12	95	.00
21	.00	.00	.00	.00	.00	.00	15	34	.00	.42	328	.00
22	.00	.00	.00	.00	.00	.00	35	16	.00	.00	733	.00
23	.00	.00	.00	.00	.00	.00	25	.00	.00	.00	201	.00
24	.00	.00	.00	.00	.00	.00	4.0	.00	.00	.00	281	.00
25	.00	.00	.00	.00	.00	.00	5.0	.00	.00	.00	98	.00
26	.00	.00	.00	.00	.00	.00	5.0	.00	.00	.00	16	.00
27	.00	.00	.00	.00	.00	.00	11	.00	.00	70	.16	.00
28	.00	.00	.00	.00	.00	.00	21	.00	.00	212	.00	.00
29	.00	.00	.00	.00	.00	.00	21	.00	.00	38	658	.00
30	.00	.00	.00	.00	.00	.00	27	.00	25	3.2	4.9	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.68	---
TOTAL	1.56	.00	.00	.00	.00	.00	324.00	1310.60	64.50	1735.70	3749.44	36.57
MEAN	.050	.000	.000	.000	.000	.000	10.8	42.3	2.15	56.0	121	1.22
MAX	.78	.00	.00	.00	.00	.00	150	349	25	886	733	26
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	3.1	.00	.00	.00	.00	.00	643	2600	128	3440	7440	73

CAL YR 1976 TOTAL 9300.37 MEAN 25.4 MAX 1070 MIN .00 AC-FT 18450
WTR YR 1977 TOTAL 7222.37 MEAN 19.8 MAX 886 MIN .00 AC-FT 14330

RIO GRANDE BASIN

08382650 PECOS RIVER ABOVE LOS ESTEROS RESERVOIR, 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 (2.6 km) upstream from River Ranch, 5.8 miles (9.3 km) southeast of Colonias, 9.1 miles (14.6 km) northwest of Santa Rosa, and at mile 770.8 (1,240.2 km).

DRAINAGE AREA.--2,340 mi² (6,060 km²), approximately.

PERIOD OF RECORD.--February 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,757.5 ft (1,450.1 m), from surveys by U.S. Corps of Engineers.

REMARKS.--Records fair. Diversions and ground-water withdrawals for irrigation of about 11,800 acres (48 km²), 1959 determination. This includes the off channel Storrie Lake project on the Gallinas River above Las Vegas. Several observations of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*); from rating curve extended above 4,980 ft³/s (141 m³/s), on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
July 9	0300	3,280	92.9	8.90	2.713
Aug. 29	0630	*9,130	259	14.08	4.292

Minimum discharge, 5.9 ft³/s (0.17 m³/s) Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	13	10	9.2	7.9	7.5	44	8.7	11	8.3	19
2	11	13	13	10	9.6	7.1	7.5	28	9.6	325	8.3	46
3	11	13	12	10	10	7.1	7.5	13	9.6	14	7.1	115
4	13	13	12	10	9.6	7.9	7.1	16	10	11	6.8	42
5	12	13	12	10	9.2	7.5	7.1	23	10	9.6	7.5	26
6	12	13	12	10	9.2	7.5	7.1	26	9.6	112	7.9	18
7	12	13	12	10	8.7	7.5	7.1	23	8.7	69	7.9	16
8	12	13	12	10	8.7	7.5	7.1	15	8.3	21	15	14
9	12	13	12	10	8.7	7.1	6.8	16	7.5	1050	12	14
10	12	12	12	10	7.9	7.1	7.1	15	7.9	178	8.3	13
11	12	12	12	10	7.9	7.5	6.8	17	7.9	60	553	13
12	12	13	12	10	7.9	7.1	6.8	34	7.9	23	179	13
13	12	13	11	10	8.3	7.5	7.9	304	7.9	14	86	13
14	13	13	11	10	8.3	7.1	8.3	341	7.1	12	21	13
15	13	13	11	10	8.7	7.5	7.1	158	7.1	11	12	12
16	13	13	11	9.6	7.9	7.5	7.5	132	7.1	11	11	12
17	13	13	11	9.6	7.9	7.5	7.5	98	7.1	10	20	12
18	13	12	11	9.6	7.9	7.9	7.1	84	7.1	9.2	440	12
19	13	12	11	9.6	7.9	7.5	170	57	6.8	10	221	12
20	13	12	11	9.2	7.9	8.3	14	53	7.1	46	120	11
21	12	12	11	9.2	7.9	8.3	16	42	7.1	11	308	11
22	12	12	11	9.6	7.5	8.3	40	18	7.1	11	810	11
23	12	13	11	9.2	7.5	8.3	33	10	7.1	10	233	11
24	12	13	11	9.2	7.9	8.3	12	11	7.1	10	290	11
25	13	12	11	9.2	8.3	7.9	13	10	7.1	10	177	11
26	13	13	11	9.2	8.3	7.9	12	10	7.1	10	58	11
27	13	13	10	9.2	7.9	8.3	12	9.6	7.1	76	28	12
28	13	13	11	9.2	7.9	7.9	23	8.7	13	257	23	12
29	14	13	11	9.6	---	7.9	26	9.2	7.5	67	1550	12
30	14	13	11	9.6	---	7.9	34	9.2	33	17	85	12
31	13	---	10	9.6	---	7.5	---	9.2	---	8.3	43	---
TOTAL	386	382	353	300.4	234.6	238.1	535.9	1643.9	266.2	2494.1	5357.1	560
MEAN	12.5	12.7	11.4	9.69	8.38	7.68	17.9	53.0	8.87	80.5	173	18.7
MAX	14	13	13	10	10	8.3	170	341	33	1050	1550	115
MIN	11	12	10	9.2	7.5	7.1	6.8	8.7	6.8	8.3	6.8	11
AC-FT	766	758	700	596	465	472	1060	3260	528	4950	10630	1110
WTR YR 1977	TOTAL	12751.3	MEAN	34.9	MAX	1550	MIN	6.8	AC-FT	25290		

LOCATION.--Lat 35°03'26", long 104°45'20", in SW¼SE¼SW¼ sec 30, T.10 N., R.21 E., Guadalupe County, Hydrologic Unit 13060001, at edge of left bank, on south boundary of Preston Beck Grant, 1.2 mi (1.9 km) upstream from River Ranch, 6.5 mi (10.5 km) southeast of Colonias, and 8.8 mi (14.2 km) northwest of Santa Rosa, and at mile 770.4 (1,239.6 km, corrected).

GAGE.--Water-stage recorder. Altitude of gage is 4,758 ft (1,450'm) from topographic map.

REMARKS.--Records poor. Diversions and ground-water withdrawals above station for irrigation of about 11,800 acres (48 km²), 1959 determination. This includes the off channel Storrie Lake Project on the Gallinas River above Las Vegas. Base flow is from springs in a 4 mi (6 km) reach upstream from gage. Several observations of water temperature were made during the period.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge not determined; minimum 8.8 ft³/s (0.25 m³/s) Dec. 27.

[illegible]

RIO GRANDE BASIN

08382730 LOS ESTEROS CREEK ABOVE LOS ESTEROS RESERVOIR, NM

LOCATION.--Lat 35°05'42', long 104°39'49", Guadalupe County, Hydrologic Unit 13060001 in Preston-Beck Grant, on left bank, 3.7 mi (6.0 km) upstream from mouth, 4.9 mi (7.9 km) north-northeast of Los Esteros Reservoir damsite, and 10.4 mi (16.7 km) north-northeast of Santa Rosa. Mouth at Pecos River mile 763.0 (1,227.7 km).

DRAINAGE AREA.--65.6 mi² (169.9 km²).

PERIOD OF RECORD.--July 1973 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,767 ft (1,453 m), from topographic map.

REMARKS.--Records fair. No known diversions or groundwater withdrawals for irrigation above station. Several observations of water temperature were made during the period.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft³/s (110 m³/s) July 24, 1976, gage height 9.3 ft (2.83 m) from rating curve extended above 20 ft³/s (0.57 m³/s) on basis of area-velocity studies, and slope-area measurements at gage heights 6.5 ft (1.98 m) and 9.3 ft (2.83 m); no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood of unknown date reached a discharge of about 6,800 ft³/s (193 m³/s), gage height 11.6 ft (3.54 m), from floodmarks, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 100 ft³/s (2.8 m³/s) and annual maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
May 14	1000	196	5.55	3.59	1.094
May 31	2130	368	10.4	4.25	1.295
June 28	2030	421	11.9	4.42	1.347
July 9	0400	534	15.1	4.75	1.448
July 27	1030	148	4.19	3.35	1.021
Aug. 10	2100	575	16.3	4.86	1.481
Aug. 15	0100	121	3.43	3.20	.975
Aug. 18	0230	118	3.34	3.18	.969
Aug. 21	0030	119	3.37	3.19	.972
Aug. 22	0530	2,690	76.2	8.12	2.475
Aug. 29	0900	*3,030	85.8	8.50	2.591

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.79	.11	.04	1.2
2	.00	.00	.00	.00	.00	.00	.00	.00	.02	.04	.00	28
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	28
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	5.4
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.68
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.22
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.12
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	52	.00	.06
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	162	.00	.03
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.9	55	.03
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.30	62	.03
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11	5.7	.03
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	19	.06
14	.00	.00	.00	.00	.00	.00	.00	33	.00	.15	25	.04
15	.00	.00	.00	.00	.00	.00	.00	2.0	.00	.15	30	.03
16	.00	.00	.00	.00	.00	.00	.00	.18	.00	.05	1.4	.02
17	.00	.00	.00	.00	.00	.00	.00	.05	.00	.03	.35	.01
18	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	31	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.9	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.32	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	20	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	493	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.7	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	10	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.40	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	36	.17	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	68	12	.11	.00
29	.00	.00	.00	.00	---	.00	.00	.00	30	1.3	690	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.96	.20	29	.00
31	.00	---	.00	.00	---	.00	---	17	---	.08	7.3	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	52.24	100.34	267.56	1491.39	63.96
MEAN	.000	.000	.000	.000	.000	.000	.000	1.69	3.34	8.63	48.1	2.13
MAX	.00	.00	.00	.00	.00	.00	.00	33	68	162	690	28
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	104	199	531	2960	127

CAL YR 1976 TOTAL 1463.46 MEAN 4.00 MAX 753 MIN .00 AC-FT 2900
WTR YR 1977 TOTAL 1975.49 MEAN 5.41 MAX 690 MIN .00 AC-FT 3920

08382760 LOS ESTEROS CREEK TRIBUTARY ABOVE LOS ESTEROS RESERVOIR, NM

LOCATION.--Lat 35°05'35", long 104°40'20", Preston-Beck Grant, Guadalupe County, Hydrologic Unit 13060001, 0.5 mile west-southwest of Los Esteros Creek gage, 0.8 mi above confluence with Los Esteros Creek, 4.6 mi north-northeast of Los Esteros Reservoir damsite, and 10.2 mi north-northeast of Santa Rosa, NM.

DRAINAGE AREA.--13.7 mi² (22.0 km²).

PERIOD OF RECORD.--July 1973 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,758 ft (1,450 m), from topographic map.

REMARKS.--Records poor. No known diversions or groundwater withdrawals for irrigation above station. Several observation of water temperature were made during the period.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft³/s (209 m³/s) Aug. 29, 1977, gage height, 7.80 ft (2.377 m) from rating curve extended above 0.5 ft³/s (.014 m³/s) on basis of area-velocity studies, and slope-area measurement at gage height 7.8 ft (2.38 m); no flow most of the time.

EXTREMES FOR PERIOD.--Peak discharge above base of 100 ft³/s (2.8 m³/s) and annual maximum (*):

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
July 29, 1973	1900	* 170	4.81	2.34	0.713
Aug. 6, 1974	2330	* 106	3.00	2.06	0.628
July 4, 1976	0230	* 260	7.36	2.65	0.808
July 14, 1976	0130	200	5.66	2.45	0.747
July 15, 1976	2300	112	3.17	2.09	0.637
July 24, 1976	1000	200	5.66	2.45	0.747
July 25, 1976	0130	150	4.25	2.26	0.689
May 31, 1977	2330	226	6.40	2.54	0.774
June 28, 1977	1900	214	6.06	2.50	0.762
July 8, 1977	2200	125	3.54	2.15	0.655
Aug. 14, 1977	1800	100	2.83	2.03	0.619
Aug. 24, 1977	0030	217	6.15	2.51	0.765
Aug. 29, 1977	0400	*7,400	210	7.80	2.377
Aug. 30, 1977	1930	217	6.15	2.51	0.765

No flow most of the time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	.00	.00
2										---	.00	.00
3										---	.00	.00
4										---	.00	.00
5										---	.00	.00
6										---	.00	.00
7										---	.00	.00
8										---	.00	.00
9										---	.00	.00
10										---	.00	.00
11										---	.00	.00
12										---	.00	.00
13										---	.00	.00
14										---	.00	.00
15										---	.00	.00
16										---	.00	.00
17										---	.00	.00
18										---	.00	.00
19										---	.00	.00
20										---	.00	.00
21										---	.00	.00
22										---	.00	.00
23										---	.00	.00
24										---	.00	.00
25										.00	.00	.00
26										.00	.00	.00
27										.00	.00	.00
28										.00	.00	.00
29										.00	.00	.00
30										.37	.00	.00
31										.00	.00	---
TOTAL										---	.00	.00
MEAN										---	.000	.000
MAX										---	.00	.00
MIN										---	.00	.00
AC-FT										---	.00	.00

RIO GRANDE BASIN

08382760 LOS ESTEROS CREEK TRIBUTARY ABOVE LOS ESTEROS RESERVOIR, NM

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974
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	.01	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.2	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.8	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.8	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.2	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.12	.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	.11
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.17
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	---	.18	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.50	15.81	.29
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.21	.51	.010
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.2	8.2	.17
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	13	31	.6

WTR YR 1974 TOTAL 22.60 MEAN .062 MAX 8.2 MIN .00 AC-FT 45

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
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	1.7	.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	1.8	.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	2.4
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.1
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	.95	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.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	1.70	2.76	4.50
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.055	.089	.15
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.7	1.8	2.4
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC=FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.4	5.5	8.9
CAL YR 1974	TOTAL	22.60	MEAN	.062	MAX	8.2	MIN	.00	AC=FT	45		
WTR YR 1975	TOTAL	8.96	MEAN	.025	MAX	2.4	MIN	.00	AC=FT	18		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
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	1.9	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.3	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	28	2.1	.00
5	.00	.00	.00	.00	.00	.00	.00	.78	.00	.06	.01	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	6.1	.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	21	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	13	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.7	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.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	1.2	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	47	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	14	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.43	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.78	6.10	129.47	10.31	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.025	.20	4.18	.33	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.78	6.1	47	6.3	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	1.5	12	257	20	.00
CAL YR 1975	TOTAL	8.96	MEAN	.025	MAX	2.4	MIN	.00	AC-FT	18		
WTR YR 1976	TOTAL	146.66	MEAN	.40	MAX	47	MIN	.00	AC-FT	291		

08382760 LOS ESTEROS CREEK TRIBUTARY ABOVE LOS ESTEROS RESERVOIR, NM

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	8.5	.00	.00	.10
2	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.25
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.21
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.1	.00	.01
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.7	.00	.01
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.5	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.38	7.4	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.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	.36	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.35	.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	1.6	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.7	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	23	.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	22	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.46	.00	819	.00
31	.00	---	.00	.00	---	.00	---	20	.00	.00	16	.00
TOTAL	.00	.00	.00	.00	.00	.00	.00	20.00	30.98	13.18	881.01	.69
MEAN	.000	.000	.000	.000	.000	.000	.000	.65	1.03	.43	28.4	.023
MAX	.00	.00	.00	.00	.00	.00	.00	20	22	8.1	819	.25
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	40	61	26	1750	1.4
CAL YR 1976	TOTAL	146.66	MEAN	.40	MAX	47	MIN	.00	AC-FT	291		
WTR YR 1977	TOTAL	945.86	MEAN	2.59	MAX	819	MIN	.00	AC-FT	1880		

RIO GRANDE BASIN

08382800 PECOS RIVER ABOVE LOS ESTEROS DAMSITE, NEAR SANTA ROSA, NM

LOCATION.--Lat 35°02'26", long 104°40'52", Guadalupe County, Hydrologic Unit 13060001, in Jose Perea Grant, on left bank, 1.3 mi (2.1 km) downstream from Catfish Falls, 1.6 mi (2.6 km) southwest from mouth of Esteros Creek, 7.2 mi (11.6 km) north of Santa Rosa, and at mile 758.4 (1,220.3 km, corrected).

DRAINAGE AREA.--2,430 mi² (6,290 km²), approximately.

PERIOD OF RECORD.--October 1965 to February 1977 (discontinued); operated as a low-flow station only.

GAGE.--Water-stage recorder. Altitude of gage is 4,630 ft (1,410.m), from topographic map.

REMARKS.--Records poor. Diversions for irrigation of about 12,000 acres (49 km²), 1959 determination, above station. Several observations of water temperature were made during the period.

EXTREMES FOR PERIOD OF RECORD.--Maximum not determined; minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Jan. 5, 6, 1971.

EXTREMES FOR CURRENT PERIOD.--Maximum not determined; minimum, 3.7 ft³/s (0.10 m³/s) Dec. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, PERIOD OCTOBER 1976 TO FEBRUARY 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	11	19	10	11							
2	13	10	18	11	11							
3	13	10	17	12	12							
4	13	11	12	10	11							
5	13	11	12	8.0	11							
6	13	11	9.0	10	11							
7	13	11	10	12	11							
8	13	11	11	12	11							
9	12	11	10	7.0	10							
10	12	11	11	8.0	10							
11	12	11	10	10	10							
12	11	11	10	10	9.8							
13	12	10	10	11	9.8							
14	12	10	11	11	9.4							
15	12	13	11	11	9.8							
16	12	12	11	10	9.8							
17	12	12	12	12	9.0							
18	11	12	13	12	9.0							
19	11	12	12	12	8.6							
20	11	12	12	12	9.0							
21	11	12	10	12	8.6							
22	11	12	9.0	12	8.3							
23	11	12	9.0	12	7.9							
24	11	12	10	12	8.6							
25	11	11	12	11	8.6							
26	12	11	12	10	8.0							
27	13	8.0	13	11	8.0							
28	14	6.0	13	11	8.0							
29	13	10	12	11	---							
30	12	14	10	11	---							
31	11	---	9.0	11	---							
TOTAL	374	331.0	360.0	335.0	269.2							
MEAN	12.1	11.0	11.6	10.8	9.61							
MAX	14	14	19	12	12							
MIN	11	6.0	9.0	7.0	7.9							
AC-FT	742	657	714	664	534							

08383000 PECOS RIVER AT SANTA ROSA, NM

LOCATION.--Lat 34°56'36", long 104°41'55", in NW¼SE¼ sec.3, T.8 N., R.21 E., Guadalupe County, Hydrologic Unit 13060001, on left bank, 0.4 mi (0.6 km) downstream from bridge on U.S. Highway I-40, 0.6 mi (1.0 km) upstream from bridge on U.S. Highway I-40 Business in Santa Rosa, 1.9 mi (3.1 km) upstream from El Rito Creek, and at mile 748.4 (1,204.2 km). Water-quality sampling site 0.7 mi (1.1 km) downstream.

DRAINAGE AREA.--2,650 mi² (6,860 km²), 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 crest-stage gage. Datum of gage is 4,537.56 ft (1,383.048 m) above mean sea level. For history of changes prior to Sept. 13, 1967, see WSP 2123.

REMARKS.--Water-discharge records poor. Diversions for irrigation of about 12,000 acres (49 km²), 1959 determination, above station.

AVERAGE DISCHARGE.--61 years (1906, 1913-24, 1928-77), 136 ft³/s (3.852 m³/s), 98,530 acre-ft/yr (121 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,200 ft³/s (1,560 m³/s) June 2, 1937, gage height, 25.7 ft (7.83 m), site and datum then in use, from rating curve extended above 32,000 ft³/s (906 m³/s); minimum 0.28 ft³/s (0.008 m³/s) Jan. 7, 1971.

The flood of June 2, 1937, is the greatest since about 1886. Flood of Sept. 30, 1904, reached a stage of 24.7 ft (7.53 m), site and datum then in use, discharge, 45,000 ft³/s (1,290 m³/s), by Kuttehr's formula. Flood of June 9, 1903, reached a stage of 21.1 ft (6.43 m), same site and datum as in 1904, discharge, 34,000 ft³/s (963 m³/s), by comparison with 1904 flood.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 4,000 ft³/s (110 m³/s) and maximum (*):

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
July 9	0800	4,140	117	4.79	1.460
Aug. 22	1300	5,250	149	5.50	1.676
Aug. 29	1100	*15,790	447	10.60	3.231

Minimum discharge 3.7 ft³/s (0.105 m³/s) Jan. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	18	11	11	12	12	39	69	60	19	243
2	19	14	19	9.0	11	13	11	48	37	210	14	302
3	16	14	17	14	12	13	11	44	20	50	13	237
4	14	14	13	12	12	13	11	27	14	40	11	120
5	16	14	14	9.0	12	13	11	24	12	35	12	54
6	16	14	12	7.5	12	13	12	29	12	25	16	46
7	16	14	9.0	12	12	12	12	35	11	98	12	37
8	17	14	12	11	12	12	12	37	10	39	10	27
9	17	14	15	5.5	11	12	12	35	9.0	1280	10	25
10	14	17	15	7.0	11	12	12	31	9.0	340	16	23
11	16	17	12	9.0	11	11	12	29	8.1	103	480	20
12	16	16	13	13	11	11	12	35	8.1	35	294	17
13	17	17	14	13	11	11	12	250	7.3	19	116	50
14	17	15	14	12	10	11	12	407	8.1	12	85	30
15	17	15	15	12	10	11	13	276	8.1	12	72	23
16	17	19	16	11	11	11	11	173	7.3	10	25	21
17	19	16	16	10	10	13	10	130	6.6	7.3	17	19
18	19	17	16	4.7	10	12	10	97	6.6	6.6	323	19
19	20	17	16	4.2	10	11	91	64	6.6	6.6	293	18
20	19	14	14	5.3	10	11	79	64	8.1	9.0	127	17
21	17	13	12	12	11	11	33	58	9.0	29	178	17
22	17	13	12	13	11	11	27	44	13	17	1320	16
23	16	12	11	13	12	11	48	31	10	14	428	16
24	17	12	12	13	12	11	41	22	10	17	446	16
25	16	11	13	13	13	11	20	14	10	17	242	17
26	17	10	12	12	14	11	20	12	11	19	85	17
27	16	8.1	14	11	14	13	16	11	9.0	20	24	20
28	19	6.5	13	12	16	14	14	9.0	48	276	12	24
29	19	10	9.0	12	---	12	24	9.0	306	133	5000	27
30	17	14	11	11	---	12	33	10	60	72	629	27
31	16	---	9.0	11	---	12	---	10	---	31	269	---
TOTAL	526	417.6	418.0	325.2	323	367	654	2104.0	763.9	3042.5	10598	1545
MEAN	17.0	13.9	13.5	10.5	11.5	11.8	21.8	67.9	25.5	98.1	342	51.5
MAX	20	19	19	14	16	14	91	407	306	1280	5000	302
MIN	14	6.5	9.0	4.2	10	11	10	9.0	6.6	6.6	10	16
AC-FT	1040	828	829	645	641	728	1300	4170	1520	6030	21020	3060
CAL YR 1976	TOTAL	20867.6	MEAN 57.0	MAX 2910	MIN 6.5	AC-FT 41390						
WTR YR 1977	TOTAL	21084.2	MEAN 57.8	MAX 5000	MIN 4.2	AC-FT 41820						

RIO GRANDE BASIN

08383000 PECOS RIVER AT SANTA ROSA, NM -- Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected 0.6 mi (1.0 km) downstream from discharge station.

PERIOD OF RECORD.--Water years 1905-07, 1959 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to current year.

WATER TEMPERATURES: October 1958 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1958 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,500 micromhos Jan. 18, 1974; minimum daily, 173 micromhos May 22, 1973.

WATER TEMPERATURES: Maximum (1958-63, 1964-77), 38.0°C May 11, 1970; minimum, 0.0°C on several days during winter months of most years.

SEDIMENT CONCENTRATIONS: Maximum daily, 31,400 mg/L Aug. 18, 1961; minimum daily, 3 mg/L Apr. 30, 1972.

SEDIMENT LOADS: Maximum daily, 344,000 tons (312,000 tonnes) July 30, 1971; minimum daily, .09 ton (.08 tonne) Apr. 30, 1972.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,370 micromhos Jan. 18; minimum daily, 240 micromhos Aug. 29.

WATER TEMPERATURES: Maximum, 34.0°C June 19; minimum, 0.0°C Dec. 20, 22, Jan. 2.

SEDIMENT CONCENTRATIONS: Maximum daily, 12,800 mg/L Aug. 22; 4; minimum daily, 10 mg/L June 21.

SEDIMENT LOADS: Maximum daily, 133,000 tons (121,000 tonnes) Aug. 29; minimum daily, .24 ton (.22 tonne) June 21.

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SED- MENT (MG/L) (80154)	SUS- PENDE SED- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN (70337)	SUS. SED. FALL DIAM. % FINER THAN (70338)	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. FALL DIAM. % FINER THAN (70342)
OCT									
02...	0800	5.3	15.0	438	6.3	65	81	95	--
JAN									
17...	1515	19	9.5	319	16	55	67	75	--
APR									
20...	0730	94	11.0	728	185	39	49	61	--
21...	0720	37	10.0	213	21	77	89	93	--
JUN									
01...	0740	168	18.0	1990	903	28	41	69	--
01...	1725	66	27.5	1050	187	76	87	96	--
29...	0730	375	17.0	4500	4560	57	65	82	92
JUL									
02...	0720	210	20.0	15300	8680	48	61	81	94
07...	0735	143	22.0	1540	595	49	61	74	91
09...	0840	4040	18.0	19500	213000	37	51	77	99
11...	0725	127	22.0	920	315	53	61	70	77
29...	0730	168	22.0	7780	3530	56	71	94	97
30...	0725	101	21.0	1540	420	54	62	81	84
AUG									
11...	1345	960	20.0	16200	42000	46	64	87	97
12...	0820	330	18.0	8960	7980	58	70	92	98
18...	1445	635	24.5	11200	19200	50	60	87	96
22...	1500	2300	24.0	14800	91900	41	56	76	97
29...	0730	10300	19.0	9190	256000	31	42	58	91
29...	1245	7050	20.0	10100	192000	34	45	62	93
29...	1735	3360	23.0	9510	86300	46	55	69	92

08383000 PECOS RIVER AT SANTA ROSA, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70345)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM (70332)	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM (70333)	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM (70334)	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM (70335)
OCT								
02...	--	--	--	99	100	--	--	--
JAN								
17...	--	--	--	87	89	92	99	100
APR								
20...	--	--	--	82	88	97	100	--
21...	--	--	--	99	99	100	--	--
JUN								
01...	--	--	--	93	98	100	--	--
01...	--	--	--	98	99	100	--	--
29...	97	100	--	--	--	--	--	--
JUL								
02...	97	100	--	--	--	--	--	--
07...	96	99	100	--	--	--	--	--
09...	100	--	--	--	--	--	--	--
11...	84	92	100	--	--	--	--	--
29...	98	100	--	--	--	--	--	--
30...	85	98	100	--	--	--	--	--
AUG								
11...	99	100	--	--	--	--	--	--
12...	99	100	--	--	--	--	--	--
18...	97	100	--	--	--	--	--	--
22...	98	100	--	--	--	--	--	--
29...	96	99	100	--	--	--	--	--
29...	97	100	--	--	--	--	--	--
29...	97	99	100	--	--	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1480	1680	1670	2040	1940	2060	1960	1270	1310	971	1460	666
2	1490	1660	1720	2100	1820	1970	2090	1030	886	786	1620	398
3	---	1680	1690	1900	1800	2100	2100	945	1300	436	1780	782
4	1560	1700	1760	1860	1800	1970	2080	1240	1610	931	1840	690
5	1540	1680	1670	1820	1860	1900	2120	1430	1880	978	1920	971
6	1560	1690	1720	2190	1760	1980	2130	1360	1920	1160	1700	1140
7	1610	1730	1850	1630	1820	1950	2160	1240	1920	721	1910	961
8	1570	1650	1670	1580	1800	1920	2050	1200	1870	657	1970	1240
9	1570	1700	1680	2220	1830	2000	2170	1270	2000	370	2120	1410
10	1610	1710	1870	1710	1820	1960	2130	1420	2010	320	1810	1540
11	1600	1700	1920	1760	1840	2010	2100	1550	2140	408	1160	1570
12	1600	1760	1820	1750	1820	1960	2140	1220	2060	696	356	1620
13	1650	1730	1820	1850	1870	2020	2220	434	2050	1010	413	1640
14	1590	1740	1830	1780	1830	2070	1970	407	2170	1260	520	1190
15	1600	1510	1780	1870	1850	2030	2000	431	2190	1280	658	1640
16	1610	1700	1810	1840	1860	2030	2020	408	2190	1470	950	1620
17	1610	1760	1860	2150	1900	2030	2130	539	2280	1610	1380	1700
18	1590	1700	1880	2370	1870	2030	2160	616	2320	1710	885	1760
19	1630	1720	1760	2240	1910	2080	2250	652	2190	1820	344	1780
20	1590	1730	1790	2340	1850	2050	570	723	2250	1840	446	1780
21	1620	1740	1940	2010	1920	2110	1030	765	2180	1370	505	1820
22	1620	1740	1910	1780	1890	1950	1490	872	1980	1360	358	1860
23	1580	1740	1980	1820	1950	2070	1320	1040	2090	1520	323	1820
24	1680	1750	2060	1780	1920	2110	1030	1200	2050	1570	310	1860
25	1690	1770	1880	1940	1910	2120	1380	1510	2050	1710	361	2000
26	1660	1810	1880	1940	1890	2090	1440	1720	2030	1780	456	2000
27	1700	2070	1710	2090	1940	2020	1570	1610	2170	1890	881	2000
28	1590	2220	1850	1950	1920	1890	1690	1740	2230	1020	1230	1990
29	1530	2000	1870	2060	---	2020	1480	1750	482	448	240	2000
30	1630	1830	1890	1860	---	2070	1290	1810	748	604	354	2000
31	1670	---	2130	2020	---	2120	---	1840	---	1280	343	---
MEAN	1600	1750	1830	1940	1860	2020	1810	1140	1880	1130	987	1510
WTR YR 1977	MEAN	1620	MAX	2370	MIN	240						

RIO GRANDE BASIN

08383000 PECOS RIVER AT SANTA ROSA, NM -- Continued

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	6.0	2.5	3.0	13.5	4.0	8.0	23.0	18.0	18.5	19.0	19.5
2	15.0	7.0	1.5	.0	5.5	9.0	4.0	14.0	18.0	20.0	19.0	20.0
3	---	8.5	2.0	3.0	3.0	14.0	8.0	14.0	17.0	20.0	18.0	20.0
4	12.5	7.0	2.0	1.5	7.5	14.0	5.5	10.0	16.0	20.5	19.0	22.0
5	10.0	8.0	3.5	2.0	13.5	5.0	23.0	12.0	20.5	19.5	18.0	18.5
6	11.0	7.0	5.0	1.0	16.5	2.5	8.0	12.0	16.0	22.0	19.0	19.0
7	8.0	10.0	8.0	5.5	14.0	4.0	8.0	12.0	17.0	22.0	17.5	17.5
8	5.5	6.0	3.0	2.0	12.0	2.0	10.0	16.5	17.0	20.0	17.0	18.0
9	8.0	7.0	3.5	2.0	10.0	7.5	10.0	13.0	17.0	18.0	19.0	17.5
10	22.0	7.0	1.0	1.0	10.0	4.5	23.0	15.0	16.0	21.5	19.5	17.5
11	10.0	7.0	2.5	4.5	9.0	5.0	13.0	15.0	16.0	22.0	20.5	20.5
12	10.0	5.0	2.0	1.0	15.0	17.5	10.0	14.5	21.0	22.0	18.0	17.0
13	11.0	8.0	1.0	2.0	6.0	11.0	14.0	23.5	30.0	20.0	20.0	17.0
14	10.0	4.0	1.5	5.0	15.0	6.5	13.0	18.5	17.5	20.5	22.0	15.0
15	10.5	4.0	4.5	3.0	13.0	5.0	21.0	5.0	16.5	20.0	21.0	17.0
16	7.0	4.0	7.0	1.0	4.0	6.0	21.0	22.5	17.0	19.0	20.0	17.5
17	15.5	3.0	8.0	2.0	6.5	7.0	16.5	22.0	16.0	26.0	20.5	17.0
18	9.0	4.5	2.0	10.0	15.0	16.0	10.0	15.0	17.5	19.0	21.0	15.0
19	5.0	5.5	9.0	4.5	5.0	15.0	14.0	13.0	34.0	19.0	23.0	15.5
20	5.0	5.0	.0	3.0	25.5	17.0	11.0	13.5	19.0	18.5	22.5	15.0
21	7.0	6.0	5.5	10.0	5.0	5.0	10.0	12.0	16.5	21.0	25.0	15.5
22	8.0	3.0	.0	8.0	13.0	5.0	10.5	16.0	29.0	20.0	20.5	14.0
23	9.5	4.0	5.0	6.5	11.0	6.0	13.0	13.5	17.5	19.0	22.0	16.5
24	8.5	4.0	2.0	8.5	10.0	7.0	16.0	15.0	17.0	20.0	15.0	14.0
25	6.5	7.5	3.5	8.5	8.0	7.0	20.0	17.0	17.0	18.5	22.0	17.5
26	8.0	5.0	2.0	7.5	5.5	15.0	23.0	14.0	22.0	29.0	21.0	14.0
27	5.0	1.0	3.5	11.0	2.5	10.0	17.0	12.5	18.0	20.5	19.0	28.0
28	6.5	4.0	2.0	9.0	15.5	6.0	14.0	13.5	18.0	22.5	19.5	14.5
29	9.0	5.0	1.5	7.5	---	6.0	13.0	16.5	17.0	22.0	19.0	15.0
30	7.5	7.5	5.0	4.0	---	4.0	27.0	18.0	18.0	21.0	21.0	15.0
31	11.5	---	9.0	3.0	---	7.0	---	17.5	---	32.0	13.0	---
MEAN	9.5	5.5	3.5	4.5	10.5	8.0	14.0	15.0	19.0	21.0	19.5	17.5
WTR YR 1977	MEAN	12.5	MAX	34.0	MIN	.0						

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)	
	LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)	
OCTOBER												
1	165	7.6	144	6.2	105	5.1	74	2.2	100	3.0	36	1.2
2	438	22	319	12	101	5.2	68	1.7	69	2.0	51	1.8
3	200	8.6	254	9.6	128	5.9	76	2.9	70	2.3	84	2.9
4	158	6.0	212	8.0	81	2.8	86	2.8	80	2.6	131	4.6
5	131	5.7	158	6.0	74	2.8	74	1.8	419	14	65	2.3
NOVEMBER												
6	112	4.8	344	13	84	2.7	73	1.5	125	4.1	50	1.8
7	120	5.2	98	3.7	94	2.3	125	4.1	48	1.6	36	1.2
8	120	5.5	116	4.4	81	2.6	158	4.7	73	2.4	69	2.2
9	174	8.0	380	14	84	3.4	111	1.6	46	1.4	41	1.3
10	104	3.9	229	11	62	2.5	70	1.3	51	1.5	17	.55
DECEMBER												
11	112	4.8	385	18	70	2.3	75	1.8	65	1.9	34	1.0
12	87	3.8	359	16	69	2.4	190	6.7	39	1.2	91	2.7
13	76	3.5	250	11	72	2.7	176	6.2	30	.89	86	2.6
14	106	4.9	191	7.7	72	2.7	138	4.5	39	1.1	20	.59
15	114	5.2	203	8.2	80	3.2	92	3.0	48	1.3	18	.53
JANUARY												
16	82	3.8	291	15	125	5.4	65	1.9	35	1.0	37	1.1
17	95	4.9	468	20	120	5.2	110	3.0	34	.92	32	1.1
18	106	5.4	337	15	142	6.1	48	.53	181	4.9	23	.75
19	100	5.4	189	8.7	142	6.1	55	.62	47	1.3	520	15
20	107	5.5	125	4.7	103	3.9	62	.89	33	.89	233	6.9
FEBRUARY												
21	95	4.4	111	3.9	94	3.0	133	4.3	31	.92	41	1.2
22	108	5.0	122	4.3	150	4.9	149	5.2	85	2.5	24	.71
23	129	5.6	172	5.6	192	5.7	115	4.0	84	2.7	22	.65
24	103	4.7	104	3.4	98	3.2	97	3.4	30	.97	19	.56
25	89	3.8	85	2.5	93	3.3	137	4.8	41	1.4	16	.48
MARCH												
26	118	5.4	84	2.3	85	2.8	129	4.2	42	1.6	12	.36
27	102	4.4	125	2.7	84	3.2	126	3.7	40	1.5	33	1.2
28	147	7.5	159	2.8	61	2.1	131	4.2	43	1.9	41	1.5
29	248	13	114	3.1	66	1.6	102	3.3	---	---	20	.65
30	315	14	131	5.0	62	1.8	96	2.9	---	---	15	.49
31	194	8.4	---	---	55	1.3	97	2.9	---	---	13	.42
TOTAL	---	200.7	---	247.8	---	108.2	---	96.64	---	63.79	---	60.34
APRIL												
1	18	.58	179	19	1030	277	116	19	387	20	1050	1840
2	15	.45	200	26	310	31	9520	5400	152	5.7	2220	2230
3	44	1.3	150	18	101	5.5	1050	142	245	8.6	5040	4360
4	15	.45	89	6.5	95	3.6	255	28	150	4.5	3100	1160
5	30	.89	82	5.3	104	3.4	381	36	124	4.0	700	102
MAY												
6	18	.58	112	8.8	114	3.7	140	9.5	206	8.9	351	44
7	16	.52	108	10	101	3.0	1210	349	110	3.6	273	27
8	15	.49	107	11	92	2.5	650	68	84	2.3	176	13
9	16	.52	90	8.5	38	.92	9030	46800	59	1.6	154	10
10	21	.68	84	7.0	31	.75	4000	3670	129	5.6	119	7.4
JUNE												
11	25	.81	76	6.0	30	.66	900	250	8500	16300	128	6.9
12	14	.45	115	11	29	.63	295	28	8310	6600	93	4.3
13	18	.58	1810	2160	31	.61	117	6.0	2600	814	106	14
14	23	.75	2290	2610	22	.48	86	2.8	1020	234	259	21
15	35	1.2	1790	1330	21	.46	107	3.5	520	101	83	5.2
JULY												
16	32	.95	925	432	20	.39	80	2.2	290	20	101	5.7
17	18	.49	1390	488	19	.34	59	1.2	500	23	81	4.2
18	44	1.2	1000	262	17	.30	79	1.4	5960	7860	88	4.5
19	38	10	482	83	16	.29	102	1.8	8250	6530	69	3.4
20	416	83	231	40	24	.52	136	3.3	6200	2130	77	3.5
AUGUST												
21	176	16	140	22	10	.24	123	9.6	6840	4140	78	3.6
22	119	8.7	108	13	19	.67	106	4.9	12800	52300	63	2.7
23	258	33	94	7.9	14	.38	100	3.8	10400	12000	69	3.0
24	231	26	80	4.8	49	1.3	79	3.6	7160	11400	63	2.7
25	137	7.4	60	2.3	56	1.5	62	2.8	5500	3590	65	3.0
SEPTEMBER												
26	105	5.7	63	2.0	60	1.8	69	3.5	2100	482	52	2.4
27	156	6.7	101	3.0	45	1.1	83	4.5	350	23	58	3.1
28	108	4.1	93	2.3	1070	465	5820	5860	180	5.8	67	4.3
29	193	13	126	3.1	3280	3970	5220	1870	7190	133000	135	9.8
30	167	15	109	2.9	267	43	1010	196	6950	11900	177	13
31	---	---	97	2.6	---	---	235	20	2480	2650	---	---
TOTAL	---	241.49	---	7608.0	---	4821.04	---	64800.4	---	272167.6	---	9913.7
TOTAL LOAD FOR YEAR: 360329.70 TONS.												

RIO GRANDE BASIN

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM
(Surveillance program station)

LOCATION.--Lat 34°43'48", long 104°31'28", in NE¼SE¼NW¼ sec.20, T.6 N., R.23 E., Guadalupe County, Hydrologic Unit 13060001, on left bank 9 mi (14.5 km) southeast of Puerto de Luna, 17.5 mi (28.2 km) upstream from Sumner Dam, and at mile 719.5 (1,157.7 km).

DRAINAGE AREA.--3,970 mi² (10,280 km²), approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to current year.

REVISED RECORDS.--WSP 1512: 1939.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,311.34 ft (1,314.096 m) above mean sea level. Prior to Apr. 15, 1954, at datum 1 ft (0.30 m) higher.

REMARKS.--Water-discharge records good. Diversions for irrigation of about 12,500 acres (51 km²), 1959 determination, above station. Discharge represents inflow to Lake Sumner.

AVERAGE DISCHARGE.--39 years, 209 ft³/s (5.919 m³/s), 151,400 acre-ft/yr (187 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,600 ft³/s (1,380 m³/s) Sept. 1, 1942, gage height, 17.00 ft (5.182 m), from rating curve extended above 7,400 ft³/s (210 m³/s) on basis of flow at Santa Rosa; minimum, 11 ft³/s (0.31 m³/s) Jan. 31, 1951.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1886 occurred June 2, 1937, when peak at Santa Rosa was 55,200 ft³/s (1,560 m³/s) and peak inflow to Lake Sumner was about 75,000 ft³/s (2,120 m³/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.--Peak discharges above base of 5,500 ft³/s (160 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
July 9	0100	7,020	199	6.00	1.829
Aug. 29	1730	*8,530	242	6.67	2.033

Minimum discharge, 39 ft³/s (1.10 m³/s) Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	89	82	87	88	90	79	88	60	92	72	452
2	82	88	89	92	89	89	77	94	111	232	62	891
3	84	87	89	88	95	89	74	101	80	250	57	635
4	80	84	89	93	91	89	80	99	62	121	56	394
5	84	93	89	90	90	90	83	93	57	154	59	192
6	86	90	83	95	89	91	85	90	57	90	58	151
7	83	84	82	95	89	87	79	88	59	103	63	139
8	86	88	85	95	89	86	81	88	60	571	53	121
9	87	89	85	88	88	84	84	100	62	2730	42	107
10	83	89	89	90	89	82	77	90	59	607	48	103
11	82	90	94	92	93	81	92	88	54	293	256	97
12	76	88	92	88	91	83	87	88	56	198	480	94
13	74	88	90	88	89	83	84	96	55	169	266	318
14	76	84	88	89	87	82	89	447	56	156	820	178
15	80	95	90	88	86	81	92	479	59	120	254	94
16	73	94	88	85	85	84	90	271	52	110	128	90
17	74	90	86	90	85	86	84	223	50	100	150	88
18	76	91	88	87	83	84	83	181	51	98	384	86
19	79	90	86	81	84	78	80	159	55	96	438	83
20	83	90	84	78	84	79	200	130	55	92	645	80
21	85	89	85	82	87	79	145	122	63	88	212	78
22	87	87	85	89	85	81	102	111	68	182	1220	76
23	88	87	82	91	84	81	97	96	76	88	700	83
24	87	88	86	91	84	82	108	88	70	68	478	73
25	87	88	86	90	85	81	101	84	108	68	331	75
26	84	85	86	89	89	82	96	76	88	64	203	77
27	83	80	88	87	89	87	94	69	69	61	119	77
28	91	70	90	86	89	84	88	67	284	82	83	78
29	93	76	87	87	---	83	88	62	954	335	3580	76
30	91	78	88	87	---	81	90	59	174	147	1220	81
31	90	---	86	87	---	81	---	57	---	104	1100	---
TOTAL	2578	2609	2697	2745	2456	2600	2789	3984	3164	7669	13637	5167
MEAN	83.2	87.0	87.0	88.5	87.7	83.9	93.0	129	105	247	440	172
MAX	93	95	94	95	95	91	200	479	954	2730	3580	891
MIN	73	70	82	78	83	78	74	57	50	61	42	73
AC-FT	5110	5170	5350	5440	4870	5160	5530	7900	6280	15210	27050	10250

CAL YR 1976 TOTAL 49773 MEAN 136 MAX 3080 MIN 59 AC-FT 98720
WTR YR 1977 TOTAL 52095 MEAN 143 MAX 3580 MIN 42 AC-FT 103300

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1939-41, 1943, 1947-59, 1968 to current year.

REMARKS.--Prior to 1968 Water Year published as 8-3834, Pecos River at Puerto de Luna, N. Mex., which was located at bridge in the village of Puerto de Luna, 9 mi (14.5 km) northwest of the discharge station.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPECIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)
OCT 19...	1130	78	2660	8.1	7.0	10.5	40	10.9	10	1600	1500	530
NOV 16...	1000	94	2800	8.8	12.5	5.5	50	11.6	24	1600	1500	540
DEC 14...	1100	93	2750	8.3	8.5	3.0	45	12.0	21	1600	1500	530
JAN 18...	1115	92	3000	7.9	9.0	4.0	40	12.2	24	1700	1600	570
FEB 15...	1030	84	2900	8.5	3.0	7.0	25	10.5	1	1700	1600	580
MAR 15...	1030	80	3000	8.6	13.5	9.5	30	10.4	41	1600	1500	540
APR 18...	1300	86	2800	8.1	25.0	24.0	25	8.3	9	1600	1500	530
MAY 24...	1000	86	2100	7.2	19.5	16.5	45	9.3	60	1300	1200	450
JUN 21...	1130	66	2800	8.1	28.5	23.5	25	8.0	13	1700	1600	580
JUL 21...	1130	88	2800	7.5	31.5	25.5	65	7.4	0	1600	1500	550
AUG 19...	1000	433	805	7.5	25.0	23.5	4800	7.1	400	380	280	130
SEP 29...	1030	78	2800	8.2	25.5	19.0	45	8.9	7	1600	1500	530

DATE	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)
OCT 19...	67	88	1.0	2.4	139	0	1500	130	.6	13	2560	2400
NOV 16...	62	85	.9	2.3	152	0	1400	120	.6	12	2450	2300
DEC 14...	66	91	1.0	2.2	142	0	1400	120	.6	14	2520	2290
JAN 18...	72	100	1.1	2.2	145	0	1600	150	.7	14	2630	2580
FEB 15...	69	90	.9	2.2	126	0	1500	150	.7	14	2630	2470
MAR 15...	68	95	1.0	2.3	140	0	1500	140	.7	14	2710	2430
APR 18...	70	95	1.0	2.6	110	0	1500	130	.7	14	2640	2400
MAY 24...	52	72	.9	2.4	130	0	1200	96	.6	12	2100	1950
JUN 21...	68	94	1.0	2.6	110	0	1600	130	.5	22	2710	2550
JUL 21...	66	93	1.0	2.8	120	0	1600	120	.7	14	2550	2510
AUG 19...	14	25	.6	2.8	120	0	290	26	.4	11	568	560
SEP 29...	71	90	1.0	2.5	120	0	1400	130	.7	14	2590	2300

RIO GRANDE BASIN

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM --- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRITE PLUS NITRATE (N) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (00631)	TOTAL AMMONIA NITRO- GEN (N) (00610)	TOTAL ORGANIC NITRO- GEN (N) (00605)	TOTAL NITRO- GEN (N) (00600)	TOTAL PHOS- PHORUS (P) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (00671)	DIS- SOLVED BORON (B) (01020)	DIS- SOLVED IRON (FE) (01046)	TOTAL ORGANIC CARBON (C) (00680)	DIS- SOLVED ORGANIC CARBON (C) (00681)	SUS- PENDE D ORGANIC CARBON (C) (00689)
OCT 19...	.04	.03	.00	.07	.11	.06	.02	90	20	--	.5	.5
NOV 16...	.14	.13	.11	.38	.63	.13	.01	90	10	--	.9	.8
DEC 14...	.12	.11	.00	.26	.38	.08	.02	90	10	--	4.5	.9
JAN 18...	.15	.15	.01	.10	.26	.07	.04	100	10	--	.9	.3
FEB 15...	.11	.08	.01	.21	.33	.08	.08	100	30	1.2	--	--
MAR 15...	.10	.04	.00	.37	.47	.02	.01	110	20	--	.7	.8
APR 18...	.07	.07	.01	.24	.32	.05	.05	100	20	--	2.7	.6
MAY 24...	.10	.10	.01	.35	.46	.09	.02	80	30	--	2.1	.3
JUN 21...	.05	.04	.01	.32	.38	.03	.01	110	30	--	.6	.6
JUL 21...	.06	.06	.01	.40	.47	.06	.01	110	10	--	.7	.3
AUG 19...	.44	.38	.04	14	14	3.8	.03	60	10	--	4.1	1.5
SEP 29...	.09	.06	.01	.15	.25	.05	.03	110	30	--	.9	.8

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)
AUG 19...	1000	1080
SEP 29...	1030	57

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL MERCURY (HG) (UG/L) (71900)
SEP 29...	1030	2	110	10	20	10	30	100	.0

RIO GRANDE BASIN

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08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM -- Continued

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
OCT 19...	1130	30	68	--
NOV 16...	1000	53	120	--
DEC 14...	1100	18	61	--
JAN 18...	1115	11	46	--
FEB 15...	1030	4	17	--
MAR 15...	1030	2	--	6
APR 18...	1300	6	--	5
MAY 24...	1000	140	--	270
JUN 21...	1130	56	--	67
JUL 21...	1130	67	--	180
AUG 19...	1000	6300	--	13000
SEP 29...	1030	36	--	50

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 19...	1130	78	10.5	164	35	69
NOV 16...	1000	94	5.5	294	75	--
DEC 14...	1100	93	3.0	277	70	--
JAN 18...	1115	92	4.0	1330	330	13
FEB 15...	1030	84	7.0	144	33	54
MAR 15...	1030	80	9.5	142	31	49
APR 18...	1300	86	24.0	180	42	--
MAY 24...	1000	86	16.5	340	79	--
JUN 21...	1130	66	23.5	246	44	--
JUL 21...	1130	88	25.5	71	17	88
AUG 19...	1000	433	23.5	9100	10600	91
SEP 29...	1030	78	19.0	230	48	--

08384000 LAKE SUMNER NEAR FORT SUMNER, NM

LOCATION.--Lat 34°36'30", long 104°23'04", in SE¼SW¼ sec.34, T.5 N., R.24 E., DeBaca County, Hydrologic Unit 13060001, near center of dam on Pecos River, 5.0 mi (8.0 km) northeast of Guadalupe, 12.2 mi (19.6 km) northwest of Fort Sumner, and at mile 702.0 (1,129.5 km).

DRAINAGE AREA.--4,390 mi² (11,370 km²), approximately (contributing area).

PERIOD OF RECORD.--December 1938 to September 1965 (monthend elevations and contents), October 1965 to current year. Monthend elevations September 1937 to November 1938 published in reports of Pecos River Commission. Elevations and contents May 27, 1937 to June 10, 1937 in WSP 842. Prior to October 1974, published as "Alamogordo Reservoir".

REVISED RECORDS.--WSP 1732: 1939-54 (contents). WSP 1923: 1939-53(M) (m).

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (Bureau of Reclamation datum). April 1, 1946, to Sept. 30, 1957, water-stage recorder above elevation 4,234.25 ft (1,290.599 m), nonrecording gage below.

REMARKS.--Reservoir is formed by earthfill dam, completed and storage began in August 1937. Capacity, 101,600 acre-ft (125 hm³) between elevation 4,200.0 ft (1,280.160 m) sill of outlet gate and elevation 4,275.0 ft (1,303.020 m), normal operating level. No dead storage. Reservoir is used to store water for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 138,300 acre-ft (171 hm³) May 23-30, June 1-10, July 21, Sept. 22, 23, 30, Oct. 12, Nov. 4, 5, 30, Dec. 23, 24, 1941, elevation, 4,275.00 ft (1,303.020 m); maximum elevation 4,276.10 ft (1,303.355 m) June 3, Sept. 8, 1958; no storage July 28 to Aug. 2, 1951, elevation 4,200.70 ft (1,280.373 m).

COOPERATION.--Elevation record and capacity table (dated November 1973) furnished by Bureau of Reclamation.

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10800	11180	18050	24430	30120	34690	4720	9580	13980	16290	4600	27090
2	10510	11480	18180	24600	30300	34690	4980	9580	13870	16420	4660	28840
3	10700	11980	18450	24760	30480	34890	5250	9580	13870	16540	4600	30300
4	10600	12380	19000	24920	30660	34890	5380	9580	13760	16660	4600	31990
5	10600	12480	19390	25080	30850	34890	5310	9580	13650	16780	4540	32370
6	10510	12690	19520	25240	31040	34890	5310	9580	13540	16900	4410	32560
7	10410	12800	19660	25410	31230	34890	5310	9580	13430	16900	4350	32560
8	10410	13010	19810	25570	31420	34890	5310	9580	13320	16900	4350	32560
9	10410	13320	20090	25740	31610	34890	5310	9480	13220	21370	4290	32560
10	10320	13540	20370	25910	31800	34890	5310	9480	13110	27090	4170	32560
11	10220	13650	20650	26080	31990	34890	5250	10130	13110	28320	4230	32370
12	10130	13980	20790	26240	32180	34890	5250	10130	13110	28670	5050	32370
13	10130	14200	20930	26410	32180	34890	5250	10220	13110	28840	6220	32370
14	10130	14420	21080	26580	32370	34690	5110	10800	13010	26750	7140	33140
15	10130	14650	21230	26920	32560	34690	5380	11980	12900	24600	9480	33330
16	10130	14990	21370	27260	32750	34690	5730	13320	12690	22260	9950	33330
17	10130	15220	21520	27440	32940	30850	6080	13980	12480	20090	10130	33140
18	10040	15690	21670	27610	33140	30480	6380	14310	12280	17920	10600	33140
19	10040	15930	21820	27790	33330	28320	6530	14530	12080	15460	11880	32940
20	10040	16050	22260	27960	33330	26080	6750	14650	11880	12590	13760	32940
21	10040	16170	22410	28140	33520	23790	7450	14650	11980	9400	15570	32940
22	10040	16420	22560	28320	33720	21520	7940	14760	11980	6380	16050	32750
23	10130	16660	22710	28490	33720	19390	8270	14880	11980	3940	18990	32560
24	10130	16900	22870	28670	33910	17030	8520	14760	11980	3880	20370	32560
25	10130	17030	23020	28840	33910	14760	8870	14760	12080	3820	21370	32560
26	10130	17160	23330	29020	34110	11980	9220	14650	12080	3820	19660	32370
27	10130	17280	23480	29200	34300	9400	9480	14530	12180	3760	17920	32180
28	10220	17410	23640	29380	34490	6900	9580	14420	12180	3710	15690	32180
29	10320	17670	23950	29570	---	4050	9580	14420	13760	3710	15570	32180
30	10600	17920	24110	29750	---	4050	9580	14310	15570	4000	23020	31990
31	10890	---	24270	29930	---	4410	---	14200	---	4540	25570	---
MAX	10890	17920	24270	29930	34490	34890	9580	14880	15570	28840	25570	33330
MIN	10040	11180	18050	24430	30120	4050	4720	9480	11880	3710	4170	27090

CAL YR 1976 MAX 39900 MIN 3440
WTR YR 1977 MAX 34890 MIN 3710

08384000 LAKE SUMNER NEAR FORT SUMNER, N. Mex.--CONTINUED

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4234.40	4234.80	4240.90	4245.30	4248.60	4251.00	4226.80	4233.10	4237.50	4239.50	4226.60	4246.90
2	4234.10	4235.10	4241.00	4245.40	4248.70	4251.00	4227.20	4233.10	4237.40	4239.60	4226.70	4247.90
3	4234.30	4235.60	4241.20	4245.50	4248.80	4251.10	4227.60	4233.10	4237.40	4239.70	4226.60	4248.70
4	4234.20	4236.00	4241.60	4245.60	4248.90	4251.10	4227.80	4233.10	4237.30	4239.80	4226.60	4249.60
5	4234.20	4236.10	4241.90	4245.70	4249.00	4251.10	4227.70	4233.10	4237.20	4239.90	4226.50	4249.80
6	4234.10	4236.30	4242.00	4245.80	4249.10	4251.10	4227.70	4233.10	4237.10	4240.00	4226.30	4249.90
7	4234.00	4236.40	4242.10	4245.90	4249.20	4251.10	4227.70	4233.10	4237.00	4240.00	4226.20	4249.90
8	4234.00	4236.60	4242.20	4246.00	4249.30	4251.10	4227.70	4233.10	4236.90	4240.00	4226.20	4249.90
9	4234.00	4236.90	4242.40	4246.10	4249.40	4251.10	4227.70	4233.00	4236.80	4243.30	4226.10	4249.90
10	4233.90	4237.10	4242.60	4246.20	4249.50	4251.10	4227.70	4233.00	4236.70	4246.90	4225.90	4249.90
11	4233.80	4237.20	4242.80	4246.30	4249.60	4251.10	4227.60	4233.70	4236.70	4247.60	4226.00	4249.80
12	4233.70	4237.50	4242.90	4246.40	4249.70	4251.10	4227.60	4233.70	4236.70	4247.80	4227.30	4249.80
13	4233.70	4237.70	4243.00	4246.50	4249.70	4251.10	4227.60	4233.80	4236.70	4247.90	4229.00	4249.80
14	4233.70	4237.90	4243.10	4246.60	4249.80	4251.00	4227.40	4234.40	4236.60	4246.70	4230.20	4250.20
15	4233.70	4238.10	4243.20	4246.80	4249.90	4251.00	4227.80	4235.60	4236.50	4245.40	4233.00	4250.30
16	4233.70	4238.40	4243.30	4247.00	4250.00	4251.00	4228.30	4236.90	4236.30	4243.90	4233.50	4250.30
17	4233.70	4238.60	4243.40	4247.10	4250.10	4249.00	4228.80	4237.50	4236.10	4242.40	4233.70	4250.20
18	4233.60	4239.00	4243.50	4247.20	4250.20	4248.80	4229.20	4237.80	4235.90	4240.80	4234.20	4250.20
19	4233.60	4239.20	4243.60	4247.30	4250.30	4247.60	4229.40	4238.00	4235.70	4238.80	4235.50	4250.10
20	4233.60	4239.30	4243.90	4247.40	4250.30	4246.30	4229.70	4238.10	4235.50	4236.20	4237.30	4250.10
21	4233.60	4239.40	4244.00	4247.50	4250.40	4244.90	4230.60	4238.10	4235.60	4232.90	4238.90	4250.10
22	4233.60	4239.60	4244.10	4247.60	4250.50	4243.40	4231.20	4238.20	4235.60	4229.20	4239.30	4250.00
23	4233.70	4239.80	4244.20	4247.70	4250.50	4241.90	4231.60	4238.30	4235.60	4225.50	4241.60	4249.90
24	4233.70	4240.00	4244.30	4247.80	4250.60	4240.10	4231.90	4238.20	4235.60	4225.40	4242.60	4249.90
25	4233.70	4240.10	4244.40	4247.90	4250.60	4238.20	4232.30	4238.20	4235.70	4225.30	4243.30	4249.90
26	4233.70	4240.20	4244.60	4248.00	4250.70	4235.60	4232.70	4238.10	4235.70	4225.30	4242.10	4249.80
27	4233.70	4240.30	4244.70	4248.10	4250.80	4232.90	4233.00	4238.00	4235.80	4225.20	4240.80	4249.70
28	4233.80	4240.40	4244.80	4248.20	4250.90	4229.90	4233.10	4237.90	4235.80	4225.10	4239.00	4249.70
29	4233.90	4240.60	4245.00	4248.30	---	4225.70	4233.10	4237.90	4237.30	4225.10	4238.90	4249.70
30	4234.20	4240.80	4245.10	4248.40	---	4225.70	4233.10	4237.80	4238.90	4225.60	4244.40	4249.60
31	4234.50	---	4245.20	4248.50	---	4226.30	---	4237.70	---	4226.50	4246.00	---
MEAN	4233.87	4238.17	4243.26	4246.91	4249.83	4244.95	4229.39	4235.76	4236.52	4236.69	4233.56	4249.72
MAX	4234.50	4240.80	4245.20	4248.50	4250.90	4251.10	4233.10	4238.30	4238.90	4247.90	4246.00	4250.30
MIN	4233.60	4234.80	4240.90	4245.30	4248.60	4225.70	4226.80	4233.00	4235.50	4225.10	4225.90	4246.90
CAL YR 1976	MEAN	4237.95	MAX	4253.50	MIN	4224.60						
WTR YR 1977	MEAN	4239.82	MAX	4251.10	MIN	4225.10						

RIO GRANDE BASIN

08384500 PECOS RIVER BELOW SUMNER DAM, NM

LOCATION.--Lat 34°36'15", Long 104°23'14", in lot 1, sec.2, T.4 N., R.24 E., DeBaca County, Hydrologic Unit 13060003, on left bank 1,200 ft (366 m) downstream from Sumner Dam, 2.9 mi (4.7 km) upstream from Salado Creek, 4.6 mi (7.4 km) northeast of Guadalupe, 12.2 mi (19.6 km) northwest of Fort Sumner, and at mile 701.7 (1,129.0 km).

DRAINAGE AREA.--4,390 mi² (11,370 km²), approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1912 to April 1926, August 1926 to current year. Monthly discharge only for some periods, published in WSP 1312. October 1944 to September 1974, published as "below Alamogordo Dam." Prior to October 1944, published as "near Guadalupe."

REVISED RECORDS.--WSP 1512: 1932. WSP 1632: 1942. WSP 1712: 1944.

GAGE.--Water-stage recorder and Parshall flume, with concrete control above top of flume. Datum of gage is 4,142.67 ft (1,262.686 m) above mean sea level (Bureau of Reclamation datum). Prior to Sept. 10, 1936, at site 1.5 mi (2.4 km) upstream at different datum. Sept. 14, 1936, to Mar. 8, 1941, and June 11, to Sept. 21, 1941, at site 0.2 mi (0.3 km) downstream at different datums.

REMARKS.--Water-discharge records good. Diversion for irrigation of about 12,500 acres (51 km²), 1959 determination, above station. Flow regulated by Lake Sumner (station 08384000).

AVERAGE DISCHARGE.--23 years (1913-25, 1927-36), 236 ft³/s (6.684 m³/s), 171,000 acre-ft/yr (211 hm³/yr), prior to completion of Sumner Dam; 41 years (1937-77), 206 ft³/s (5.834 m³/s) 149,200 acre-ft/yr (184 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft³/s (1,210 m³/s) Sept. 1, 1942, by computation of flow over spillway and through outlet gates of Sumner Dam by Bureau of Reclamation; maximum gage height, 13.58 ft (4.139 m) Sept. 22, 1941, no flow at times.

Flood of June 2, 1937, about 75,000 ft³/s (2,120 m³/s) at site 1.5 mi (2.4 km) upstream, from peak inflow to Lake Sumner.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,070 ft³/s (30.3 m³/s) Mar. 17-21, July 19-21, Aug. 26, gage height, 3.30 ft (1.006 m); no flow Dec. 20 to Jan. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	.03	1.8	.00	.54	.87	.67	89	97	54	84	98
2	98	.13	1.4	.00	.60	.89	.62	89	97	54	77	99
3	97	.34	2.6	.00	.52	36	34	89	98	54	86	99
4	98	.29	2.1	.00	.51	78	77	89	98	72	77	98
5	96	.26	1.3	.00	.58	79	78	89	99	82	77	98
6	96	.25	.60	.00	.55	79	78	90	87	82	77	99
7	99	.13	.56	.00	.54	76	78	90	82	82	78	98
8	96	.13	.41	.26	.70	75	79	89	82	83	78	98
9	96	.24	.56	.38	.79	76	79	91	83	84	78	99
10	98	.26	.20	.39	.77	77	78	94	82	83	78	98
11	90	.28	.48	.44	.81	79	91	94	81	83	77	98
12	78	.28	.44	.51	.78	79	101	93	80	82	77	101
13	78	.26	.10	.51	.79	79	101	44	81	713	77	104
14	79	.31	.06	.51	.72	79	81	.49	82	1060	77	104
15	78	.28	.01	.51	.81	79	.60	.45	82	1060	69	104
16	79	.28	.01	.51	.80	736	.45	.45	82	1060	64	104
17	79	.47	.03	.51	.83	1070	.39	30	83	1060	64	104
18	79	.65	.02	.51	.91	1070	14	86	83	1060	64	103
19	79	1.1	.05	.51	.94	1070	52	93	83	1070	63	103
20	79	1.4	.00	.51	.87	1070	40	93	74	1070	64	103
21	79	.99	.00	.51	.88	1070	.43	93	52	1070	64	104
22	79	1.4	.00	.51	.93	1060	.38	93	54	975	64	104
23	79	1.4	.00	.51	.86	1060	.39	96	53	397	64	104
24	80	1.7	.00	.51	.90	1050	.39	97	52	95	64	103
25	80	1.2	.00	.51	.88	1040	.42	97	53	96	740	103
26	80	1.7	.00	.54	.88	1040	.39	97	53	96	1070	97
27	80	1.4	.00	.54	.88	1020	45	97	52	97	1060	94
28	80	.00	.00	.52	.87	963	83	97	54	97	1050	93
29	27	.28	.00	.51	---	385	89	97	55	97	673	93
30	.03	1.3	.00	.51	---	.54	89	97	54	98	99	92
31	.03	---	.00	.54	---	.55	---	97	---	97	98	---
TOTAL	2433.06	18.74	12.73	11.77	21.44	14677.85	1372.13	2491.39	2248	12263	6532	2999
MEAN	78.5	.62	.41	.38	.77	473	45.7	80.4	74.9	396	211	100
MAX	99	1.7	2.6	.54	.94	1070	101	97	99	1070	1070	104
MIN	.03	.00	.00	.00	.51	.54	.38	.45	52	54	63	92
AC-FT	4830	37	25	23	43	29110	2720	4940	4460	24320	12960	5950
CAL YR 1976	TOTAL	51886.37	MEAN	142	MAX	1190	MIN	.00	AC-FT	102900		
WTR YR 1977	TOTAL	45081.11	MEAN	124	MAX	1070	MIN	.00	AC-FT	89420		

08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937-66, 1972 to current year.

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)
OCT						
01...	1630	95	2060	18.0	110	28
05...	0905	96	2010	17.0	84	22
12...	1230	78	2110	14.0	92	19
19...	0930	78	2250	12.5	112	24
22...	0800	80	2260	11.0	143	31
29...	0800	80	2370	8.0	65	14
NOV						
16...	0830	.03	2400	5.5	54	.00
DEC						
14...	0930	.28	236	3.0	55	.04
JAN						
18...	0930	.45	2500	2.0	39	.05
FEB						
15...	0900	.84	2580	5.0	53	.12
MAR						
04...	1415	78	2630	6.0	27	5.7
07...	0900	75	2730	5.0	18	3.6
15...	0830	78	2680	7.0	28	5.9
16...	0905	1030	2880	6.0	192	534
28...	1200	1010	2850	9.0	173	472
29...	0630	970	2830	9.0	175	458
APR						
04...	0900	76	2880	8.5	137	28
14...	1800	101	2890	13.0	151	41
18...	1515	.28	2840	22.5	103	.08
28...	0800	88	2670	16.0	93	22
MAY						
04...	1610	88	2650	17.5	111	26
09...	1000	92	2670	16.5	145	36
11...	0945	93	2570	16.5	136	34
13...	1030	93	2570	17.0	102	26
17...	1730	67	2540	17.0	126	23
18...	0900	93	2430	15.5	70	18
24...	0830	98	2140	17.5	76	20
27...	0830	97	2060	17.0	43	11
31...	0730	97	2130	17.0	40	10
JUN						
07...	0700	84	2210	19.0	59	13
13...	0900	80	2310	20.5	73	16
17...	0800	82	2370	19.5	34	7.5

RIO GRANDE BASIN

08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)
JUN						
20...	0815	82	2450	21.0	31	6.9
20...	1900	78	2410	20.0	93	20
21...	0845	52	2390	21.5	104	15
30...	0630	54	2300	19.5	76	11
JUL						
01...	0645	54	2350	20.5	80	12
09...	0700	84	2050	21.0	3960	898
09...	1300	84	1530	21.5	7980	1810
10...	0730	82	1610	19.5	330	73
11...	0700	82	1820	19.5	101	22
13...	0730	82	1750	19.5	88	19
13...	0900	1030	1750	20.0	176	489
18...	1930	1050	1390	23.0	59	167
19...	1930	1050	1390	23.5	78	221
20...	0800	1030	1400	22.5	79	220
20...	1630	1050	1430	24.0	84	238
21...	0700	1050	1440	24.0	72	204
21...	0930	1070	1440	25.0	48	139
22...	1230	930	1500	23.5	97	244
25...	0700	95	1740	23.0	109	28
29...	0810	96	--	23.5	117	30
AUG						
17...	0800	64	2070	21.0	64	11
19...	0830	64	--	23.0	65	11
22...	1300	64	1370	24.0	146	25
24...	0830	64	1420	22.0	63	11
25...	0730	64	1420	23.0	58	10
25...	0930	1050	1330	24.0	78	221
30...	1100	98	895	22.0	1180	312
31...	1100	98	874	22.0	82	22
31...	1330	98	865	22.0	93	25
SEP						
09...	1000	98	1050	21.0	47	12
16...	1500	103	1250	21.0	64	18
21...	0815	102	1500	20.0	52	14
29...	0915	93	1240	20.0	63	16

08385000 FORT SUMNER MAIN CANAL NEAR FORT SUMNER, NM

LOCATION.--Lat 34°30'30", long 104°16'40", in SE¼SW¼SW¼ sec.1, T.3 N., R.25 E., DeBaca County, Hydrologic Unit 13060003, on right bank of concrete canal, 200 ft. (60 m) downstream from diversion dam on Pecos River, 3.0 mi (4.8 km) northwest of Fort Sumner, and at Pecos River mile 684.8 (1,101.8 km).

PERIOD OF RECORD.--March 1939 to February 1943 (published in WSP 1732), April 1954 to current year (monthly discharge only prior to October 1965).

GAGE.--Water-stage recorder. Datum of gage is 4,034.7 ft (1,229.78 m) above mean sea level (Bureau of Reclamation bench mark). Prior to March 1954 at site 2.4 mi (3.9 km) downstream at different datum. April 1954 to March 1965 at site 1.1 mi (1.8 km) downstream at datum 1.7 ft (0.52 m) lower.

REMARKS.--Records good. Canal diverts water from Pecos River for irrigation of about 6,600 acres (27 km²), 1961 determination, by the Fort Sumner Irrigation District. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--26 years (1940-42, 1955-77), 49.0 ft³/s (1.388 m³/s), 35,500 acre-ft/yr (43.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 174 ft³/s (4.93 m³/s) July 22, 1941; no flow many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	.00	.00	.00	.00	.00	.00	86	95	51	92	89
2	91	.00	.00	.00	.00	.00	.00	86	95	77	77	97
3	94	.00	.00	.00	.00	.00	.00	88	96	49	76	92
4	92	.00	.00	.00	.00	44	56	92	95	51	73	95
5	93	.00	.00	.00	.00	88	86	89	95	78	74	85
6	92	.00	.00	.00	.00	85	85	86	94	83	73	100
7	94	.00	.00	.00	.00	80	83	85	81	80	75	100
8	95	.00	.00	.00	.00	70	83	85	79	82	75	97
9	94	.00	.00	.00	.00	74	82	87	82	103	76	96
10	95	.00	.00	.00	.00	78	83	88	85	84	74	96
11	95	.00	.00	.00	.00	77	82	95	78	84	80	94
12	80	.00	.00	.00	.00	78	106	98	80	80	75	94
13	77	.00	.00	.00	.00	79	104	59	79	83	70	96
14	79	.00	.00	.00	.00	78	109	.00	82	97	89	97
15	80	.00	.00	.00	.00	81	38	.00	80	90	100	93
16	78	.00	.00	.00	.00	67	.00	.00	78	98	74	91
17	82	.00	.00	.00	.00	83	.00	.00	78	100	73	85
18	80	.00	.00	.00	.00	88	2.7	37	78	99	80	91
19	86	.00	.00	.00	.00	91	39	79	78	101	82	91
20	80	.00	.00	.00	.00	88	78	84	86	102	95	90
21	81	.00	.00	.00	.00	88	30	86	72	104	89	89
22	87	.00	.00	.00	.00	90	.00	86	52	102	91	89
23	84	.00	.00	.00	.00	90	.00	91	55	98	78	90
24	80	.00	.00	.00	.00	85	.00	96	48	99	89	89
25	80	.00	.00	.00	.00	85	.00	102	48	98	98	86
26	78	.00	.00	.00	.00	90	.00	96	47	97	93	90
27	80	.00	.00	.00	.00	90	.00	95	47	97	97	89
28	87	.00	.00	.00	.00	85	52	93	48	96	98	89
29	31	.00	.00	.00	---	80	87	93	50	95	90	89
30	.00	.00	.00	.00	---	20	87	94	52	96	77	88
31	.00	---	.00	.00	---	.00	---	94	---	98	97	---
TOTAL	2382.00	.00	.00	.00	.00	2132.00	1372.70	2350.00	2213	2752	2580	2757
MEAN	76.8	.000	.000	.000	.000	68.8	45.8	75.8	73.8	88.8	83.2	91.9
MAX	95	.00	.00	.00	.00	91	109	102	96	104	100	100
MIN	.00	.00	.00	.00	.00	.00	.00	.00	47	49	70	85
AC=FT	4720	.00	.00	.00	.00	4230	2720	4660	4390	5460	5120	5470
CAL YR 1976	TOTAL	20582.00	MEAN 56.2	MAX 98	MIN .00	AC=FT 40820						
WTR YR 1977	TOTAL	18538.70	MEAN 50.8	MAX 109	MIN .00	AC=FT 36770						

08386000 PECOS RIVER NEAR ACME, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	
OCT 22...	1050	22	3450	7.8	16.0	1700	1600	460	130	250	2.7	4.3	
NOV 11...	1405	18	3760	7.8	10.5	--	--	--	--	--	--	--	
30...	1450	8.3	4620	7.9	1.0	1800	1700	480	140	440	4.5	4.6	
DEC 20...	1135	11	4180	7.7	3.0	1700	1600	490	120	390	4.1	4.3	
JAN 07...	1110	13	4650	7.7	.3	1800	1700	520	130	480	4.9	4.5	
28...	1430	7.4	4630	7.8	10.5	--	--	--	--	--	--	--	
FEB 16...	1105	7.9	4600	7.8	9.0	1700	1600	480	120	460	4.9	4.8	
MAR 21...	1055	770	2940	7.4	8.5	1700	1600	540	77	120	1.3	3.8	
APR 21...	0945	184	1980	7.4	13.0	830	200	260	43	140	2.1	3.8	
MAY 16...	1030	120	1920	7.2	19.0	920	830	280	54	110	1.6	3.9	
JUN 03...	1325	2.4	3880	6.9	30.0	1700	1600	480	110	350	3.7	5.8	
JUL 18...	0945	696	1960	7.5	--	970	890	310	47	80	1.1	4.0	
28...	1010	64	1830	7.2	26.0	--	--	--	--	--	--	--	
AUG 18...	1050	38	2020	7.5	25.5	810	720	240	50	140	2.1	4.6	
SEP 03...	1245	178	1740	7.4	27.0	820	740	260	41	100	1.5	4.4	
DATE		BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (REST- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT 22...	114	0	1500	330	.6	14	2940	2750	.37	.03	260	20	
NOV 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	141	0	1600	660	.6	12	--	3410	.42	--	--	--	--
DEC 20...	133	0	1600	540	.6	11	--	3220	.42	--	--	--	--
JAN 07...	135	0	1700	690	.6	12	--	3610	.40	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 16...	114	0	1700	680	.6	7.3	--	3510	.06	--	--	--	--
MAR 21...	140	0	1500	160	.7	13	--	2490	.34	--	--	--	--
APR 21...	760	0	790	140	.6	12	1550	1770	1.3	.03	180	10	
MAY 16...	110	0	860	120	.6	10	--	1500	.58	--	--	--	--
JUN 03...	79	0	1600	470	.7	13	--	3070	.23	--	--	--	--
JUL 18...	100	0	930	68	.7	14	--	1510	.69	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	100	0	790	180	.8	13	--	1470	.36	--	--	--	--
SEP 03...	98	0	740	120	.6	10	1380	1330	.21	.00	120	30	

RIO GRANDE BASIN

08386900 F. HERRERA DITCH-S. AT HOLLYWOOD, NM

LOCATION.--Lat 33°19'35", long 105°36'50", in NE¼NE¼SW¼ sec.30, T.11 S., R.14 E., Lincoln County, Hydrologic Unit 13060008, on left bank, at upstream end of flume over Grapevine Canyon, 1.0 mi (1.6 km) below point of diversion, 0.7 mi (1.1 km) east of Hollywood and junction of U.S. Highway 70 and State Highway 37, point of diversion at Rio Ruidoso mile 24.5 (39.4 km).

PERIOD OF RECORD.--May 1960 to current year. (Monthly acre-ft only prior to January 1973, published as a supplement to station 08387000).

GAGE.--Water stage recorder and concrete control. Altitude of gage is 6,432 ft (1,960.5 m), from Topographic Division. Prior to Mar. 20, 1962, at site 315 ft (96 m) downstream at datum 12.79 ft (3.898 m) lower.

REMARKS.--Records poor. Water is diverted from Rio Ruidoso 1.0 mi (1.6 km) upstream for irrigation below station 08387000. Some observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--17 years, 0.52 ft³/s (0.015 m³/s), 377 acre-ft/yr (465,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6.6 ft³/s (0.19 m³/s) June 15, 1961; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 0.45 ft³/s (0.013 m³/s) May 18; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.05	.24	.00	.11	.00
2	.08	.00	.00	.00	.00	.00	.00	.04	.30	.00	.16	.03
3	.00	.00	.00	.00	.00	.00	.00	.05	.35	.00	.14	.00
4	.00	.00	.00	.00	.00	.00	.00	.05	.30	.11	.13	.00
5	.01	.00	.00	.00	.00	.00	.00	.03	.22	.07	.14	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.08	.05	.17	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	.14	.00
8	.00	.00	.00	.00	.00	.00	.00	.01	.01	.00	.11	.00
9	.00	.00	.00	.00	.00	.00	.00	.02	.05	.00	.08	.00
10	.00	.00	.00	.00	.00	.00	.00	.02	.02	.00	.15	.00
11	.00	.00	.00	.00	.00	.00	.00	.03	.00	.01	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.07	.00	.00	.11	.00
13	.00	.00	.00	.00	.00	.00	.01	.01	.00	.00	.02	.00
14	.00	.00	.00	.00	.00	.00	.32	.00	.01	.00	.02	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.08	.00
17	.00	.00	.00	.00	.00	.00	.00	.22	.03	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.45	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.42	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.40	.00	.01	.08	.00
21	.00	.00	.00	.00	.00	.00	.00	.30	.00	.03	.38	.00
22	.00	.00	.00	.00	.00	.00	.00	.24	.02	.06	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.19	.09	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.17	.03	.07	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.17	.00	.12	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.22	.00	.11	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.22	.01	.10	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.14	.01	.13	.00	.00
29	.00	.00	.00	.00	---	.00	.02	.13	.00	.11	.01	.00
30	.00	.00	.00	.00	---	.00	.07	.10	.00	.11	.00	.00
31	.00	---	.00	.00	---	.00	---	.16	---	.12	.00	---
TOTAL	.09	.00	.00	.00	.00	.00	.42	3.91	1.78	1.25	2.17	.03
MEAN	.003	.000	.000	.000	.000	.000	.014	.13	.059	.040	.070	.001
MAX	.08	.00	.00	.00	.00	.00	.32	.45	.35	.13	.38	.03
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.2	.00	.00	.00	.00	.00	.8	7.8	3.5	2.5	4.3	.06
CAL YR 1976	TOTAL	77.91	MEAN	.21	MAX	1.1	MIN	.00	AC-FT	155		
WTR YR 1977	TOTAL	9.65	MEAN	.026	MAX	.45	MIN	.00	AC-FT	19		

08387000 RIO RUIDOSO AT HOLLYWOOD, NM

LOCATION.--Lat 33°19'43", long 105°36'34", in SW¼SE¼NE¼ sec.30, T.11 S., R.14 E., Lincoln County, Hydrologic Unit 13060008, on right upstream bridge abutment on road leading to Ruidoso Downs race track, 0.2 mi (0.3 km) north of U.S. Highway 70, 1.1 mi (1.8 km) east of the Hollywood Post Office, 1.2 mi (1.9 km) downstream from the Ruidoso sewage disposal plant, 1.8 mi (2.9 km) downstream from Gavilan Canyon, 2.8 mi (4.5 km) downstream from Carrizo Creek, and at mile 23.4 (37.7 km).

DRAINAGE AREA.--120 mi² (310 km²), approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 6,365.42 ft (1,940.180 m) above mean sea level. Prior to Oct. 14, 1961, at datum 0.30 ft (0.091 m) higher. Oct. 14, 1961, to Mar. 8, 1962, at datum 0.60 ft (0.183 m) higher. Mar. 9, 1962, to June 18, 1965, at datum 1.0 ft (0.305 m) higher.

REMARKS.--Records good. Figures of discharge do not include F. Herrera ditch-S, (station 08386900), which diverts from right bank 1.5 mi (2.4 km) upstream and bypasses station for irrigation of 75 acres (30.4 hm²), 1959 determination. Village of Ruidoso diverts from right bank 7.0 mi (11.3 km) upstream for municipal use and returns a portion of this water as effluent from sewage disposal plant 1.2 mi (1.9 km) upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 13.3 ft³/s (0.377 m³/s), 9,640 acre-ft/yr (11.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,340 ft³/s (37.9 m³/s) June 17, 1965, gage height, 10.05 ft (3.063 m) present datum, from rating curve extended above 110 ft³/s (3.12 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.30 ft³/s (0.008 m³/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.--Maximum discharge 700 ft³/s (19.82 m³/s) Aug. 22, on basis of slope-area measurement, gage height, 5.27 ft (1.606 m) from floodmarks, no other peak above base of 100 ft³/s (2.8 m³/s); minimum 5.0 ft³/s (0.142 m³/s), Nov. 29, result of freeze-up.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	10	7.5	8.2	9.0	12	15	58	16	12	16	14
2	20	10	9.5	7.8	10	13	14	55	16	10	16	25
3	13	9.5	8.0	7.8	9.7	12	15	51	16	9.8	16	22
4	12	7.8	7.7	7.7	8.9	12	14	47	16	12	15	23
5	11	7.9	7.8	7.5	9.2	12	14	47	15	16	15	32
6	10	7.8	8.5	7.6	10	11	14	43	14	17	16	31
7	9.4	7.7	8.1	7.6	10	12	17	39	14	15	16	30
8	9.2	7.7	8.1	7.8	9.9	12	21	37	14	13	16	25
9	8.7	7.6	8.4	7.5	9.8	12	27	37	14	12	16	22
10	8.2	7.5	8.2	8.5	10	13	40	37	13	12	17	21
11	8.3	7.5	8.4	8.0	11	13	59	35	13	11	18	18
12	11	7.6	8.5	8.0	10	13	64	34	12	11	19	18
13	10	7.9	8.5	7.9	11	13	55	31	11	10	19	16
14	10	10	8.7	7.8	11	15	53	29	10	10	20	14
15	10	8.3	8.5	8.2	10	16	37	28	10	9.5	23	14
16	11	7.8	8.4	8.0	11	17	34	26	9.7	9.5	22	13
17	10	8.1	8.0	8.1	12	16	33	24	9.0	9.0	21	12
18	10	7.9	8.3	8.0	13	16	39	22	8.5	10	21	11
19	10	7.1	8.1	8.4	14	15	50	21	8.2	14	20	11
20	9.7	7.0	7.8	8.6	15	15	62	20	8.0	12	20	11
21	9.7	6.8	7.7	8.7	16	15	57	18	7.8	12	30	11
22	9.8	6.6	7.4	9.3	16	15	52	17	7.6	13	95	9.7
23	11	6.8	7.0	9.3	16	16	50	16	8.0	12	275	10
24	9.7	8.0	7.5	9.0	16	16	51	16	8.4	14	47	9.7
25	9.8	8.6	7.7	8.6	15	17	49	16	8.2	15	25	9.0
26	9.5	8.5	7.6	9.0	14	17	49	16	8.0	15	16	9.0
27	11	8.2	8.3	9.0	13	17	52	15	7.8	15	14	8.3
28	10	6.0	7.8	9.6	11	16	61	15	7.6	18	12	10
29	11	5.0	7.6	9.6	---	15	65	14	7.7	14	12	9.8
30	10	7.0	8.4	9.6	---	14	61	15	8.6	13	13	8.6
31	10	---	7.9	8.5	---	14	---	15	---	15	13	---
TOTAL	328.0	234.2	249.9	259.2	331.5	442	1224	894	327.1	390.8	914	478.1
MEAN	10.6	7.81	8.06	8.36	11.8	14.3	40.8	28.8	10.9	12.6	29.5	15.9
MAX	20	10	9.5	9.6	16	17	65	58	16	18	275	32
MIN	8.2	5.0	7.0	7.5	8.9	11	14	14	7.6	9.0	12	8.3
AC=FT	651	465	496	514	658	877	2430	1770	649	775	1810	948

CAL YR 1976 TOTAL 4962.8 MEAN 13.6 MAX 82 MIN 5.0 AC=FT 9840
WTR YR 1977 TOTAL 6072.8 MEAN 16.6 MAX 275 MIN 5.0 AC=FT 12050

08387600 EAGLE CREEK BELOW SOUTH FORK, NEAR ALTO, NM

LOCATION.--Lat 33°23'33", long 105°43'16", in SE¼SW¼ sec.31, T.10 S., R.13 E., Lincoln County, Hydrologic Unit 13060008, in Lincoln National Forest at right bank, 100 ft (30 m) downstream from culvert under State Road No. 532, 0.1 mi (0.2 km) downstream from South Fork, and 2.4 mi (3.9 km) west of Alto. Mouth at Rio Ruidoso mile 11.3 (18.2 km).

DRAINAGE AREA.--8.14 mi² (21.08 km²).

PERIOD OF RECORD.--August 1969 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,600 ft (2,316 m), from topographic map.

REMARKS.--Records good. No diversions for irrigation above station. Some water is stored in small unregulated recreational ponds on the Mescalero Apache Indian Reservation upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years, 2.70 ft³/s (0.076 m³/s), 1,960 acre-ft/yr (2.42 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 107 ft³/s (3.03 m³/s) Oct. 20, 1972, gage height, 3.49 ft (1.064 m), from rating curve extended above 21 ft³/s (0.59 m³/s); minimum, 0.05 ft³/s (0.001 m³/s) June 30, July 3, 4, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 21 ft³/s (0.59 m³/s) Apr. 14, Sept. 4; maximum gage height 2.90 ft (0.884 m) Apr. 14, no peak above base of 25 ft³/s (0.7 m³/s); minimum 0.07 ft³/s (0.002 m³/s) Nov. 28, result of freeze-up.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.1	.60	.69	1.2	2.0	2.4	10	1.9	.51	.61	3.5
2	2.3	1.0	.87	.60	1.5	2.1	2.3	9.9	2.2	.58	.56	4.8
3	1.7	1.0	.90	.60	1.0	1.6	2.4	9.4	2.2	.53	.53	5.8
4	1.6	.96	.86	.69	1.4	1.4	2.5	8.2	1.8	.63	.49	6.6
5	1.5	.95	.84	.69	1.4	1.0	2.8	8.8	1.3	.81	.49	7.6
6	1.4	.86	.84	.64	1.5	1.0	2.8	7.9	1.1	.85	.47	5.7
7	1.3	.86	.75	.50	1.5	1.2	3.0	7.8	1.0	.77	.46	4.7
8	1.2	.80	.77	.40	1.3	1.4	4.1	7.3	1.0	.63	.47	3.8
9	1.2	.74	.81	.40	1.4	1.5	5.7	6.8	1.0	.58	.53	3.0
10	1.1	.75	.79	.50	1.7	2.6	7.8	6.6	.97	.53	.63	2.7
11	1.0	.74	.76	.66	1.7	4.3	9.4	5.9	.85	.51	.53	2.2
12	.95	.66	.73	.75	1.7	2.5	8.8	5.7	.77	.45	2.1	2.0
13	.90	.66	.69	.76	1.7	1.9	8.0	5.1	.71	.40	1.9	1.7
14	.93	.80	.65	.73	1.7	2.2	11	5.3	.68	.45	2.1	1.4
15	.93	.88	.65	.73	1.7	2.3	16	4.9	.68	.41	2.4	1.3
16	.90	.74	.60	.78	1.8	2.7	11	4.4	.63	.49	2.2	1.1
17	.82	.68	.65	.81	2.0	2.8	9.1	3.9	.58	.41	1.9	1.0
18	.76	.78	.64	.81	2.2	2.5	10	3.6	.51	.35	1.7	.91
19	.75	.79	.66	.89	2.4	2.3	14	3.3	.47	1.0	1.6	.82
20	.68	.78	.71	.95	2.6	2.5	15	3.2	.47	1.0	1.6	.74
21	.66	.73	.61	1.0	2.9	2.5	12	2.8	.49	.93	2.8	.67
22	.72	.68	.56	1.2	3.3	2.5	9.4	2.5	.53	.93	4.1	.62
23	.78	.62	.63	1.4	3.0	2.8	8.6	2.3	.56	.89	4.6	.62
24	.72	.59	.60	1.3	3.4	3.2	8.8	2.2	.63	.68	3.2	.57
25	.69	.60	.62	1.0	3.1	3.4	8.6	2.1	.58	.71	2.4	.52
26	.63	.56	.60	1.3	3.0	3.5	8.6	2.0	.51	.71	2.1	.49
27	.77	.40	.59	1.3	2.5	3.4	8.8	1.7	.51	.74	1.6	.45
28	.85	.15	.60	1.2	2.2	3.2	9.9	1.6	.49	.63	1.4	.61
29	.99	.20	.57	1.3	---	3.0	12	1.5	.51	.61	1.6	.77
30	1.1	.40	.60	1.0	---	2.7	12	1.5	.53	.61	2.5	.55
31	1.1	---	.59	.70	---	2.6	---	1.5	---	.63	3.6	---
TOTAL	32.63	21.46	21.34	26.28	56.8	74.6	246.8	149.7	26.16	19.96	53.17	67.24
MEAN	1.05	.72	.69	.85	2.03	2.41	8.23	4.83	.87	.64	1.72	2.24
MAX	2.3	1.1	.90	1.4	3.4	4.3	16	10	2.2	1.0	4.6	7.6
MIN	.63	.15	.56	.40	1.0	1.0	2.3	1.5	.47	.35	.46	.45
AC-FT	65	43	42	52	113	148	490	297	52	40	105	133

CAL YR 1976 TOTAL 679.46 MEAN 1.86 MAX 11 MIN .15 AC-FT 1350
WTR YR 1977 TOTAL 796.14 MEAN 2.18 MAX 16 MIN .15 AC-FT 1580

08387800 EAGLE CREEK NEAR ALTO, NM

LOCATION.--Lat 33°23'29", long 105°36'39", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.31, T.10 S., R.14 E., Lincoln County, Hydrologic Unit 13060008, on left bank 200 ft (60 m) north of Lincoln National Forest boundary, 500 ft (152 m) northeast of windmill, and 4.0 mi (6.4 km) east of Alto. Mouth at Rio Ruidoso mile 11.3 (18.2 km).

DRAINAGE AREA.--15.7 mi²

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,838 ft (2,084 m), from topographic map.

REMARKS.--Records good. Discharge at this station is affected by Alto Reservoir and municipal water supply diversions for Ruidoso and Capitan. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years, 1.43 ft³/s (0.040 m³/s), 1,040 acre-ft/yr (1.28 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72 ft³/s (2.04 m³/s) Sept. 16, 1976, gage height, 2.03 ft (0.619 m); from rating curve extended above 22 ft³/s (0.62 m³/s); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13 ft³/s (0.37 m³/s) Apr. 15, gage height, 1.15 ft (0.351 m), no peak above base of 25 ft³/s (.71 m³/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	8.9	.14	.02	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	8.6	.13	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	7.8	.12	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	5.9	.11	.03	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	6.3	.10	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	5.0	.10	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	7.0	.09	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	5.9	.08	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	5.2	.08	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.05	2.6	.07	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	1.4	2.4	.06	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.97	2.3	.05	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	1.5	4.6	.03	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	5.2	3.7	.02	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	12	3.3	.00	.00	.06	.00
16	.00	.00	.00	.00	.00	.00	9.8	2.4	.00	.00	.01	.00
17	.00	.00	.00	.00	.00	.00	7.3	.73	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	7.0	.42	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	9.2	.37	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	12	.37	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	10	.37	.00	.00	.05	.00
22	.00	.00	.00	.00	.00	.00	8.1	.34	.00	.03	.00	.00
23	.00	.00	.00	.00	.00	.00	6.8	.31	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	6.8	.31	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	6.8	.26	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	6.8	.24	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	7.0	.28	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	7.8	.22	.00	.00	.00	.01
29	.00	.00	.00	.00	---	.00	8.9	.20	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	9.5	.18	.00	.00	.01	.00
31	.00	---	.00	.00	---	.00	---	.16	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	144.92	86.66	1.18	.08	.13	.01
MEAN	.000	.000	.000	.000	.000	.000	4.83	2.80	.039	.003	.004	.000
MAX	.00	.00	.00	.00	.00	.00	12	8.9	.14	.03	.06	.01
MIN	.00	.00	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	287	172	2.3	.2	.3	.02

CAL YR 1976 TOTAL 45.88 MEAN .13 MAX 6.3 MIN .00 AC-FT 91
WTR YR 1977 TOTAL 232.98 MEAN .64 MAX 12 MIN .00 AC-FT 462

08390500 RIO HONDO AT DIAMOND A RANCH, NEAR ROSWELL, NM

LOCATION.--Lat 33°20'57", long 104°51'05", in NE¼NE¼ sec.20, T.11 S., R.21 E., Chaves County, Hydrologic Unit 13060008, on right bank 15 ft (5 m) downstream from county road bridge at Diamond A Ranch, 1.3 mi (2.1 km) south of U.S. Highway 70-380, 13 mi (21 km) upstream from Two Rivers Reservoir, 21 mi (34 km) upstream from mouth of Rocky Arroyo, 18 mi (29 km) west of Roswell, and at mile 44.7 (71.9 km).

DRAINAGE AREA.--947 mi² (2,450 km²), 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, Streamflow and Reservoir Content 1888-1954.

REVISED RECORDS.--WSP 1392: Drainage area, WSP 1512: 1939-40(P), 1941, 1942-43(P), 1946(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,190 ft (1,277 m), from topographic map. Prior to Nov. 11, 1965 at site on opposite bank at same datum. Supplemental water-stage recorder on opposite bank Nov. 11, 1965, to December 1972, at same datum.

REMARKS.--Records fair. Diversions and ground-water withdrawals above station for irrigation above and below station of about 6,500 acres (26 km²), 1959 determination. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years (1939-77) 21.5 ft³/s (0.609 m³/s), 15,580 acre-ft/yr (19.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,800 ft³/s (1,550 m³/s) June 18, 1965, gage height, 26.40 ft (8.047 m), from rating curve extended above 3,000 cfs (85.0 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 28.78 ft (8.772 m), Sept. 22, 1941; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood on June 1, 1937, reached a discharge of 24,900 ft³/s (705 m³/s) at Riverside about 13 mi (21 km) upstream. Other major floods occurred Oct. 31, 1901, Sept. 29, 30, 1904, and July 25, 1905.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 2,160 ft³/s (61.2 m³/s) at 1200 hours Aug. 29, gage height, 19.08 ft (5.816 m), no other peak above base of 1,000 ft³/s (28 m³/s); no flow most of the time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	13	.00	.00	.00	38
2	.00	.00	.00	.00	.00	.00	.00	17	.00	.00	.00	28
3	.00	.00	.00	.00	.00	.00	.00	12	.00	13	.00	16
4	.00	.00	.00	.00	.00	.00	.00	12	.00	.47	.00	18
5	.00	.00	.00	.00	.00	.00	.00	7.1	.00	.00	.00	117
6	.00	.00	.00	.00	.00	.00	.00	2.7	.00	.00	.00	53
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	42
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	28
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	12
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.3
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	9.2
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	11	10
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	18	5.4
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	14	3.7
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	2.4
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	83	.44
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	57	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	36	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	25	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	110	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	74	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	52	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	44	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	38	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	28	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	20	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	15	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.7	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	200	.00
30	.00	.00	.00	.00	---	.00	4.3	.00	.00	.00	36	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	43	---
TOTAL	.00	.00	.00	.00	.00	.00	4.30	63.80	.00	13.47	912.74	391.44
MEAN	.000	.000	.000	.000	.000	.000	.14	2.06	.000	.43	29.4	13.0
MAX	.00	.00	.00	.00	.00	.00	4.3	17	.00	13	200	117
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	8.5	127	.00	27	1810	776

CAL YR 1976 TOTAL 550.66 MEAN 1.50 MAX 54 MIN .00 AC-FT 1090
WTR YR 1977 TOTAL 1385.75 MEAN 3.80 MAX 200 MIN .00 AC-FT 2750

08390600 TWO RIVERS RESERVOIR NEAR ROSWELL, NM

LOCATION.--08390610 Rio Hondo Reservoir: Lat 33°17'55", long 104°43'20", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.4, T.12 S., R.22 E., Chaves County, Hydrologic Unit 13060008, near center of Diamond A Dam on Rio Hondo, 13 mi (20.9 km) southwest of Roswell at mile 33.4 (53.7 km); 08390620 Rocky Arroyo Reservoir: Lat 33°16'20", long 104°43'20", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.16, T.12 S., R.22 E., at left end of Rocky Dam on Rocky Arroyo, and 14 mi (22.5 km) southwest of Roswell.

DRAINAGE AREA.--1,027 mi² (2,660 km²); Rio Hondo, 963 mi² (2,494 km²); Rocky Arroyo, 64 mi² (166 km²).

PERIOD OF RECORD.--July 1963 to current year. Prior to October 1965 (monthend contents only). Prior to October 1966 contents at 0800 hours.

GAGE.--Water-stage recorders. Datum of gages is mean sea level.

REMARKS.--Two Rivers Reservoir, completed July 16, 1963, is formed by earthfill dams on Rio Hondo, which forms Rio Hondo Reservoir; and Rocky Arroyo which forms Rocky Arroyo Reservoir. Above elevation 3,980.0 ft (1,213.10 m) the pools of the two reservoirs combine to form Two Rivers Reservoir with a total capacity of 166,200 acre-ft (205 hm³) at elevation 4,032.0 ft (1,228.95 m) crest of ungated spillway. Capacity of Rio Hondo Reservoir, 181 acre-ft (223,000 m³) between elevations 3,957.0 ft (1,206.09 m), sill of outlet gate, and 3,980.0 ft (1,213.10 m). Capacity of Rocky Arroyo Reservoir, 13,410 acre-ft (16.5 hm³) between elevations 3,945.0 ft (1,202.44 m), sill of outlet gate, and 3,980.0 ft (1,213.10 m). No dead storage in Rio Hondo Reservoir, or Rocky Arroyo Reservoir. Primary objective of project is flood control. Outlet conduits in Rocky Dam have fixed openings. Figures given herein represent total contents at 2400 hours.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents at 0800 hours of Rio Hondo Reservoir, 1,260 acre-ft (1.55 hm³) July 29, 1965, elevation, 3,985.7 ft (1,214.84 m); Rocky Arroyo Reservoir at 0800 hours, 6,090 acre-ft (7.51 hm³) June 18, 1965, elevation, 3,970.7 ft (1,210.27 m); no contents both reservoirs 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 (152 m) downstream from outlet conduit of Diamond A dam (Two Rivers Reservoir), 13 mi (20.9 km) southwest of Roswell, and at mile 33.3 (53.6 km). Mouth at Pecos River mile 566.0 (910.7 km).

DRAINAGE AREA.--963 mi² (2,490 km²), contributing area.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,949.68 ft (1,203.862 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records fair. Diversions and ground-water withdrawals for irrigation of about 6,500 acres (26 km²), 1959 determination, above station. This record represents the outflow from Two Rivers Reservoir through Diamond A Dam. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 7.98 ft³/s (0.226 m³/s), 5,780 acre-ft/yr (7.13 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 659 ft³/s (18.7 m³/s) July 29, 1965, gage height, 4.91 ft (1.497 m); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 263 ft³/s (7.45 m³/s) Sept. 6, gage height, 3.28 ft (1.000 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
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	21
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	21
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.0
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	9.1
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	14
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	93
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	52
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	30
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	12
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.7
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	40	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	43	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	34	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	14	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	34	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	47	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	103	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	129	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	60	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.0	.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	4.3	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	87	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	103	.00
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	730.30	266.80
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	23.6	8.89
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	129	93
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	1450	529

CAL YR 1976 TOTAL 88.51 MEAN .24 MAX 17 MIN .00 AC-FT 176
WTR YR 1977 TOTAL 997.10 MEAN 2.73 MAX 129 MIN .00 AC-FT 1980

LOCATION.--Lat 33°17'07", long 104°47'47", in NE¼SW¼, sec.11, T.12 S., R.21½ E., Chaves County, Hydrologic Unit 13060008, on left bank, 2.1 mi (3.4 km) upstream from mouth of Buchanan Draw, 5.2 mi (8.4 km) upstream from Rocky Dam (Two Rivers Reservoir), and 17 mi (27.4 km) southwest of Roswell.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,059.17 ft (1,237.235 m) above mean sea level (Corps of Engineers datum). Prior to Dec. 7, 1968, at site on opposite bank at datum 3.72 ft (1.134 m) lower.

REMARKS.--Records good. No diversions above station. Flow past station represents inflow to Two Rivers Reservoir.

AVERAGE DISCHARGE.--14 years, 0.92 ft³/s (0.026 m³/s), 667 acre-ft/yr (822,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s (340 m³/s) July 5, 1968, gage height, 11.53 ft (3.514 m), from floodmarks, present datum, from rating curve extended above 350 ft³/s (9.91 m³/s) on basis of slope-area measurements at gage heights 5.92 ft (1.804 m), 7.14 ft (2.176 m), and 11.53 ft (3.514 m), present datum; no flow most of time.

EXTREMES FOR CURRENT YEAR.--No flow all 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 1976	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC-FT	.00		
WTR YR 1977	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC-FT	.00		

RIO GRANDE BASIN

08393300 ROCKY ARROYO BELOW ROCKY DAM, NEAR ROSWELL, NM

LOCATION.--Lat 33°16'11", long 104°43'13", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.16, T.12 S., R.22 E., Chaves County, Hydrologic Unit 13060008, on left bank, 300 ft (90 m) downstream from outlet structure in Rocky Dam (Two Rivers Reservoir) and 13.5 mi (21.7 km) southwest of Roswell.

DRAINAGE AREA.--64 mi² (166 km²), approximately.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,935.66 ft (1,199.589 m) above mean sea level (Corps of Engineers bench mark). Prior to Jan. 12, 1972, at site 1.4 mi (2.3 km) downstream at datum 28.76 ft (8.766 m) lower.

REMARKS.--Records good. No diversions above station. This record represents the outflow from Two Rivers Reservoir through Rocky Dam. Outlet conduits in Rocky Dam have fixed openings.

AVERAGE DISCHARGE.--14 years, 1.61 ft³/s (0.046 m³/s), 1,170 acre-ft/yr (1.44 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 548 ft³/s (15.5 m³/s) Aug. 21, 1966, gage height, 4.57 ft (1.393 m), site and datum then in use, from rating curve extended above 260 ft³/s (7.36 m³/s); no flow most of time.

EXTREMES FOR CURRENT YEAR.--No flow during year.

CAL YR 1976	TOTAL 0.00	MEAN .000	MAX .00	MIN .00	AC-FT .00
WTR YR 1977	TOTAL 0.00	MEAN .000	MAX .00	MIN .00	AC-FT .00

08393600 NORTH SPRING RIVER AT ROSWELL, NM

LOCATION.--Lat 33°23'47", long 104°32'53", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.31, T.10 S., R.24 E., Chaves County, Hydrologic Unit 13060008, on left bank, in Roswell Municipal Golf Course, 2,400 ft (730 m) upstream from Montana Avenue, and 2 blocks north of West Second Street, Roswell.

DRAINAGE AREA.--19.5 mi² (31.4 km²).

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,575 ft (1,090 m), from topographic map.

REMARKS.--Records poor. No diversions above station.

AVERAGE DISCHARGE.--19 years, 0.042 ft³/s (0.001 m³/s), 30 acre-ft/yr (37,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 387 ft³/s (11.0 m³/s) June 13, 1964, gage height, 4.65 ft (1.417 m), from rating curve extended above 80 ft³/s (2.27 m³/s) on basis of slope-area measurement; no flow most of time.

EXTREMES FOR CURRENT YEAR.--No flow during year.

CAL YR 1976	TOTAL 0.46	MEAN .001	MAX .31	MIN .00	AC-FT .9
WTR YR 1977	TOTAL 0.00	MEAN .000	MAX .00	MIN .00	AC-FT .00

08394100 PECOS RIVER NEAR HAGERMAN, NM

LOCATION.--Lat 33°10'08", long 104°18'24", in SE¼SW¼SE¼ sec.23, T.13 S., R.26 E., Chaves County, Hydrologic Unit 13060007, on left bank 3.4 mi (5.5 km) upstream from Rio Felix, 4.9 mi (7.9 km) north of Hagerman, and at mile 544.6 (876.3 km).

DRAINAGE AREA.--13,630 mi² (35,300 km²), approximately (contributing area).

PERIOD OF RECORD.--February 1968 to current year (operated as a low-flow station only).

REMARKS.--Records good. Flow partly regulated by Lake Sumner (station 08384000). Diversions and ground-water withdrawals for irrigation of about 80,000 acres (320 km²) above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined; no flow at times in 1971, 1974, 1976, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge not determined; no flow June 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	71	36	39	28	21	251	45	17	3.7	30	779
2	60	81	40	41	30	21	183	40	27	3.1	31	327
3	50	81	40	40	31	20	149	39	10	2.8	19	220
4	39	65	41	41	34	20	117	37	11	2.5	13	190
5	32	58	45	40	34	22	100	39	12	25	8.7	312
6	27	52	53	39	35	24	84	38	5.6	40	3.7	202
7	32	47	54	35	34	26	76	34	4.8	19	5.2	307
8	36	43	51	38	34	26	67	31	3.4	8.7	3.7	205
9	39	41	50	33	32	25	64	29	1.4	3.9	3.1	149
10	38	40	47	34	32	25	57	30	1.3	4.2	2.5	122
11	36	43	47	37	36	20	52	29	.93	1.1	4.0	103
12	33	46	45	36	36	20	49	109	.77	4.0	73	102
13	35	51	44	36	36	20	55	487	.63	2.9	94	91
14	34	53	43	36	35	19	64	268	.15	1.4	52	81
15	34	58	43	35	34	18	87	213	.38	3.4	65	74
16	35	60	42	36	34	18	90	149	1.1	2.8	44	71
17	30	57	42	35	31	18	80	111	.02	432	30	65
18	29	57	42	35	31	16	111	77	.00	565	22	87
19	25	56	42	38	28	330	91	59	.88	645	18	80
20	26	54	42	42	28	660	77	46	2.5	650	206	68
21	27	51	42	43	27	741	92	39	4.0	680	829	65
22	29	50	40	45	26	790	158	34	4.8	785	768	62
23	33	47	36	47	22	796	137	29	6.0	878	290	62
24	33	47	38	44	20	840	122	25	4.0	691	169	55
25	29	48	38	42	22	796	99	24	4.4	560	124	49
26	29	48	38	45	21	790	77	23	4.0	235	105	46
27	29	46	38	44	21	846	65	25	3.7	143	75	42
28	42	43	40	35	21	884	56	21	3.4	94	313	38
29	58	38	44	31	---	780	50	17	3.7	66	---	37
30	68	37	44	29	---	763	47	15	3.1	50	---	34
31	64	---	42	30	---	595	---	14	---	42	---	---
TOTAL	1175	1569	1329	1181	833	9990	2807	2176	141.96	6644.5	---	4125
MEAN	37.9	52.3	42.9	38.1	29.8	322	93.6	70.2	4.73	214	---	138
MAX	68	81	54	47	36	884	251	487	27	878	---	779
MIN	25	37	36	29	20	16	47	14	.00	1.1	---	34
AC-FT	2330	3110	2640	2340	1650	19820	5570	4320	282	13180	---	8180

CAL YR 1976 TOTAL 40013.83 MEAN 109 MAX 1000 MIN .00 AC-FT 79370

08394500 RIO FELIX AT OLD HIGHWAY BRIDGE, NEAR HAGERMAN, NM

LOCATION.--Lat 33°07'30", long 104°20'40", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.4, T.14 S., R.26 E., Chaves County, Hydrologic Unit 13060009, near left bank on downstream side of abandoned bridge pier, 0.6 mi (1.0 km) upstream from alternate U.S. Highway 285, 1.3 mi (2.1 km) northwest of Hagerman, and 2.7 mi (4.3 km) upstream from mouth. Mouth at Pecos River mile 541.4 (871.1 km).

DRAINAGE AREA.--932 mi² (2,410 km²), contributing area.

PERIOD OF RECORD.--April 1939 to current year. March 1932 to April 1939 at site 1 mi (1.6 km) 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 (1,037.356 m) above mean sea level.

REMARKS.--Records fair. Diversions for irrigation of about 350 acres (1.4 km²), 1959 determination, above station.

AVERAGE DISCHARGE.—38 years, 15.1 ft³/s (0.428 m³/s), 10,940 acre-ft/yr (13.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,000 ft³/s (2,100 m³/s) Oct. 7, 1954, gage height, 27.5 ft (8.38 m), from floodmarks, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of slope-area measurement at point 5.5 mi (8.8 km) 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 24 ft³/s (0.680 m³/s) Aug. 23, gage height, 4.65 ft (1.417 m) no peaks above base of 500 ft³/s (14 m³/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
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	1.7	.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	.30
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	.72	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.9	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.4	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.3	.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	1.70	.00	.00	.00	7.32	.30
MEAN	.000	.000	.000	.000	.000	.000	.057	.000	.000	.000	.24	.010
MAX	.00	.00	.00	.00	.00	.00	1.7	.00	.00	.00	3.4	.30
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	3.4	.00	.00	.00	15	.6
CAL YR 1976	TOTAL	0.02	MEAN .000	MAX .02	MIN .00	AC-FT	.04					
WTR YR 1977	TOTAL	9.32	MEAN .026	MAX 3.4	MIN .00	AC-FT	18					

08395500 PECOS RIVER NEAR LAKE ARTHUR, NM

LOCATION.--Lat 32°59'18", long 104°19'20", in SW¼ sec.27, T.15 S., R.26 E., Chaves County, Hydrologic Unit 1306007, on left bank 400 ft (120 m) upstream from county bridge, 2.5 mi (4.0 km) east of Lake Arthur, 7 mi (11.3 km) upstream from Cottonwood Creek, 11 mi (17.7 km) northeast of Artesia, and at mile 522.0 (839.9 km).

DRAINAGE AREA.--14,760 mi² (38,230 km²), approximately (contributing area).

PERIOD OF RECORD.--August 1938 to current year.

GAGE.--Water-stage recorder and rock control. Datum of gage is 3,327.07 ft (1,014.091 m) above mean sea level.

REMARKS.--Records good. Flow partly regulated by Lake Sumner (station 08384000). Diversions and ground-water withdrawals for irrigation of about 124,000 acres (500 km²), 1959 determination, above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,600 ft³/s (1,410 m³/s) Sept. 24, 1941, gage height, 21.90 ft (6.675 m), from rating curve extended above 16,100 ft³/s (456 m³/s) on basis of slope-area measurement at gage height 21.77 ft (6.635 m); no flow at times in 1947, 1953-4, 1962, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1937, reached a stage of 21.77 ft (6.635 m), discharge, 51,500 ft³/s (1,460 m³/s), on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 2,540 ft³/s (71.9 m³/s) at 1100 hours Aug. 31, gage height 7.02 ft (2.140 m), no other peak above base of 2,500 ft³/s (71 m³/s); minimum 0.94 ft³/s (0.027 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	64	41	46	37	24	281	31	11	2.0	14	1050
2	51	73	39	44	36	26	158	27	9.2	2.3	6.5	511
3	48	77	41	44	37	26	118	22	14	2.8	12	333
4	44	68	41	43	37	25	83	25	5.2	2.4	7.0	221
5	38	59	43	44	38	26	62	27	4.2	7.8	5.8	214
6	32	53	47	43	39	27	53	30	4.5	13	3.0	240
7	28	51	51	42	39	27	56	28	5.0	8.6	5.1	192
8	31	49	53	40	39	27	57	26	4.5	3.4	5.0	192
9	39	45	50	39	39	28	50	24	4.7	2.4	5.1	121
10	41	44	50	37	39	25	52	20	4.4	2.0	20	88
11	42	43	49	48	38	24	52	21	4.5	1.6	21	79
12	36	45	49	45	40	22	47	19	4.1	1.8	94	66
13	30	52	47	44	40	20	45	376	4.0	1.8	145	67
14	33	51	47	43	41	22	77	408	2.8	2.0	88	58
15	30	53	47	43	39	21	77	228	2.3	2.0	52	51
16	27	56	47	42	33	23	97	157	2.8	1.7	63	49
17	32	56	46	43	32	25	84	113	2.7	142	42	51
18	32	52	45	42	31	22	87	81	3.1	450	30	47
19	28	52	45	42	30	103	98	56	2.8	490	23	75
20	27	52	45	43	28	599	71	35	2.5	530	46	50
21	32	52	45	46	29	698	60	30	3.0	547	673	33
22	33	50	45	47	25	718	89	32	5.0	613	833	34
23	35	49	44	49	25	726	106	23	7.0	771	360	32
24	38	47	43	49	22	760	98	21	9.0	650	219	32
25	38	47	44	46	26	738	84	7.4	6.0	534	146	43
26	35	47	43	45	26	692	68	5.9	5.0	335	113	37
27	34	46	45	47	27	755	43	5.2	4.0	126	81	33
28	45	43	44	46	26	783	33	4.3	3.0	77	108	29
29	50	39	46	40	---	735	27	15	1.6	42	657	41
30	60	40	48	38	---	671	31	18	1.6	26	1700	35
31	65	---	47	36	---	608	---	14	---	19	2500	---
TOTAL	1177	1555	1417	1346	938	9026	2344	1929.8	143.5	5409.6	8077.5	4104
MEAN	38.0	51.8	45.7	43.4	33.5	291	78.1	62.3	4.78	175	261	137
MAX	65	77	53	49	41	783	281	408	14	771	2500	1050
MIN	27	39	39	36	22	20	27	4.3	1.6	1.6	3.0	29
AC-FT	2330	3080	2810	2670	1860	17900	4650	3830	285	10730	16020	8140
CAL YR 1976	TOTAL	36785.2	MEAN	101	MAX	943	MIN	2.0	AC-FT	72960		
WTR YR 1977	TOTAL	37467.4	MEAN	103	MAX	2500	MIN	1.6	AC-FT	74320		

LOCATION.--Lat 32°50'25", long 104°19'23", in NW 1/4 sec.18, T.17 S., R.27 E., Eddy County, Hydrologic Unit 13060007, near left bank on downstream end of bridge pier on State Highway 83, 4.3 mi (6.9 km) east of Artesia, 7.0 mi (11.3 km) upstream from Río Pecos, 17 mi (27.4 km) upstream from McMillan Dam, and at mile 503.9 (810.8 km).

WATER-DISCHARGE RECORDS

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.

REMARKS.—Water-discharge records fair. Flow partly regulated by Lake Sumner (station 08384000) since August 1937. Diversions and ground-water withdrawals for irrigation of about 154,000 acres (620 km²). 1959 determination, above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since at least 1893 occurred Oct. 2, 1904, discharge not determined; the peak inflow to Lake McMillan, which includes Rio Peñasco and Fourmile Draw, was estimated at 82,000 ft³/s (2,320 m³/s). The second highest flood occurred July 25, 1905, discharge below Rio Peñasco, 50,300 ft³/s (1,420 m³/s), based on gain in storage and spill from Lake McMillan. The floods in August 1893 and October 1904 damaged McMillan Dam and washed out Avalon Dam.

EXTREMES FOR CURRENT YEAR.—Maximum discharge 2,380 ft³/s (67.4 m³/s) at 0130 hours Sept. 1, gage height 11.34 ft (3.456 m), no other peak above base of 2,000 ft³/s (57 m³/s); minimum, 0.42 ft³/s (0.012 m³/s) July 17.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	70	47	50	36	27	363	32	14	2.1	21	1500
2	42	69	42	49	36	25	174	31	12	1.7	14	477
3	49	78	42	48	36	24	114	27	9.9	1.4	11	287
4	50	77	43	49	37	26	96	23	13	1.4	9.6	192
5	43	67	42	47	36	27	64	25	8.1	1.5	8.6	150
6	35	57	44	47	34	28	51	26	6.5	2.8	4.7	214
7	30	49	48	48	35	28	44	29	5.9	9.1	4.3	155
8	26	50	54	47	40	27	47	26	5.5	6.3	4.3	192
9	32	47	54	43	40	28	48	23	4.9	3.2	3.8	133
10	39	43	52	40	40	29	48	21	5.2	2.4	3.2	98
11	43	41	52	42	39	25	49	18	4.7	1.5	17	84
12	42	43	51	50	40	24	47	20	4.7	1.2	94	81
13	36	52	50	47	42	22	44	155	3.8	.74	132	75
14	31	53	50	45	42	19	70	492	3.5	.74	95	74
15	34	54	49	44	42	19	85	240	3.5	.74	57	68
16	29	59	48	44	38	19	87	187	3.3	1.2	56	56
17	29	60	48	43	32	20	103	134	2.6	.64	58	50
18	36	59	49	44	32	23	85	96	2.4	336	44	45
19	32	57	49	42	29	23	104	73	2.3	432	37	69
20	30	57	48	36	29	445	88	50	2.3	471	30	76
21	31	56	48	41	27	647	67	34	2.2	494	426	67
22	36	56	49	50	25	671	59	27	3.1	549	830	43
23	37	53	49	51	19	681	119	24	4.9	700	481	37
24	38	51	47	52	21	674	104	22	6.8	675	229	33
25	41	50	46	51	21	669	96	21	9.9	552	132	35
26	38	49	44	48	22	643	70	14	5.0	394	101	40
27	35	47	44	47	25	683	49	11	3.0	135	82	38
28	41	45	43	49	27	698	32	10	2.5	68	46	35
29	49	41	45	46	---	705	32	9.0	4.2	44	405	31
30	56	47	46	41	---	657	27	12	3.0	30	993	36
31	67	---	42	38	---	643	---	14	---	22	2110	---
TOTAL	1198	1637	1465	1419	922	8279	2466	1926.0	162.7	4940.66	6539.5	4471
MEAN	38.6	54.6	47.3	45.8	32.9	267	82.2	62.1	5.42	159	211	149
MAX	67	78	54	52	42	705	363	492	14	700	2110	1500
MIN	26	41	42	36	19	19	27	9.0	2.2	.64	3.2	31
AC-FT	2380	3250	2910	2810	1830	16420	4890	3820	323	9800	12970	8870
CAL YR 1976	TOTAL	36241.50	MEAN	99.0	MAX	897	MIN	1.4	AC-FT	71880		
WTR YR 1977	TOTAL	35425.86	MEAN	97.1	MAX	2110	MIN	.64	AC-FT	70270		

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.

HARDNESS: July 1937 to current year.

DISSOLVED SOLIDS: July 1937 to current year.

SUSPENDED SEDIMENT DISCHARGE: January 1949 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 28,800 micromhos June 24, 1977; minimum daily, 464 micromhos Sept. 23, 1974.

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.

HARDNESS: Maximum, 4,740 mg/L May 3, 1967; minimum, 235 mg/L May 31, 1963.

DISSOLVED SOLIDS: Maximum, 18,000 mg/L June 6, 1972; minimum, 461 mg/L May 31, 1963.

SEDIMENT CONCENTRATIONS: Maximum daily, 21,300 mg/L Aug. 1, 1962; minimum daily, no flow on many days during July 1953, July and August 1954, July 1957, July to October 1964.

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.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 28,800 micromhos June 24; minimum daily, 1,690 micromhos Aug. 31.

WATER TEMPERATURES: Maximum, 35.0°C June 18, 27, July 11, 15; minimum, 0.0°C Jan. 10, 11.

HARDNESS: Maximum, 4,300 mg/L June 13-24; minimum, 730 mg/L Aug. 25.

DISSOLVED SOLIDS: Maximum, 14,900 mg/L July 1-17; minimum, 1,400 mg/L Sept. 1.

SEDIMENT CONCENTRATIONS: Maximum daily, 7,160 mg/L May 14; minimum daily, 5 mg/L Feb. 6-8.

SEDIMENT LOADS: Maximum daily, 22,200 tons (20,100 tonnes) Aug. 31; minimum daily, .07 ton (.06 tonne) July 13.

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	HARD- NESS (CA, MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	SODIUM AD- SORP- TION RATIO (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (MG/L) (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)
OCT												
01-07	41	6870	7.6	1900	1800	500	160	890	8.9	11	116	0
08-31	38	8440	7.6	2200	2100	560	200	1200	11	12	141	0
NOV												
01-07	67	6340	7.6	1900	1800	500	160	750	7.5	8.5	136	0
08-23	52	7950	7.8	2200	2100	550	200	1000	9.3	9.9	174	0
24-30	47	8710	7.8	2300	2100	570	210	1200	11	11	190	0
DEC												
01-30	47	9220	7.8	2400	2200	590	230	1200	11	11	217	0
31...	42	9550	7.6	2500	2300	610	230	1300	11	11	216	0
JAN												
01-31	46	9360	7.8	2400	2200	600	220	1300	12	12	201	0
FEB												
01-22	36	10400	7.6	2600	2500	630	250	1500	13	13	150	0
23-28	22	11900	7.6	2800	2600	660	270	1700	14	18	150	0
MAR												
01-19	24	12410	7.9	3000	2900	700	310	2000	16	17	120	0
20-31	651	3214	7.7	1700	1600	530	83	190	2.0	5.0	73	0
MAY												
01-13	35	9980	6.7	2600	2500	650	240	1400	12	15	140	0
14-21	163	2800	7.1	860	760	250	56	250	3.7	5.5	110	0
22-25	24	7040	7.0	2000	1900	530	170	1100	11	14	110	0
26-31	12	11600	7.0	2800	2700	710	260	2100	17	23	140	0
JUN												
01-12	7.9	15300	7.1	3400	3200	800	330	2700	20	27	160	0
13-24	3.4	22000	6.7	4300	4100	980	440	4200	28	43	160	0
25-30	4.6	14700	6.9	2700	2600	630	280	2700	23	30	110	0
JUL												
01-17	2.3	21200	7.4	3900	3800	800	460	3900	27	47	130	0
18-31	350	2370	7.6	1200	1100	350	67	160	2.1	5.6	110	0
AUG												
01-05	13	4610	7.8	1500	1400	440	100	520	5.8	9.3	100	0
06-11	6.2	8340	7.8	2100	2000	570	160	1200	11	15	120	0
12-20	67	5900	7.4	1400	1400	410	99	800	9.2	9.8	89	0
21-28	291	2600	7.4	920	820	290	48	210	3.0	5.2	120	0
29-31	1170	1890	7.4	870	780	270	48	130	1.9	5.0	110	0
SEP												
01...	1500	1960	7.4	800	710	260	36	130	2.0	5.4	110	0
02-09	225	2390	7.6	920	830	280	53	210	3.0	5.4	110	0
10-13	84	3540	7.7	1200	1100	340	86	380	4.8	6.2	120	0
14-18	59	5520	7.5	1600	1500	440	130	660	7.1	8.2	110	0
19-30	45	6830	7.5	1900	1800	490	170	940	9.3	10	120	0
WTD. AVG.	--	4400	7.6	1530	1420	432	106	483	4.9	7.2	116	0
TIME WTD.												
AVG.	98	9290	7.5	2310	2190	575	214	1400	12	15	145	0
TOT. LOAD (TONS)	--	--	--	--	--	38400	9430	42900	--	644	10300	0

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT												
01-07	1700	1500	.7	14	--	4840	6.58	536	.62	--	--	--
08-31	1900	2000	.7	14	--	5960	8.11	612	.95	--	--	--
NOV												
01-07	1700	1200	.6	13	--	4400	5.98	796	.92	--	--	--
08-23	1700	1700	.7	13	--	5270	7.17	740	1.4	--	--	--
24-30	1900	2000	.8	9.4	--	6000	8.16	761	1.5	--	--	--
DEC												
01-30	1700	2000	.9	11	--	5860	7.97	744	2.6	--	--	--
31...	1900	2200	.8	11	--	6380	8.68	724	2.0	--	--	--
JAN												
01-31	1800	2400	.9	10	--	6450	8.77	806	1.8	--	--	--
FEB												
01-22	2000	2800	.9	7.2	--	7280	9.90	708	.43	--	--	--
23-28	2200	3100	.9	8.9	--	8030	10.9	477	.46	--	--	--
MAR												
01-19	2500	3300	.9	2.9	--	8890	12.1	576	.05	--	--	--
20-31	1600	270	.5	8.4	--	2720	3.70	4780	.01	--	--	--
MAY												
01-13	2200	2400	.8	15	--	6990	9.51	661	.27	--	--	--
14-21	780	350	.6	9.5	--	1760	2.39	775	.79	--	--	--
22-25	1700	1700	.7	13	--	5280	7.18	342	.64	--	--	--
26-31	2400	3200	.8	14	--	8780	11.9	284	.56	--	--	--
JUN												
01-12	2800	4600	.9	16	--	11400	15.5	243	.66	--	--	--
13-24	3500	6800	.9	16	--	16100	21.9	148	.70	--	--	--
25-30	2400	4500	.9	7.9	--	10600	14.4	132	1.2	--	--	--
JUL												
01-17	3400	6200	1.0	13	--	14900	20.3	92.5	--	--	--	--
18-31	980	270	.8	15	--	1900	2.58	1800	--	--	--	--
AUG												
01-05	1300	850	.7	13	--	3280	4.46	115	--	--	--	--
06-11	1900	1800	.8	16	--	5720	7.78	95.8	--	--	--	--
12-20	1200	1300	.5	9.1	--	3870	5.26	700	--	--	--	--
21-28	800	360	.6	12	--	1790	2.43	1410	--	--	--	--
29-31	770	160	.6	12	--	1450	1.97	4580	--	--	--	--
SEP												
01...	710	190	.6	9.9	--	1400	1.90	5670	--	--	--	--
02-09	790	310	.6	11	--	1710	2.33	1040	--	--	--	--
10-13	1100	570	.6	13	--	2560	3.48	581	--	--	--	--
14-18	1500	1100	.6	14	--	3910	5.32	623	--	--	--	--
19-30	1700	1500	.7	15	--	4880	6.64	593	--	--	--	--
WTD. AVG.	1310	798	.7	11	--	3200	4.35	--	--	--	--	--
TIME WTD.												
AVG.	1900	2340	.8	12	--	6530	8.88	--	--	--	--	--
TOT. LOAD												
(TONS)	116000	71000	59	991	--	285000	--	--	--	--	--	--

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA, MG) (MG/L) (00900)
OCT										
08...	1030	26	8320	7.8	15.0	12.0	30	10.2	83	2200
NOV										
10...	1450	41	8100	7.9	24.5	13.0	30	12.4	110	2100
DEC										
16...	1000	48	9100	7.8	4.5	3.5	6	13.3	29	2300
JAN										
20...	1000	36	10300	8.2	9.0	4.0	5	13.0	50	2600
FEB										
18...	1100	32	11000	8.1	17.5	12.0	2	10.4	75	2600
MAR										
24...	0900	671	3400	7.9	17.5	11.5	800	9.7	120	1700
APR										
29...	1030	34	6310	8.4	21.0	21.0	7	--	150	1900
MAY										
20...	1000	51	3900	8.2	24.5	20.5	220	11.2	31	1100
JUL										
01...	1100	2.5	9000	8.1	30.0	32.0	8	12.2	64	2500
28...	1300	65	2390	8.1	33.5	30.0	400	8.8	33	970
AUG										
25...	0700	137	2200	7.9	23.5	26.0	2500	7.1	240	730

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	NON-CAR-BONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (00915)	DIS-SOLVED MAGNE- SIUM (MG) (00925)	DIS-SOLVED SODIUM (NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (00935)	BICARBONATE (HCO3) (00440)	CARBONATE (CO3) (00445)	DIS-SOLVED SULFATE (SO4) (00945)
OCT 08...	2100	550	190	1100	10	13	128	0	1900
NOV 10...	2000	560	180	1000	9.4	12	153	0	1700
DEC 16...	2100	580	210	1200	11	11	206	0	1900
JAN 20...	2400	620	250	1400	12	11	210	0	2100
FEB 18...	2500	640	250	1500	13	14	150	0	2000
MAR 24...	1500	530	80	150	1.6	4.3	131	0	1500
APR 29...	1800	500	150	900	9.1	11	110	0	1700
MAY 20...	990	320	71	450	5.9	7.5	120	0	950
JUL 01...	2400	600	240	2200	19	25	120	0	2200
28...	890	310	48	160	2.2	5.0	96	0	900
AUG 25...	650	230	38	200	3.2	4.7	93	0	650

DATE	DIS-SOLVED CHLORIDE (CL) (00940)	DIS-SOLVED FLUORIDE (F) (00950)	DIS-SOLVED SILICA (SiO2) (00955)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (00630)	DIS-SOLVED NITRITE PLUS NITRATE (N) (00631)	TOTAL AMMONIA NITROGEN (N) (00610)	TOTAL ORGANIC NITROGEN (N) (00605)
OCT 08...	1800	.8	13	5980	5630	.14	.12	.00	.33
NOV 10...	1700	.7	11	5700	5240	.29	.27	.23	2.6
DEC 16...	2100	.9	11	6350	6120	1.1	1.1	1.2	.40
JAN 20...	2400	.9	11	7110	6900	1.1	1.1	.44	.18
FEB 18...	2800	.8	5.5	7460	7290	.03	.03	.01	.23
MAR 24...	250	.7	11	2910	2590	.22	.22	.08	1.3
APR 29...	1400	.9	11	4920	4730	.06	.03	.03	.79
MAY 20...	650	.8	10	2600	2520	.63	.63	.05	.16
JUL 01...	3500	.8	7.9	9070	8830	.03	.03	.17	1.0
28...	240	.7	11	1820	1720	.15	.15	.17	1.1
AUG 25...	290	.6	10	1560	1470	.58	.58	.05	4.4

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRO- GEN (N) (006600)	TOTAL PHOS- PHORUS (P) (00665)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (00671)	DIS- SOLVED BORON (B) (01020)	DIS- SOLVED IRON (FE) (01046)	DIS- SOLVED MAN- GANESE (MN) (01056)	TOTAL ORGANIC CARBON (C) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (00681)	SUS- PEN- DED ORGANIC CARBON (C) (00689)
OCT									
08...	.47	.04	.01	540	20	50	--	5.6	1.4
NOV									
10...	3.1	.07	.01	480	10	--	--	9.9	.8
DEC									
16...	2.7	.14	.08	490	0	60	4.0	--	--
JAN									
20...	1.7	.11	.07	540	10	--	--	5.0	.5
FEB									
18...	.27	.04	.04	580	20	--	3.9	--	--
MAR									
24...	1.6	1.1	.04	140	20	20	14	2.6	<5.0
APR									
29...	.88	.07	.01	430	20	--	--	2.8	2.2
MAY									
20...	.84	.18	.02	270	20	--	--	2.9	1.5
JUL									
01...	1.2	.03	.01	950	60	310	--	7.4	1.5
28...	1.4	.28	.02	130	10	--	--	3.8	1.3
AUG									
25...	5.0	.09	.01	160	30	--	--	2.5	.5

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)
JUL		
28...	1300	588
AUG		
25...	0700	4430

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CH) (UG/L) (01030)	TOTAL COBAL- (CO) (UG/L) (01037)	DIS- SOLVED COBAL- (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)
OCT 08...	1030	1	0	540	30	0	10	10	150	0	20	1
DEC 16...	1000	2	1	490	10	0	0	0	<50	0	20	0
MAR 24...	0900	21	1	140	10	0	40	0	<50	0	60	0
JUL 01...	1100	1	1	950	20	1	20	10	50	1	20	20

DATE	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT 08...	840	20	100	0	140	50	.0	.0	2	1	20	20
DEC 16...	180	0	<100	0	80	60	.3	.1	4	2	20	20
MAR 24...	31000	20	200	2	1400	20	.1	.0	1	1	120	20
JUL 01...	330	60	100	4	420	310	.1	.1	1	1	30	30

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOC- CI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOC- CI KF AGAR (COL. PER 100 ML) (31673)
OCT 08...	1030	12	8	--
NOV 10...	1450	5	4	--
DEC 16...	1000	2	5	--
JAN 20...	1000	2	52	--
FEB 18...	1100	0	42	--
MAR 24...	0900	180	--	--
APR 29...	1030	13	--	60
MAY 20...	1000	30	--	120
JUL 01...	1100	70	--	110
28...	1300	70	--	150
AUG 25...	0700	500	--	1900

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)
NOV								
10...	1450	41	13.0	26	2.9	--	--	--
DEC								
16...	1000	48	3.5	72	9.3	--	--	--
JAN								
20...	1000	36	4.0	47	4.6	--	--	--
FEB								
18...	1100	32	12.0	13	1.1	--	--	--
MAR								
24...	0900	671	11.5	2600	4710	--	--	--
29...	1120	719	13.5	1760	3420	--	--	--
APR								
02...	1655	167	15.0	642	289	--	--	--
29...	1030	34	21.0	79	7.3	--	--	--
MAY								
14...	1500	533	19.5	7850	11300	--	--	--
20...	1000	51	20.5	349	48	--	--	--
JUL								
01...	1100	2.5	32.0	21	14	--	--	--
18...	1425	384	27.0	6920	7170	61	76	96
19...	1040	425	26.0	4320	4960	54	73	96
20...	1735	464	28.0	3110	3900	56	68	91
21...	1030	487	27.0	2550	3350	49	71	92
22...	1515	547	25.0	2740	4050	40	58	79
25...	0825	569	25.0	2140	3290	43	61	81
27...	1000	130	26.5	1160	407	59	74	92
28...	1300	65	30.0	518	91	64	75	85
AUG								
21...	1930	755	26.5	5830	11900	49	64	87
22...	1745	932	27.0	5370	13500	47	58	79
25...	0700	137	26.0	4120	1520	67	80	96
30...	1410	1080	26.0	4410	12900	53	64	85
31...	1515	2240	25.0	4050	24500	53	73	90
SEP								
01...	1440	1250	26.0	2230	7530	50	68	87
		SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM (70332)	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM (70333)	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM (70334)
NOV								
10...	--	--	--	91	93	96	100	--
DEC								
16...	--	--	--	71	81	96	99	100
JAN								
20...	--	--	--	19	--	--	--	--
FEB								
18...	--	--	--	37	--	--	--	--
MAR								
24...	--	--	--	80	--	--	--	--
29...	--	--	--	91	--	--	--	--
APR								
02...	--	--	--	100	--	--	--	--
29...	--	--	--	91	--	--	--	--
MAY								
14...	--	--	--	97	--	--	--	--
20...	--	--	--	96	--	--	--	--
JUL								
01...	--	--	--	93	--	--	--	--
18...	--	--	--	99	100	--	--	--
19...	100	--	--	--	--	--	--	--
20...	--	--	--	99	100	--	--	--
21...	100	--	--	--	--	--	--	--
22...	--	--	--	93	96	100	--	--
25...	--	--	--	97	100	--	--	--
27...	--	--	--	97	99	100	--	--
28...	--	--	--	87	91	100	--	--
AUG								
21...	97	100	--	--	--	--	--	--
22...	92	99	100	--	--	--	--	--
25...	--	--	--	96	97	100	--	--
30...	--	--	--	97	100	--	--	--
31...	--	--	--	99	100	--	--	--
SEP								
01...	--	--	--	98	100	--	--	--

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6630	7040	9260	9280	10100	11700	2940	8800	19800	12600	3610	1960
2	7360	6630	9180	9010	10600	11800	3410	9150	12800	17500	4710	1960
3	7310	6470	9100	8990	10300	11800	3600	8950	13000	19200	5050	2000
4	6240	5810	9350	9170	10600	12400	3810	9440	13900	20000	5300	2240
5	6460	5810	9900	9010	10200	11900	4450	10200	14800	19500	5600	2490
6	6670	6140	9900	9300	10500	12000	4790	11000	15100	22400	7040	2800
7	7460	6470	9900	9210	10700	11900	4620	10300	14300	23400	6990	2770
8	8830	7110	9260	9160	10900	11900	5310	10100	15300	23200	7990	3090
9	9380	7150	8550	9420	10400	11900	5370	10000	14900	21000	8830	2870
10	8090	7450	8420	10000	10200	11900	6030	10800	---	21800	8760	3150
11	7790	7940	8350	9820	9950	12100	6360	11000	17300	21500	9070	3340
12	7630	8240	8560	9520	9890	12900	6620	11500	18700	21100	7330	3670
13	7460	7880	8780	9640	9890	13300	6460	8540	21200	20700	6950	4160
14	7970	8060	8940	9330	9790	13200	6540	2640	20800	19800	4710	4910
15	8280	8060	8940	9080	10300	13300	6500	2320	20300	19600	4950	5170
16	8480	8060	8940	9710	10600	13400	5490	2460	18400	19800	4730	5420
17	8480	7830	9100	9890	10300	13000	6430	2350	20700	18500	5820	6120
18	9290	8180	9090	10200	10400	13500	7340	2700	21200	4560	5700	6460
19	8400	8310	9260	9870	10400	12900	6670	3140	21800	3060	5790	6800
20	8830	8240	9440	9920	10700	4500	5970	3460	21800	2410	6620	6270
21	9140	8120	9270	9920	10900	3580	6120	4960	21200	2240	3490	6120
22	9300	8110	9350	9300	11200	3220	6360	6320	21900	2160	2320	6150
23	8620	8230	9430	9300	11500	3120	5750	7000	23800	2050	2040	6930
24	8820	8500	9430	8970	11600	3070	5120	7120	28800	2130	2300	6930
25	8820	8500	9170	8690	12400	3030	4590	7860	9900	1840	2190	7270
26	8400	8560	9430	8670	11600	3050	4920	9660	17500	1900	2240	7220
27	8400	8770	9610	8860	12100	2990	5240	10600	16800	1980	2540	6620
28	8330	8630	9690	9070	12100	3100	5530	10300	16400	2440	2840	7030
29	8200	8920	9890	9080	---	3060	6680	11200	20300	2620	2690	7820
30	8140	9220	9690	9440	---	3060	7940	11700	9120	2810	1900	8320
31	7610	---	9550	9950	---	3050	---	15400	---	3350	1690	---
MEAN	8090	7750	9250	9380	10700	8890	5570	8100	18000	12200	4900	4940
WTR YR 1977	MEAN	8940		MAX	28800		MIN	1690				

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	13.0	3.5	5.0	5.0	11.5	14.0	24.5	30.0	32.0	25.0	26.0
2	23.0	11.5	7.5	2.0	6.0	11.0	15.0	20.0	30.5	32.5	29.0	24.5
3	20.0	14.0	9.0	7.0	5.0	8.0	13.5	20.0	24.5	33.0	26.0	26.0
4	21.5	15.5	5.0	4.5	9.5	13.5	16.0	18.5	30.0	30.5	27.5	24.0
5	22.0	15.0	8.5	5.5	5.5	6.5	14.0	20.0	19.0	30.0	24.0	26.0
6	17.5	16.0	6.5	2.5	5.0	6.5	15.0	22.0	26.0	26.0	26.0	25.0
7	14.5	11.5	6.5	3.0	5.5	15.0	17.0	19.0	30.5	32.0	26.0	27.0
8	18.0	14.0	8.5	3.5	6.5	10.0	20.0	19.0	24.0	26.0	26.0	27.0
9	18.5	16.5	7.0	1.0	8.5	12.5	23.0	20.0	23.5	33.0	28.0	26.0
10	20.5	10.0	7.5	.0	8.0	12.5	21.0	24.5	---	26.5	27.0	27.5
11	13.5	11.0	5.0	.0	8.5	16.0	23.0	25.0	31.0	35.0	28.0	24.0
12	21.0	8.0	5.0	3.0	13.0	15.0	24.0	21.0	28.0	29.0	29.5	27.0
13	21.5	4.0	8.0	3.0	13.0	15.0	20.0	22.0	24.0	34.0	25.0	26.5
14	17.5	4.0	5.0	1.5	8.0	10.0	15.0	19.0	26.5	30.0	25.0	25.0
15	16.5	5.0	5.0	2.0	8.5	17.0	20.0	19.5	25.0	35.0	30.0	25.0
16	10.5	7.0	4.5	4.0	7.5	14.0	17.5	22.0	24.0	32.0	29.0	22.0
17	11.0	6.0	8.0	3.0	16.5	15.0	21.0	23.0	27.0	29.0	31.5	26.5
18	15.0	7.0	4.0	4.5	17.0	16.0	20.0	21.0	35.0	27.0	25.5	25.0
19	17.0	9.0	10.0	7.5	10.0	10.5	23.0	21.0	22.0	26.0	32.5	25.5
20	15.5	10.0	5.0	3.5	9.5	12.0	19.0	21.0	25.5	28.0	25.0	24.0
21	13.5	12.0	7.0	5.0	15.0	12.5	19.0	23.0	23.5	27.0	26.5	27.0
22	14.0	9.5	1.5	7.0	13.0	13.0	17.0	24.5	22.0	27.0	27.0	24.5
23	15.0	11.5	4.0	8.5	9.0	12.0	21.5	25.5	31.0	25.0	27.0	26.0
24	13.0	10.5	2.5	5.5	12.0	14.0	22.0	20.0	29.5	25.0	27.5	26.5
25	12.0	12.5	5.5	5.0	11.5	13.0	21.0	23.5	22.0	25.0	30.5	21.0
26	10.0	11.5	4.0	8.5	7.0	12.5	23.0	25.0	32.0	26.0	27.0	21.0
27	9.0	8.0	8.5	7.5	12.5	12.0	24.0	27.0	35.0	26.5	28.5	27.5
28	7.0	2.0	3.5	8.0	12.0	13.0	19.0	28.0	25.0	28.0	26.0	23.0
29	8.0	1.0	5.5	9.5	---	13.5	21.0	22.0	33.5	28.0	26.5	28.0
30	7.5	4.0	9.0	5.0	---	14.0	17.0	30.0	32.0	27.0	26.0	25.0
31	11.5	---	3.5	4.5	---	15.0	---	24.5	---	29.5	25.0	---
MEAN	15.5	9.5	6.0	4.5	9.5	12.5	19.0	22.5	27.5	29.0	27.0	25.5
WTR YR 1977	MEAN	17.5		MAX	35.0		MIN	.0				

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1	210	23	100	19	42	5.3	58	7.8	6	.58	20	1.5											
2	245	28	74	14	34	3.9	53	7.0	6	.58	30	2.0											
3	238	31	86	18	34	3.9	70	9.1	26	2.5	24	1.6											
4	255	34	93	19	29	3.4	39	5.2	18	1.8	24	1.7											
5	267	31	63	11	34	3.9	45	5.7	6	.58	18	1.3											
6	238	22	54	8.3	30	3.6	45	5.7	5	.46	26	2.0											
7	281	23	48	6.4	22	2.9	45	5.8	5	.47	27	2.0											
8	203	14	46	6.2	19	2.8	50	6.3	5	.54	18	1.3											
9	243	21	55	7.0	21	3.1	61	7.1	8	.86	18	1.4											
10	331	35	47	5.5	17	2.4	65	7.0	9	.97	34	2.7											
11	202	23	61	6.8	15	2.1	83	9.4	7	.74	25	1.7											
12	273	31	47	5.5	20	2.8	58	7.8	8	.86	31	2.0											
13	295	29	32	4.5	16	2.2	49	6.2	7	.79	21	1.2											
14	148	12	34	4.9	15	2.0	61	7.4	6	.68	46	2.4											
15	74	6.8	32	4.7	41	5.4	53	6.3	8	.91	35	1.8											
16	59	4.6	34	5.4	52	6.7	53	6.3	8	.82	32	1.6											
17	53	4.1	26	4.2	41	5.3	63	7.3	11	.95	92	5.0											
18	58	5.6	33	5.3	30	4.0	19	2.3	12	1.0	49	3.0											
19	67	5.8	39	6.0	19	2.5	20	2.3	18	1.4	34	2.1											
20	69	5.6	46	7.1	61	7.9	22	2.1	18	1.4	1000	494											
21	68	5.7	37	5.6	49	6.4	8	.89	19	1.4	4120	7200											
22	48	4.7	37	5.6	52	6.9	8	1.1	38	2.6	3010	5450											
23	70	7.0	34	4.9	40	5.3	10	1.4	28	1.4	2600	4780											
24	49	5.0	33	4.5	30	3.8	9	1.3	13	.74	2410	4390											
25	53	5.9	37	5.0	50	6.2	8	1.1	19	1.1	1950	3520											
26	46	4.7	43	5.7	57	6.8	7	.91	20	1.2	1910	3320											
27	42	4.0	34	4.3	39	4.6	6	.76	25	1.7	1950	3600											
28	37	4.1	30	3.6	83	9.6	6	.79	18	1.3	1980	3730											
29	47	6.2	37	4.1	52	6.3	9	1.1	---	---	1830	3480											
30	85	13	37	4.7	53	6.6	6	.66	---	---	2730	4840											
31	101	18	---	---	63	7.1	8	.82	---	---	2010	3490											
TOTAL	---	467.8	---	216.8	---	145.7	---	134.93	---	30.33	---	48332.3											
	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER																	
1	1290	1260	72	6.2	59	2.2	20	.11	72	4.1	2700	10900											
2	760	357	63	5.3	48	1.6	23	.11	71	2.7	3250	4190											
3	615	189	55	4.0	44	1.2	28	.11	86	2.6	2150	1670											
4	400	104	48	3.0	44	1.5	48	.18	69	1.8	1120	581											
5	179	3																					

08398500 RIO PENASCO AT DAYTON, NM

LOCATION.--Lat 32°44'36", long 104°24'49", in NE¼SE¼SE¼ sec.18, T.18 S., R.26 E., Eddy County, Hydrologic Unit 13060010, on left bank 1.2 mi (1.9 km) upstream from U.S. Highway 285, 1.9 mi (3.1 km) northwest of old Dayton railway station, 5.6 mi (9.0 km) upstream from mouth, and 7.0 mi (11.3 km) south of Artesia. Mouth at Pecos River mile 496.4 (798.7 km).

DRAINAGE AREA.--1,060 mi² (2,750 km²), approximately.

PERIOD OF RECORD.--April 1951 to current year. Prior to October 1953, published as "near Dayton."

REVISED RECORDS.--WSP 1242: 1951(M). WSP 1512: 1956. WSP 1923: 1955.

GAGE.--Water-stage recorder and rock and concrete control. Datum of gage is 3,385.19 ft (1,031.806 m) above mean sea level. Prior to May 9, 1968, at site 2.4 mi (3.9 km) downstream, at datum 44.30 ft (13.503 m) lower. May 9, 1968, to June 12, 1975, at present site at datum 1.98 ft (0.604 m) higher.

REMARKS.--Records good. Diversions and ground-water withdrawals for irrigation of about 3,000 acres (12 km²), 1959 determination, above station.

AVERAGE DISCHARGE.--26 years, 5.92 ft³/s (0.168 m³/s), 4,290 acre-ft/yr (5.29 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft³/s (844 m³/s) Aug. 23, 1966, gage height, 16.4 ft (5.00 m), from floodmarks, present site and datum, from rating curve extended above 6,000 ft³/s (170 m³/s), on basis of slope-area measurements at gage heights 6.82 ft (2.079 m) and 7.90 ft (2.408 m) at previous site and datum; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about Sept. 22, 1941, reached a stage of about 9 ft (2.7 m) previous site and datum (from old logs), and peak discharge for station "near Dunken", at river mile 66.8 (107 km), was 70,000 ft³/s (1,980 m³/s), as determined for that station in 1956, from floodmarks and rating curve extended above 36,300 ft³/s (1,030 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge 6,210 ft³/s (176 m³/s) at 1400 hours Aug. 20, gage height, 8.34 ft (2.542 m), no other peak above base of 750 ft³/s (21 m³/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
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	.08	.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	780	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	792.22	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	25.6	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	780	.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	1570	.00

CAL YR 1976 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1977 TOTAL 792.22 MEAN 2.17 MAX 780 MIN .00 AC-FT 1570

RIO GRANDE BASIN

08399500 PECOS RIVER (KAISER CHANNEL) NEAR LAKEWOOD, NM

LOCATION.--Lat 32°41'22", long 104°17'53", in NW¼SE¼ sec.5, T.19 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on left bank 3.0 mi (4.8 km) upstream from high-water line of Lake McMillan, 6.0 mi (9.7 km) northeast of Lakewood, 7.0 mi (11.3 km) northeast of gates in McMillan Dam, 12 mi (19.3 km) southeast of Artesia, and at mile 492.1 (791.8 km).

PERIOD OF RECORD.--May 1950 to current year. Prior to October 1954, published as Kaiser Lake-McMillan Channel near Lakewood.

GAGE.--Water-stage recorder. Datum of gage is 3,268.53 ft (996.248 m) above mean sea level (Bureau of Reclamation bench mark). Prior to Mar. 23, 1955, at site 3.0 mi (4.8 km) downstream at datum 7.83 ft (2.387 m) lower. Mar. 23, 1955, to Sept. 30, 1963, at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records fair. Flow partly regulated by Lake Summer (station 08384000). Diversions and ground-water withdrawals for irrigation of about 170,000 acres (690 km²), 1959 determination, above station. Above about 1,500 ft³/s (42 m³/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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,920 ft³/s (82.7 m³/s) July 12, 1960; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,470 ft³/s (41.6 m³/s) Aug. 31; no flow at times in June, July, August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	62	52	41	33	25	423	30	10	.00	13	1340
2	33	58	45	46	34	24	177	32	9.2	.00	11	475
3	40	64	42	45	35	22	118	30	7.1	.00	7.4	385
4	45	68	44	44	34	23	95	25	7.1	.00	3.6	266
5	39	62	43	43	34	25	70	24	7.1	.00	4.0	200
6	31	54	43	43	31	25	52	26	3.2	.00	1.3	250
7	24	50	45	43	30	25	45	27	1.1	.00	.00	190
8	21	46	50	44	35	25	46	30	.54	.00	.00	202
9	21	45	54	39	37	25	50	27	.54	.00	.00	162
10	30	43	51	35	38	26	46	25	.11	.00	.00	120
11	35	40	50	39	38	25	48	21	.12	.00	95	94
12	37	42	49	44	36	23	47	18	.00	.00	392	90
13	33	47	49	47	39	22	45	60	.00	.00	101	75
14	27	53	46	44	40	20	56	500	.00	.00	105	74
15	26	53	45	42	40	18	81	243	.00	.00	56	64
16	26	56	44	40	39	19	72	200	.00	.00	41	57
17	19	57	45	40	31	18	92	129	.00	.00	49	52
18	24	55	44	40	30	20	79	97	.00	199	34	48
19	26	52	44	40	28	21	86	67	.00	417	24	44
20	23	52	43	35	27	344	88	47	.00	472	17	70
21	23	52	42	34	26	645	65	31	.00	485	212	51
22	27	51	42	42	24	633	57	25	.00	531	782	37
23	29	50	43	46	21	655	88	30	.00	649	567	37
24	29	49	43	47	20	676	97	26	.00	705	309	32
25	31	49	41	48	21	684	90	19	6.6	582	150	33
26	33	49	40	47	20	655	73	18	3.2	452	111	39
27	30	46	41	45	22	699	57	12	.03	177	90	36
28	32	43	40	46	23	699	39	9.4	.00	77	55	32
29	36	38	40	45	---	714	34	8.4	.00	45	251	29
30	43	45	42	40	---	676	30	6.6	.00	26	862	35
31	54	---	39	35	---	676	---	11	---	17	1470	---
TOTAL	965	1531	1381	1309	866	8187	2446	1854.4	55.94	4834.00	5813.30	4619
MEAN	31.1	51.0	44.5	42.2	30.9	264	81.5	59.8	1.86	156	188	154
MAX	54	68	54	48	40	714	423	500	10	705	1470	1340
MIN	19	38	39	34	20	18	30	6.6	.00	.00	.00	29
AC-FT	1910	3040	2740	2600	1720	16240	4850	3680	111	9590	11530	9160
CAL YR 1976	TOTAL	33706.26	MEAN	92.1	MAX	867	MIN	.00	AC-FT	66860		
WTR YR 1977	TOTAL	33861.64	MEAN	92.8	MAX	1470	MIN	.00	AC-FT	67160		

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 (110 m) downstream from ford on Lakewood-Dayton road, 1.9 mi (3.1 km) downstream from U.S. Highway 285, 2.8 mi (4.5 km) north of Lakewood, 3.8 mi (6.1 km) upstream from mouth, and 11.5 mi (18.5 km) south of Artesia. Mouth at Pecos River mile 490.6 (789.4 km).

DRAINAGE AREA.--265 mi² (686 km²), approximately.

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WRD 1968: 1967.

GAGE.--Water-stage recorder. Datum of gage is 3,299.14 ft (1,005.578 m) above mean sea level. Oct. 1, 1951, to June 19, 1962, at site 1.8 mi (2.9 km) upstream at datum 30.61 ft (9.330 m) higher. June 19, 1962, to Oct. 12, 1966, at site 410 ft (125 m) upstream at datum 6.08 ft (1.853 m) higher.

REMARKS.--Records good. No surface diversions above station.

AVERAGE DISCHARGE.--26 years, 3.97 ft³/s (0.112 m³/s) 2,880 acre-ft/yr (3.55 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,300 ft³/s (830 m³/s) Aug. 23, 1966, gage height, 19.9 ft (6.07 m), from floodmarks present datum, from rating curve extended above 5,000 ft³/s (17.0 m³/s) on basis of slope-area measurement of peak flow; no flow most of time.

The flood of Aug. 23, 1966, (information from local resident) is believed to be the greatest since at least 1920.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 824 ft³/s (23.3 m³/s) at 1900 hours Aug. 20, gage height, 4.46 ft (1.359 m), no other peak above base of 200 ft³/s (5.7 m³/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
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	.03	.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	120	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	19	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	139.03	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	4.48	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	120	.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	276	.00

CAL YR 1976 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1977 TOTAL 139.03 MEAN .38 MAX 120 MIN .00 AC-FT 276

RIO GRANDE BASIN

08400500 LAKE MCMILLAN NEAR LAKEWOOD, NM

LOCATION.--Lat 32°35'42", long 104°20'49", in NE¼ sec.11, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, near outlet gates of McMillan Dam on Pecos River, 3.4 mi (5.5 km) southeast of Lakewood, and at mile 484.3 (779.2 km).

DRAINAGE AREA.--16,990 mi² (44,000 km²), approximately (contributing area).

PERIOD OF RECORD.--January 1939 to September 1965 (monthend gage heights and contents), October 1965 to current year. Monthend gage heights January 1918 to December 1938 in files of Pecos River Commission.

GAGE.--Nonrecording gage. Datum of gage is 3,241.6 ft (988.04 m) above mean sea level (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, (based on Aug. 1964 survey) 27,300 acre-ft (33.7 hm³) between gage heights 0.0 ft (sill of outlet gate) and 24.9 ft (7.59 m), crest of spillway 2. Flashboards in spillway No. 2 may be used to increase this capacity. Maximum capacity without spill, 33,620 acre-ft (41.5 hm³) at gage height 26.1 ft (7.96 m) crest of spillway 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 furnished by Carlsbad Irrigation District.

EXTREMES FOR PERIOD OF RECORD (SINCE 1938).--Maximum contents observed, 68,500 acre-ft (84.5 hm³) Sept. 26, 1941, gage height, 29.95 ft (9.129 m); no storage for periods in 1944-54, 1957, 1964, 1965, 1974, 1976, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 17,120 acre-ft (21.1 hm³) Apr. 2, gage height, 22.60 ft (6.888 m); no storage several days.

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	1650	2570	3310	3510	16740	9110	4120	283	80.00	2930
2	.00	.00	1710	2570	3410	3510	17120	8850	3810	257	110.0	4330
3	.00	130.0	1760	2570	3410	3410	16930	8590	3610	189	120.0	5410
4	.00	210.0	1820	2570	3510	3410	16380	8330	3410	130	110.0	5960
5	.00	290.0	1850	2660	3510	3510	16200	8200	3020	130	.00	5960
6	.00	350.0	1880	2660	3610	3510	15840	7960	2660	130	.00	6080
7	.00	415.0	1900	2660	3610	3610	15300	7840	2230	110	.00	6080
8	.00	497.0	1980	2660	3610	3610	14790	7720	1660	110	.00	6080
9	.00	589.0	1980	2660	3710	3710	14280	7600	1160	110	.00	5960
10	.00	639.0	2060	2660	3710	3410	13620	7360	912	102	.00	5740
11	.00	689.0	2060	2660	3710	3510	13140	7120	854	94	.00	5410
12	.00	689.0	2140	2750	3810	3610	12660	7000	854	87	.00	5190
13	.00	743.0	2140	2750	3810	3610	12210	7000	797	80	344.0	5080
14	.00	797.0	2230	2750	3810	3610	12060	6880	743	74	497.0	4970
15	.00	912.0	2230	2840	3810	3510	12210	7480	743	74	797.0	4860
16	.00	1040	2320	2840	3910	3510	12060	7840	689	55	912.0	4640
17	.00	1100	2320	2840	3910	3510	11760	8080	589	50	912.0	4440
18	.00	1160	2400	2840	3910	3410	11460	8200	497	45	1040	4220
19	.00	1230	2400	2930	3910	3410	11160	8330	497	32	1040	4020
20	.00	1230	2400	2930	3910	3410	11020	8330	497	25	1040	3710
21	.00	1300	2480	2930	3910	3610	10740	8200	415	589	1040	3410
22	.00	1300	2480	2930	3910	4640	10600	7960	380	50	1160	3220
23	.00	1370	2480	3020	3810	5850	10460	7720	497	110	2060	2840
24	.00	1440	2480	3020	3710	7000	10320	7360	497	283	3020	2570
25	.00	1520	2480	---	3610	8080	10320	7240	497	639	3610	2400
26	.00	1370	2570	---	3610	9240	10180	6660	456	854	3910	2230
27	.00	1440	2570	---	3610	10600	10040	6080	415	689	3510	2060
28	.00	1520	2570	---	3510	11610	9900	5630	415	797	2840	1820
29	.00	1520	2570	---	---	12980	9630	5190	344	689	2230	1590
30	.00	1590	2570	3310	---	14280	9370	4640	314	344	1590	1300
31	.00	---	2570	3310	---	15660	---	4330	---	80	1820	---
MAX	.00	1590	2570	---	3910	15660	17120	9110	4120	854	3910	6080
MIN	.00	.00	1650	---	3310	3410	9370	4330	314	25	.00	1300

CAL YR 1976 MAX 21840 MIN .00

08400500 LAKE MCMILLAN NEAR LAKEWOOD, N. MEX.--CONTINUED

GAGE HEIGHT, IN FEET. WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	17.10	17.50	17.60	22.50	20.05	17.90	15.30	14.60	17.30
2	.00	11.00	---	17.10	17.55	17.60	22.60	19.95	17.75	15.25	14.80	18.00
3	.00	14.90	---	17.10	17.55	17.55	22.55	19.85	17.65	15.10	14.85	18.50
4	.00	15.15	16.65	17.10	17.60	17.55	22.40	19.75	17.55	14.90	14.80	18.75
5	.00	---	---	17.15	17.60	17.60	22.35	19.70	17.35	14.90	.00	18.75
6	.00	---	---	17.15	17.65	17.60	22.25	19.60	17.15	14.90	.00	18.80
7	.00	15.50	16.70	17.15	17.65	17.65	22.10	19.55	16.90	14.80	.00	18.80
8	.00	15.60	16.75	17.15	17.65	17.65	21.95	19.50	16.55	14.80	.00	18.80
9	.00	15.70	16.75	17.15	17.70	17.70	21.80	19.45	16.20	14.80	.00	18.75
10	.00	15.75	16.80	17.15	17.70	17.55	21.60	19.35	16.00	14.75	.00	18.65
11	.00	15.80	16.80	17.15	17.70	17.60	21.45	19.25	15.95	14.70	.00	18.50
12	.00	15.80	16.85	17.20	17.75	17.65	21.30	19.20	15.95	14.65	.00	18.40
13	.00	15.85	16.85	17.20	17.75	17.65	21.15	19.20	15.90	14.60	15.40	18.35
14	.00	15.90	16.90	17.20	17.75	17.65	21.10	19.15	15.85	14.55	15.60	18.30
15	.00	16.00	16.90	17.25	17.75	17.60	21.15	19.40	15.85	14.55	15.90	18.25
16	.00	16.10	16.95	17.25	17.80	17.60	21.10	19.55	15.80	14.40	16.00	18.15
17	.00	16.15	16.95	17.25	17.80	17.60	21.00	19.65	15.70	14.35	16.00	18.05
18	.00	16.20	17.00	17.25	17.80	17.55	20.90	19.70	15.60	14.30	16.10	17.95
19	.00	16.25	17.00	17.30	17.80	17.55	20.80	19.75	15.60	14.15	16.10	17.85
20	.00	16.25	17.00	17.30	17.80	17.55	20.75	19.75	15.60	14.05	16.10	17.70
21	.00	16.30	17.05	17.30	17.80	17.65	20.65	19.70	15.50	15.70	16.10	17.55
22	.00	16.30	17.05	17.30	17.80	18.15	20.60	19.60	15.45	14.35	16.20	17.45
23	.00	16.35	17.05	17.35	17.75	18.70	20.55	19.50	15.60	14.80	16.80	17.25
24	.00	16.40	17.05	17.35	17.70	19.20	20.50	19.35	15.60	15.30	17.35	17.10
25	.00	16.45	17.05	17.35	17.65	19.65	20.50	19.30	15.60	15.75	17.65	17.00
26	.00	16.35	17.10	17.35	17.65	20.10	20.45	19.05	15.55	15.95	17.80	16.90
27	.00	16.40	17.10	17.35	17.65	20.60	20.40	18.80	15.50	15.80	17.60	16.80
28	.00	16.45	17.10	17.35	17.60	20.95	20.35	18.60	15.50	15.90	17.25	16.65
29	.00	---	17.10	17.35	---	21.40	20.25	18.40	15.40	15.80	16.90	16.50
30	.00	---	17.10	17.50	---	21.80	20.15	18.15	15.35	15.40	16.50	16.30
31	.00	---	17.10	17.50	---	22.20	---	18.00	---	14.60	16.65	---
MEAN	.00	---	---	17.25	17.69	18.47	21.24	19.35	16.13	14.94	12.03	17.87
MAX	.00	---	---	17.50	17.80	22.20	22.60	20.05	17.90	15.95	17.80	18.80
MIN	.00	---	---	17.10	17.50	17.55	20.15	18.00	15.35	14.05	.00	16.30

08401100 PECOS RIVER ABOVE SEVEN RIVERS, NEAR LAKEWOOD, NM

LOCATION.--Lat 32°34'42", long 104°22'42", in NE¼NE¼ sec.16. T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank, 0.5 mi (0.80 km) upstream from mouth of Seven Rivers, 2.6 mi (4.2 km) downstream from Lake McMillan, and 3.6 mi (5.8 km) south of Lakewood, and at mile 481.4 (774.6 km).

DRAINAGE AREA.--17,000 mi² (44,030 km²), approximately (contributing area).

PERIOD OF RECORD.--May 1974 to current year. (Operated as a low-flow station only).

GAGE.--Water-stage recorder. Datum of gage 3,213.52 ft (979.481 m) above mean sea level (levels by Bureau of Reclamation).

REMARKS.--Records good. Flow regulated by Lake Sumner and Lake McMillan (stations 08384000, 08400500). Diversions and ground-water withdrawals for irrigation of about 171,000 acres (690 km²), 1959 determination, above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge not determined; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	18	.00	.00	.00	.00	58	98	80	.00	.00	360
2	24	11	.00	.00	.00	.00	154	98	60	.00	.00	276
3	9.2	2.0	.00	.00	.00	.00	183	74	60	.00	.00	95
4	12	.00	.00	.00	.00	.00	204	56	101	.00	14	95
5	6.8	.00	.00	.00	.00	.00	200	56	129	.00	1.2	126
6	4.1	.00	.00	.00	.00	.00	200	56	147	.00	.00	158
7	6.0	.00	.00	.00	.00	.00	195	54	223	.00	.00	162
8	3.6	.00	.00	.00	.00	.00	200	52	218	.00	.00	195
9	1.8	.00	.00	.00	.00	.00	200	51	183	.00	.00	209
10	2.1	.00	.00	.00	.00	.00	200	51	2.7	.00	.00	209
11	2.0	.00	.00	.00	.00	.00	191	51	.00	.00	.00	187
12	.80	.00	.00	.00	.00	.00	204	45	.00	.00	.00	112
13	1.8	.00	.00	.00	.00	.00	209	.90	.00	.00	.00	109
14	5.1	.00	.00	.00	.00	.00	150	.00	.00	.00	.00	109
15	6.1	.00	.00	.00	.00	.00	106	.00	.00	.00	.18	109
16	3.6	.00	.00	.00	.00	.00	112	.00	.00	.00	.00	106
17	1.7	.00	.00	.00	.00	.00	112	.00	.00	.00	.00	106
18	.20	.00	.00	.00	.00	.00	112	.00	.00	.00	.00	106
19	.00	.00	.00	.00	.00	.00	150	.00	.00	.00	.00	106
20	.00	.00	.00	.00	.00	.00	174	.00	.00	.00	.00	106
21	.00	.00	.00	.00	.00	.00	112	20	.00	220	.00	122
22	.00	.00	.00	.00	.00	.00	72	135	.00	331	.00	200
23	.00	.00	.00	.00	.00	.00	72	140	.00	366	.00	174
24	.00	.00	.00	.00	.00	.00	72	80	.00	384	.00	104
25	.00	.00	.00	.00	.00	.00	90	125	.00	390	.00	101
26	.00	.00	.00	.00	.00	.00	101	275	.00	396	162	101
27	7.2	.00	.00	.00	.00	.00	98	250	.00	311	360	98
28	35	.00	.00	.00	.00	.00	98	180	.00	154	354	98
29	31	.00	.00	.00	---	.00	98	165	.00	154	354	98
30	22	.00	.00	.00	---	.00	98	150	.00	112	348	90
31	14	---	.00	.00	---	.00	---	100	---	.00	354	---
TOTAL	214.10	31.00	.00	.00	.00	.00	4225	2362.90	1203.70	2818.00	1947.38	4227
MEAN	6.91	1.03	.000	.000	.000	.000	141	76.2	40.1	90.9	62.8	141
MAX	35	18	.00	.00	.00	.00	209	275	223	396	360	360
MIN	.00	.00	.00	.00	.00	.00	58	.00	.00	.00	.00	90
AC-FT	425	61	.00	.00	.00	.00	8380	4690	2390	5590	3860	8380
CAL YR 1976 TOTAL	17241.80			MEAN 47.1	MAX 653	MIN .00	AC-FT 34200					
WTR YR 1977 TOTAL	17029.08			MEAN 46.7	MAX 396	MIN .00	AC-FT 33780					

RIO GRANDE BASIN

08401200 SOUTH SEVEN RIVERS NEAR LAKEWOOD, NM

LOCATION.--Lat 32°35'19", long 104°25'17", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.7, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on downstream side of center pier of bridge on U.S. Highway 285, 0.4 mi (0.6 km) south of Seven Rivers, 2.6 mi (4.2 km) upstream from mouth, and 4.0 mi (6.4 km) southwest of Lakewood. Mouth at Pecos River mile 480.9 (773.8 km).

DRAINAGE AREA.--220 mi² (570 km²), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,276 ft (999 m), from topographic map. Prior to July 8, 1965, at site 400 ft (120 m) upstream at datum 0.57 ft (0.174 m) higher.

REMARKS.--Records poor. No surface diversions above station, ground-water withdrawals for 240 acres (97.1 hm²), above station.

AVERAGE DISCHARGE.--14 years, 5.07 ft³/s (0.144 m³/s), 3,670 acre-ft/yr (4.53 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft³/s (722 m³/s) May 30, 1965, gage height, 20.0 ft (6.10 m), from floodmarks, present site and datum, from rating curve extended above 5,700 ft³/s (161 m³/s) on basis of slope-area measurements at gage heights 18.15 ft (5.532 m) and 20.0 ft (6.10 m); no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1941, about 30,000 ft³/s (850 m³/s) gage height, 22.8 ft (6.95 m), from old debris on left bank former site and datum, from rating curve extended above 5,700 ft³/s (161 m³/s) on basis of slope-area measurement at gage height 21.8 ft (6.64 m). Probable date of flood, Oct. 7, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17 ft³/s (0.481 m³/s) Aug. 14, gage height, 5.03 ft (1.533 m) no peak above base of 450 ft³/s (13 m³/s); no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
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	.11	.00	.00	.00	.80	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07	.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	.04	.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	.11	.00	.04	.00	.87	.00
MEAN	.000	.000	.000	.000	.000	.000	.004	.000	.001	.000	.028	.000
MAX	.00	.00	.00	.00	.00	.00	.11	.00	.04	.00	.80	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.2	.00	.08	.00	1.7	.00
CAL YR 1976	TOTAL	43.33	MEAN	.12	MAX	26	MIN	.00	AC-FT	86		
WTR YR 1977	TOTAL	1.02	MEAN	.003	MAX	.80	MIN	.00	AC-FT	2.0		

08401500 PECOS RIVER BELOW MAJOR JOHNSON SPRINGS NEAR CARLSBAD, NM

LOCATION.--Lat 32°31'54", long 104°22'40", in SW 1/4 NW 1/4 sec. 27, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on left bank, at mouth of Willow Draw 2.4 mi (3.9 km) downstream from South Seven Rivers, 4.2 mi (6.8 km) southeast of Seven Rivers, 6.0 mi (9.7 km) south of Lakewood, 11.5 mi (18.5 km) northwest of Carlsbad, and at mile 478.6 (770.1 km).

DRAINAGE AREA.--17,650 mi² (45,710 km²), approximately (contributing area).

PERIOD OF RECORD.--October 1971 to current year (operated as a low-flow station only). Records for January 1947 to September 1950 at site 0.5 mi (0.8 km) upstream not equivalent owing to spring inflow between sites.

GAGE.--Water-stage recorder. Datum of gage 3,198.44 ft (974.885 m) above mean sea level (levels by Bureau of Reclamation).

REMARKS.--Records good. Flow regulated by Lake Sumner and Lake McMillan (stations 08384000, 08400500). Diversions and ground-water withdrawal for irrigation of about 173,000 acres (700 km²), 1959 determination, above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined; minimum 7.0 ft³/s (0.20 m³/s) July 20, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge not determined; minimum, 7.0 ft³/s (0.20 m³/s) July 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	45	25	27	28	27	56	131	113	15	14	382
2	51	41	26	28	28	26	162	134	94	14	13	305
3	42	28	26	28	29	26	185	113	93	14	12	118
4	36	27	26	28	29	26	209	93	128	14	17	118
5	37	27	26	28	29	27	209	94	163	14	16	144
6	33	27	26	28	29	26	209	94	171	14	11	182
7	33	27	26	28	29	26	207	94	254	13	9.9	182
8	31	27	26	29	29	25	214	95	252	14	9.9	201
9	28	27	26	30	29	25	216	94	234	13	9.5	214
10	28	27	26	30	29	24	214	94	39	12	9.2	214
11	28	27	26	30	29	24	211	94	33	11	10	200
12	28	28	26	29	28	23	216	95	30	11	10	120
13	28	28	26	29	28	22	222	46	30	10	8.9	120
14	32	27	26	28	28	22	184	41	28	9.9	9.2	120
15	34	27	26	28	27	21	136	39	27	9.2	8.9	120
16	33	27	26	28	27	20	138	38	26	8.6	8.9	120
17	28	27	26	28	27	20	139	37	25	8.1	9.2	120
18	28	27	26	28	27	20	138	36	24	7.5	9.2	120
19	26	27	26	28	27	19	168	35	23	7.5	8.9	120
20	26	27	26	28	27	19	191	34	22	7.3	9.2	120
21	26	27	26	28	27	19	138	35	22	204	9.2	120
22	26	27	26	28	27	19	101	170	23	343	9.2	200
23	26	27	26	28	27	19	101	166	21	375	8.9	180
24	26	26	26	28	27	19	101	123	20	385	8.9	115
25	25	26	27	28	28	19	116	133	19	395	9.2	110
26	25	24	27	28	28	20	129	316	18	395	124	110
27	28	25	27	28	28	20	131	273	17	329	362	110
28	58	26	26	28	27	20	131	219	16	163	362	110
29	60	25	26	28	---	20	132	202	16	161	359	110
30	48	25	27	28	---	20	132	193	15	157	356	100
31	42	---	27	28	---	20	---	136	---	90	365	---
TOTAL	1045	833	810	876	782	683	4836	3497	1996	3224.1	2187.3	4605
MEAN	33.7	27.8	26.1	28.3	27.9	22.0	161	113	66.5	104	70.6	154
MAX	60	45	27	30	29	27	222	316	254	395	365	382
MIN	25	24	25	27	27	19	56	34	15	7.3	8.9	100
AC-FT	2070	1650	1610	1740	1550	1350	9590	6940	3960	6400	4340	9130
CAL YR 1976	TOTAL	26522.7	MEAN	72.5	MAX	636	MIN	9.7	AC-FT	52610		
WTR YR 1977	TOTAL	25374.4	MEAN	69.5	MAX	395	MIN	7.3	AC-FT	50330		

RIO GRANDE BASIN

08401900 ROCKY ARROYO AT HIGHWAY BRIDGE, NEAR CARLSBAD, NM

LOCATION.--Lat 32°30'23", long 104°22'28", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.21 S., R.25 E., Eddy County, Hydrologic Unit 13060011, at downstream end of bridge pier nearest left bank on U.S. Highway 285, 2.1 mi (3.4 km) upstream from mouth and 10 mi (16.1 km) northwest of Carlsbad. Mouth at Pecos River mile 475.2 (764.6 km).

DRAINAGE AREA.--285 mi (738 km²), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,248 ft (990 m), from topographic map.

REMARKS.--Records good. Diversions for irrigation of 220 acres (89.0 hm²), above station.

AVERAGE DISCHARGE.--14 years, 9.17 ft³/s (0.260 m³/s) 6,640 acre-ft/yr (8.19 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,600 ft³/s (895 m³/s) Aug. 23, 1966, gage height, 15.35 ft, (4.679 m), from rating curve extended above 8,500 ft³/s (156 m³/s) on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Since about 1941 the maximum discharge probably occurred Oct. 7, 1954, discharge 63,600 ft³/s (1,800 m³/s), gage height, 19.2 ft (5.85 m), from highwater marks on downstream end of bridge pier, by slope-area measurement at site 5 mi (8.0 km) upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 1,100 ft³/s (31.2 m³/s) at 2130 hours Aug. 14, gage height, 7.26 ft (2.213 m), no other peak above base of 1,000 ft³/s (28 m³/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
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	114	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	17	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	65	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	35	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.35	.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	1.7	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	17	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.18	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	250.23	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	8.07	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	114	.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	496	.00
CAL YR 1976	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC-FT	.00		
WTR YR 1977	TOTAL	250.23	MEAN	.69	MAX	114	MIN	.00	AC-FT	496		

08402000 PECOS RIVER AT DAMSITE 3, NEAR CARLSBAD, NM

LOCATION.--Lat 32°30'40", long 104°19'58", in lot 14, sec.6, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank at damsite 3 of Carlsbad project of Bureau of Reclamation, about 1 mi (1.6 km) upstream from flow line of Lake Avalon, 1.3 mi (2.1 km) downstream from Rocky Arroyo, 8.0 mi (12.9 km) northwest of Carlsbad, and at mile 473.8 (762.3 km).

DRAINAGE AREA.--17,980 mi² (46,570 km²), approximately (contributing area).

PERIOD OF RECORD.--August 1939 to December 1940, August 1944 to current year.

REVISED RECORDS.--WSP 1512: 1946-47(M), 1948(p), 1949, 1950(P). WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,171.31 ft (966.615 m) above mean sea level (Bureau of Reclamation datum). Prior to Aug. 10, 1944, at site 1,000 ft (305 m) downstream, at datum 1.00 ft (0.305 m) higher. Aug. 10, 1944, to Dec. 31, 1966, at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. Flow regulated by Lake Sumner and Lake McMillan (stations 08384000, 08400500). Diversions and ground-water withdrawals for irrigation of about 173,000 acres (700 km²), 1959 determination, above station. Discharge represents inflow to Lake Avalon. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--34 years (1940, 1945-77), 162 ft³/s (4,588 m³/s), 117,400 acre-ft/yr (145 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,000 ft³/s (1,950 m³/s) Aug. 23, 1966, gage height, 21.32 ft (6.194 m), present datum, from floodmark, from rating curve extended above 25,000 ft³/s (708 m³/s) on basis of slope-area measurement at gage height 19.53 ft (5.953 m) present datum; minimum, 4.3 ft³/s (0.12 m³/s) Aug. 5, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks which probably exceeded 40,000 ft³/s (1,130 m³/s) occurred in August 1893, Oct. 2, 1904, July 25, 1905, Apr. 17, 1915, Aug. 7, 1916, and May 30, 1937, based primarily on records for station "at Carlsbad." Peak of May 22, 1941, was estimated at 60,000 ft³/s (1,700 m³/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, 452 ft³/s (12.8 m³/s) Aug. 14, gage height, 2.70 ft (0.823 m), no peak above base of 1,700 ft³/s (48 m³/s); minimum, 6.1 ft³/s (0.17 m³/s) July 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	44	24	25	26	25	29	123	106	13	18	370
2	50	44	24	25	27	24	146	123	85	12	13	265
3	49	29	24	26	26	24	164	113	83	11	12	114
4	36	28	24	26	26	24	196	83	100	11	11	115
5	42	27	24	26	26	25	202	83	149	13	19	140
6	33	28	24	26	26	24	205	81	146	12	10	180
7	32	27	24	26	26	23	205	81	222	12	9.4	180
8	33	27	24	26	27	23	208	79	228	13	8.8	182
9	30	26	24	27	27	23	210	78	225	12	8.8	210
10	28	26	24	26	26	21	210	78	53	10	8.8	210
11	28	26	24	26	26	22	208	76	28	10	10	213
12	28	27	24	27	26	23	213	79	26	10	59	129
13	28	27	24	27	26	22	219	49	25	9.4	34	123
14	30	26	24	26	26	21	202	33	24	8.8	11	123
15	32	25	24	26	26	21	135	32	23	8.3	69	123
16	33	25	24	26	27	21	135	32	23	8.3	8.8	123
17	28	25	24	26	26	20	137	32	23	7.8	8.8	119
18	27	24	24	26	27	18	137	31	22	7.2	8.3	119
19	26	24	24	26	27	19	156	31	20	6.6	8.3	119
20	26	24	24	26	27	18	191	30	20	6.1	8.3	121
21	25	24	24	26	26	18	154	31	19	147	8.3	121
22	24	24	24	26	26	18	100	130	19	343	8.8	191
23	24	24	24	26	25	18	102	159	23	361	9.4	199
24	24	23	24	26	24	18	102	130	18	376	8.8	121
25	24	23	24	25	26	18	108	113	17	383	8.8	115
26	24	19	24	25	26	18	128	275	16	387	52	117
27	25	23	24	25	26	18	128	259	15	346	358	117
28	50	25	24	26	25	17	128	205	14	164	355	115
29	69	24	24	26	---	18	128	182	14	162	352	115
30	48	24	25	26	---	18	126	180	13	156	352	113
31	44	---	25	26	---	19	---	123	---	113	360	---
TOTAL	1049	792	746	804	731	639	4712	3134	1799	3139.5	2217.4	4602
MEAN	33.8	26.4	24.1	25.9	26.1	20.6	157	101	60.0	101	71.5	153
MAX	69	44	25	27	27	25	219	275	228	387	360	370
MIN	24	19	24	25	24	17	29	30	13	6.1	8.3	113
AC-FT	2080	1570	1480	1590	1450	1270	9350	6220	3570	6230	4400	9130

CAL YR 1976 TOTAL 25983.2 MEAN 71.0 MAX 636 MIN 7.8 AC-FT 51540
WTR YR 1977 TOTAL 24364.9 MEAN 66.8 MAX 387 MIN 6.1 AC-FT 48330

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 (67 m) downstream from headgates in Avalon Dam, and 3.3 mi (5.3 km), north of Carlsbad. Pecos River mile 467.2 (751.7 km).

PERIOD OF RECORD.--July 1939 to current year (monthly discharge only July 1939 to September 1965). January 1941 to March 1951 published in WSP 1732.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,156.50 ft (962.101 m) above mean sea level (Bureau of Reclamation datum). Prior to March 1951 at site 20 ft (6.1 m) upstream at datum 0.9 ft (0.274 m) higher.

REMARKS.--Records good. Carlsbad main canal diverts water from Lake Avalon for irrigation of about 25,000 acres (100 km²) in the Carlsbad Irrigation District. About 1,600 acres (6.5 km²) are irrigated, on the left bank, most of it above gaging station 08405200. The remaining acreage (most of which is downstream from station 08405200) is on the right bank.

AVERAGE DISCHARGE.--38 years, 105 ft³/s (2.974 m³/s), 76,070 acre-ft/yr (93.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 526 ft³/s (14.9 m³/s) Sept. 15, 16, 1946; no flow many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	75	129	.00	185	302
2	34	.00	.00	.00	.00	.00	.00	81	123	.00	191	245
3	67	.00	.00	.00	.00	.00	.00	72	144	.00	166	222
4	67	.00	.00	.00	.00	.00	79	84	166	.00	147	216
5	43	.00	.00	.00	.00	.00	194	75	116	.00	152	213
6	29	.00	.00	.00	.00	.00	220	72	154	.00	134	171
7	51	.00	.00	.00	.00	.00	245	60	226	.00	124	171
8	57	.00	.00	.00	.00	.00	245	57	220	.00	44	209
9	47	.00	.00	.00	.00	.00	226	92	191	.00	6.4	216
10	19	.00	.00	.00	.00	.00	226	104	33	.00	4.4	180
11	24	.00	.00	.00	.00	.00	294	99	.00	.00	2.3	144
12	41	.00	.00	.00	.00	.00	353	65	.00	.00	.00	131
13	48	.00	.00	.00	.00	.00	400	22	.00	.00	.00	126
14	47	.00	.00	.00	.00	.00	356	.20	.00	.00	.00	96
15	44	.00	.00	.00	.00	.00	241	.00	.00	.00	.00	110
16	51	.00	.00	.00	.00	.00	209	61	.00	.00	.00	119
17	32	.00	.00	.00	.00	.00	213	110	.00	.00	.00	84
18	44	.00	.00	.00	.00	.00	215	139	.00	.00	.00	86
19	71	.00	.00	.00	.00	.00	215	132	.00	.00	.00	116
20	21	.00	.00	.00	.00	.00	203	126	.00	.00	.00	178
21	.00	.00	.00	.00	.00	.00	152	132	.00	.00	.00	196
22	.00	.00	.00	.00	.00	.00	126	123	.00	124	.00	180
23	.00	.00	.00	.00	.00	.00	107	146	.00	262	.00	137
24	.00	.00	.00	.00	.00	.00	94	152	.00	251	.00	82
25	.00	.00	.00	.00	.00	.00	142	169	.00	200	.00	69
26	.00	.00	.00	.00	.00	.00	126	173	.00	152	.00	76
27	.00	.00	.00	.00	.00	.00	131	184	.00	131	.00	78
28	.00	.00	.00	.00	.00	.00	104	159	.00	152	131	84
29	.00	.00	.00	.00	---	.00	75	132	.00	135	324	96
30	.00	.00	.00	.00	---	.00	68	142	.00	129	339	96
31	.00	---	.00	.00	---	.00	---	144	---	169	345	---
TOTAL	837.00	.00	.00	.00	.00	.00	5259.00	3182.20	1502.00	1705.00	2295.10	4429
MEAN	27.0	.000	.000	.000	.000	.000	175	103	50.1	55.0	74.0	148
MAX	71	.00	.00	.00	.00	.00	400	184	226	262	345	302
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	69
AC=FT	1660	.00	.00	.00	.00	.00	10430	6310	2980	3380	4550	8780

CAL YR 1976 TOTAL 18000.30 MEAN 49.2 MAX 383 MIN .00 AC=FT 35700
WTR YR 1977 TOTAL 19209.30 MEAN 52.6 MAX 400 MIN .00 AC=FT 38100

08403800 LAKE AVALON NEAR CARLSBAD, NM

LOCATION.--Lat 32°29'27", long 104°15'05", in NW¼SW¼ sec.12, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on headwall at outlet gate of dam on Pecos River, 3.3 mi (5.3 km) north of Carlsbad, and at mile 467.2 (751.7 km).

DRAINAGE AREA.--18,070 mi² (46,800 km²), approximately (contributing area).

PERIOD OF RECORD.--January 1939 to September 1965 (monthend gage heights and contents). October 1965 to current year. Monthend gage heights January 1919 to December 1938 in files of Pecos River Commission.

REVISED RECORDS.--WSP 898: 1939.

GAGE.--Nonrecording gage. Datum of gage is 3,157.0 ft (962.25 m) above mean sea level (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 Aug. 1964 survey), 4,970 acre-ft (6.1 hm³) between gage heights 0.0 (sill of outlet gates) and 20.4 ft (6.22 m), crest of spillway 2. No dead storage. No storage allocated to flood control. Figures given herein represent usable contents. Water is used by Carlsbad Irrigation District.

COOPERATION.--Capacity table based on data furnished by Carlsbad Irrigation District.

EXTREMES FOR PERIOD OF RECORD (SINCE 1938).--Maximum contents, 11,000 acre-ft (13.6 hm³) May 22, 1941, gage height, 25.0 ft (7.62 m); no storage at times when natural flow was passing through reservoir.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,200 acre-ft (5.18 hm³) Apr. 5, gage height, 19.55 ft (5.959 m); no storage several days.

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3530	2480	3010	3530	3770	3730	3490	1980	1320	1350	2700	1770
2	3570	2510	3010	3530	3770	3730	3570	2020	1250	1350	2330	1910
3	3490	2550	3010	3530	3770	3730	3810	2080	1130	1320	1910	1940
4	3410	2590	3010	3530	3810	3730	4120	2080	1010	1320	1580	1700
5	3250	2620	3050	3570	3810	3730	4200	2050	900	1320	1250	1840
6	3170	2620	3050	3570	3810	3770	4160	2050	955	1320	928.0	1480
7	3130	2660	3090	3570	3810	3770	4070	2050	928	1280	661.0	1580
8	2970	2660	3130	3570	3810	3770	3940	2050	955	1280	.00	1510
9	2850	2660	3170	3570	3810	3770	3890	2050	955	1280	.00	1440
10	2780	2700	3170	3570	3810	3730	3810	1910	1070	1250	.00	1410
11	2780	2700	3170	3570	3850	3730	3730	1910	1070	1250	.00	1440
12	2700	2700	3210	3610	3850	3730	3490	1840	1160	1250	636.0	1580
13	2590	2740	3210	3610	3890	3730	3170	1910	1190	1220	712.0	1510
14	2480	2740	3250	3610	3890	3730	2850	1940	1190	1220	738.0	1510
15	2400	2780	3290	3610	3890	3730	2620	1980	1190	1220	845.0	1510
16	2330	2780	3290	3650	3890	3730	2440	2020	1220	1190	845.0	1510
17	2260	2850	3290	3650	3890	3730	2300	1840	1250	1190	845.0	1510
18	2190	2850	3290	3650	3890	3610	2160	1610	1280	1160	845.0	1580
19	2080	2850	3330	3690	3890	3610	1980	1380	1250	1130	845.0	1580
20	1940	2890	3330	3690	3850	3650	1910	1130	1220	1100	845.0	1510
21	1980	2890	3330	3690	3850	3650	1940	845	1250	1070	818.0	1320
22	1980	2930	3330	3690	3810	3650	1910	712	1280	1510	791.0	1160
23	1980	2930	3370	3730	3770	3610	1840	791	1320	1700	791.0	1220
24	1980	2930	3370	3730	3770	3610	1840	818	1350	1910	791.0	1350
25	1980	2970	3410	3730	3730	3570	1800	686	1380	1980	791.0	1380
26	1980	2970	3410	3730	3730	3570	1740	661	1380	2440	764.0	1440
27	1980	2970	3410	3730	3730	3570	1740	928	1380	2850	1040	1510
28	2020	3010	3450	3730	3730	3630	1700	1070	1350	3090	1740	1540
29	2260	3010	3450	3730	---	3530	1770	1190	1350	3010	1880	1580
30	2360	3010	3450	3730	---	3530	1880	1250	1350	3010	1840	1580
31	2440	---	3450	3730	---	3490	---	1320	---	2970	1800	---
MAX	3570	3010	3450	3730	3890	3770	4200	2080	1380	3090	2700	1940
MIN	1940	2480	3010	3530	3730	3490	1700	661	900	1070	.00	1160

CAL YR 1976 MAX 3940 MIN 686
WTR YR 1977 MAX 4200 MIN .00

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.75	17.40	18.10	18.75	19.05	19.00	18.70	16.70	15.70	15.75	17.70	16.40
2	18.80	17.45	18.10	18.75	19.05	19.00	18.80	16.75	15.60	15.75	17.20	16.60
3	18.70	17.50	18.10	18.75	19.05	19.00	19.10	16.85	15.40	15.70	16.60	16.65
4	18.60	17.55	18.10	18.75	19.10	19.00	19.45	16.85	15.20	15.70	16.10	16.30
5	18.40	17.60	18.15	18.80	19.10	19.00	19.55	16.80	15.00	15.70	15.60	16.50
6	18.30	17.60	18.15	18.80	19.10	19.05	19.50	16.80	15.10	15.70	15.05	15.95
7	18.25	17.65	18.20	18.80	19.10	19.05	19.40	16.80	15.05	15.65	14.55	16.10
8	18.05	17.65	18.25	18.80	19.10	19.05	19.25	16.80	15.10	15.65	.00	16.00
9	17.90	17.65	18.30	18.80	19.10	19.05	19.20	16.80	15.10	15.65	.00	15.90
10	17.80	17.70	18.30	18.80	19.10	19.00	19.10	16.60	15.30	15.60	.00	15.85
11	17.80	17.70	18.30	18.80	19.15	19.00	19.00	16.60	15.30	15.60	.00	15.90
12	17.70	17.70	18.35	18.85	19.15	19.00	18.70	16.50	15.45	15.60	14.50	16.10
13	17.55	17.75	18.35	18.85	19.20	19.00	18.30	16.60	15.50	15.55	14.65	16.00
14	17.40	17.75	18.40	18.85	19.20	19.00	17.90	16.65	15.50	15.55	14.70	16.00
15	17.30	17.80	18.45	18.85	19.20	19.00	17.60	16.70	15.50	15.55	14.90	16.00
16	17.20	17.80	18.45	18.90	19.20	19.00	17.35	16.75	15.55	15.50	14.90	16.00
17	17.10	17.90	18.45	18.90	19.20	19.00	17.15	16.50	15.60	15.50	14.90	16.00
18	17.00	17.90	18.45	18.90	19.20	18.85	16.95	16.15	15.65	15.45	14.90	16.10
19	16.85	17.90	18.50	18.95	19.20	18.85	16.70	15.80	15.60	15.40	14.90	16.10
20	16.65	17.95	18.50	18.95	19.15	18.90	16.60	15.40	15.55	15.35	14.90	16.00
21	16.70	17.95	18.50	18.95	19.15	18.90	16.65	14.90	15.60	15.30	14.85	15.70
22	16.70	18.00	18.50	18.95	19.10	18.90	16.60	14.65	15.65	16.00	14.80	15.45
23	16.70	18.00	18.55	19.00	19.05	18.85	16.50	14.80	15.70	16.30	14.80	15.55
24	16.70	18.00	18.55	19.00	19.05	18.85	16.50	14.85	15.75	16.60	14.80	15.75
25	16.70	18.05	18.60	19.00	19.00	18.80	16.45	14.60	15.80	16.70	14.80	15.80
26	16.70	18.05	18.60	19.00	19.00	18.80	16.35	14.55	15.80	17.35	14.75	15.90
27	16.70	18.05	18.60	19.00	19.00	18.80	16.35	15.05	15.80	17.90	15.25	16.00
28	16.75	18.10	18.65	19.00	19.00	18.75	16.30	15.30	15.75	18.20	16.35	16.05
29	17.10	18.10	18.65	19.00	---	18.75	16.40	15.50	15.75	18.10	16.55	16.10
30	17.25	18.10	18.65	19.00	---	18.75	16.55	15.60	15.75	18.10	16.50	16.10
31	17.35	---	18.65	19.00	---	18.70	---	15.70	---	18.05	16.45	---
MEAN	17.47	17.81	18.40	18.89	19.11	18.92	17.77	16.03	15.50	16.15	13.42	16.03
MAX	18.80	18.10	18.65	19.00	19.20	19.05	19.55	16.85	15.80	18.20	17.70	16.65
MIN	16.65	17.40	18.10	18.75	19.00	18.70	16.30	14.55	15.00	15.30	.00	15.45
CAL YR 1976	MEAN 17.03		MAX 19.25		MIN 14.60							
WTR YR 1977	MEAN 17.11		MAX 19.55		MIN .00							

08404000 PECOS RIVER BELOW AVALON DAM, NM

LOCATION.--Lat 32°28'55", long 104°15'47", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.14, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank 4,800 ft (1,460 m) below Avalon Dam, 4.5 mi (7.2 km) northwest of Carlsbad, and at mile 466.3 (750.3 km).

DRAINAGE AREA.--18,080 mi² (46,830 km²), approximately (contributing area).

PERIOD OF RECORD.--January 1906 to March 1907, (published as "at Avalon"), June 1951 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,130 ft (954 m), from topographic map. January 1906 to March 1907 nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum.

REMARKS.--Records good. Flow regulated by Lake Sumner, Lake McMillan, and Lake Avalon (stations 08384000, 09400500, 08403800). Diversions and ground-water withdrawals above station for irrigation of about 198,000 acres (800 km²), 1959 determination. Station bypassed by Carlsbad main canal (station 08403500).

AVERAGE DISCHARGE.--26 years 35.8 ft³/s (1.014 m³/s), 25,940 acre-ft/yr (32.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,500 ft³/s (1,570 m³/s) Aug. 23, 1966, gage height, 26.4 ft (8.05 m), from floodmarks, from rating curve extended above 33,000 ft³/s (935 m³/s) on basis of computation of peak flow over Tansill Dam 5.8 mi (1.3 km) downstream; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 2, 1904, caused in part, by failure of Avalon Dam, probably exceeded 90,000 ft³/s (2,550 m³/s) and is probably the greatest flood since 1842. A major flood occurred Aug. 3, 1893, and was described as "greatest in 50 years"; it damaged McMillan Dam, then under construction, and washed out the original Avalon Dam. Another major flood occurred Aug. 7, 1916, discharge 70,000 ft³/s (1,980 m³/s) at site 6.5 mi (10.5 km) downstream.

EXTREMES FOR CURRENT YEAR.--No flow all year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC=FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CAL YR 1976	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC=FT	.00		
WTR YR 1977	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC=FT	.00		

RIO GRANDE BASIN

08405000 PECOS RIVER AT CARLSBAD, NM

LOCATION.--Lat 32°24'42", long 104°13'17", in SE¼NE¼ sec. 7, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, immediately downstream from Lower Tansil Dam, which is approximately 0.2 mi (0.3 km) upstream from Dark Canyon, and 0.5 mi (0.8 km) downstream from the Greene Street Bridge on U.S. Highway 62-180 in Carlsbad.

DRAINAGE AREA.--18,100 mi² (46,900 km²), 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.

HARDNESS: May 1905 to April 1907, May 1937 to September 1946, July 1951 to current year.

DISSOLVED SOLIDS: May 1905 to April 1907, May 1937 to September 1946, 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.

HARDNESS: Maximum, 2,400 mg/L July 1-31, 1974; minimum, 216 mg/L Oct. 21, 1969.

DISSOLVED SOLIDS: Maximum, 4,680 mg/L July 1-31, 1974; minimum, 335 mg/L Oct. 21, 1969.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 6,070 micromhos Aug. 5; minimum daily, 2,380 micromhos Apr. 14.

WATER TEMPERATURES: Maximum, 32.0°C June 26; minimum, 4.0°C Jan. 11, 12.

HARDNESS: Maximum, 2,100 mg/L Aug. 1-11; minimum, 1,100 mg/L Dec. 30-31, Jan. 1-31, Feb. 1-28, Mar. 1-25, Mar. 26-31.

DISSOLVED SOLIDS: Maximum, 4,030 mg/L Aug. 1-11; minimum, 1,980 mg/L Jan. 1-31.

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)
OCT												
01-31	13	3500	7.8	1300	1200	320	120	320	3.9	5.0	156	0
NOV												
01-30	15	3190	7.9	1200	1000	300	110	280	3.5	4.4	192	0
DEC												
01-29	14	3075	7.9	1200	1100	310	110	270	3.4	4.4	185	0
30-31	15	3080	7.8	1100	970	290	100	260	3.4	4.4	198	0
JAN												
01-31	16	3030	8.0	1100	930	270	98	260	3.4	4.7	179	0
FEB												
01-28	15	2940	7.8	1100	940	280	96	260	3.4	4.4	183	0
MAR												
01-25	16	2990	7.8	1100	1000	290	100	270	3.5	4.6	160	0
26-31	40	2870	7.9	1100	980	280	97	260	3.4	4.6	140	0
APR												
01-30	16	3420	7.7	1300	1100	320	110	300	3.7	5.3	170	0
MAY												
01-31	12	3450	7.8	1300	1200	330	110	320	3.9	5.6	150	0
JUN												
01-30	5.9	3550	7.2	1300	1200	340	120	360	.3	6.0	140	0
JUL												
01-31	.08	4100	7.1	1500	1400	360	150	370	4.1	6.8	110	
AUG												
01-11	1.4	5400	7.1	2100	2000	490	210	570	5.4	9.9	120	v
12-31	.38	3400	7.2	1200	1100	290	120	330	4.1	6.9	110	0
SEP												
01-30	3.2	4210	7.1	1600	1500	370	160	440	4.8	7.3	120	0
WTD. AVG.	--	3230	7.8	1210	1070	304	108	291	3.6	4.9	168	0
TIME WTD.												
AVG.	11	3460	7.6	1290	1170	321	120	322	3.9	5.5	154	0
TOT. LOAD (TONS)	--	--	--	--	--	3280	1170	3140	--	53	1810	0

RIO GRANDE BASIN

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08405000 PECOS RIVER AT CARLSBAD, NM -- Continued

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT												
01-31	1100	520	.7	20	2570	2490	3.39	87.4	1.2	.01	220	10
NOV												
01-30	1100	450	.7	17	--	2360	3.21	95.6	1.5	--	--	--
DEC												
01-29	980	440	.7	14	--	2230	3.03	84.3	1.5	--	--	--
30-31	940	460	.7	15	--	2170	2.95	87.9	1.4	--	--	--
JAN												
01-31	830	410	.8	13	--	1980	2.69	85.5	1.4	--	--	--
FEB												
01-28	870	410	.7	14	--	2030	2.76	82.2	1.1	--	--	--
MAR												
01-25	940	430	.7	11	--	2130	2.90	92.0	.96	--	--	--
26-31	900	410	.5	6.9	--	2030	2.76	219	.79	--	--	--
APR												
01-30	1000	500	.8	14	2480	2340	3.18	101	1.5	.00	210	10
MAY												
01-31	1100	510	.7	14	--	2470	3.36	80.0	.86	--	--	--
JUN												
01-30	1200	550	.8	15	--	2660	3.62	42.4	.60	--	--	--
JUL												
01-31	1300	620	.8	15	--	2880	3.92	.62	--	--	--	--
AUG												
01-11	1800	870	.9	23	--	4030	5.48	15.2	--	--	--	--
12-31	1100	450	.6	15	--	2370	3.22	2.43	--	--	--	--
SEP												
01-30	1400	690	.8	18	3210	3150	4.28	27.2	--	--	390	20
WTD. AVG.	1000	466	.7	14	--	2280	3.10	--	--	--	--	--
TIME WTD.												
AVG.	1100	511	.7	15	--	2470	3.36	--	--	--	--	--
TOT. LOAD (TONS)	10800	5030	7.8	154	--	24600	--	--	--	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3780	3340	3150	3080	2850	2990	3010	3470	3550	3860	5450	4190
2	3740	3310	3160	3100	2910	3010	3720	3480	3520	3920	5500	4320
3	3700	3270	3150	3110	2930	3030	3700	3420	3500	3950	5650	4330
4	3700	3270	3110	3080	2930	3030	3430	3520	3510	4020	5870	4430
5	3680	3280	3130	2980	2940	3000	3460	3460	3530	3980	6070	4520
6	3680	3260	3150	3080	2940	3040	3500	3380	3550	3950	5120	4520
7	3660	3260	3140	3080	2940	2910	3500	3490	3530	3920	5070	3560
8	3650	3250	3120	3080	2910	2930	3500	3450	3560	3940	5100	4600
9	3630	3250	3140	3050	2890	2960	3540	3450	3590	4000	5170	4700
10	3630	3250	3150	3070	2870	2930	3600	3490	3550	4030	5230	4160
11	3600	3220	3140	3090	2930	2970	3690	3430	3580	4000	5200	4000
12	3630	3260	3110	3080	2950	2990	3630	3390	3520	4030	3420	3940
13	3560	3130	3130	3010	2930	3010	3670	3310	3560	4130	3430	3920
14	3550	3140	3110	3060	2910	3010	2380	3350	3580	4210	3470	3980
15	3570	3170	3100	3030	2960	3000	2500	3370	3610	4210	3260	4030
16	3550	3110	3130	3020	2890	2980	2590	3390	3600	4250	3240	4110
17	3550	3140	3080	3020	2940	2980	2850	3410	3640	4300	3270	4190
18	3540	3120	3120	2960	2940	2990	2890	3430	3660	4380	3320	4180
19	3540	3160	3090	3060	2950	2990	2800	3430	3660	4490	3350	4230
20	3520	3140	3120	3020	2910	3000	2990	3460	3680	4530	3510	4240
21	3490	3160	3110	3000	2980	3030	3070	3510	3320	4590	3540	4320
22	3480	3050	3130	2950	2960	3010	3210	3510	3500	4550	3550	4320
23	3450	3140	3120	3010	2980	3020	3210	3510	3460	4550	3620	4320
24	3470	3150	2790	2980	2960	3020	3250	3490	3480	4660	3690	4370
25	3440	3150	3110	2980	3010	3020	3270	3440	3520	4720	3740	4390
26	3440	3140	2740	2990	2970	2990	3310	3480	3560	4830	3800	4410
27	3490	3160	2920	2980	2980	2640	3290	3480	3560	4950	3840	4430
28	3280	3130	3090	2950	3030	2780	3370	3480	3600	4950	3880	4460
29	3100	3150	2650	2980	---	2810	3390	3470	3640	5070	3940	4460
30	3240	3130	3030	2980	---	2900	3400	3510	3680	5150	3980	4500
31	3240	---	3050	2980	---	2920	---	3520	---	5260	4050	---
MEAN	3530	3190	3070	3030	2940	2960	3260	3450	3560	4370	4240	4270
WTR YR 1977	MEAN	3490		MAX	6070		MIN	2380				

RIO GRANDE BASIN

08405000 PECOS RIVER AT CARLSBAD, NM -- Continued

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	13.0	6.5	7.0	7.0	9.5	15.0	26.0	22.5	25.0	24.0	25.0
2	21.0	13.0	6.0	7.5	8.0	10.0	14.0	23.0	24.0	25.0	24.5	24.0
3	23.0	14.5	7.0	7.0	7.5	9.0	15.5	22.0	24.0	25.0	23.0	24.0
4	21.0	13.0	8.0	7.0	9.0	8.5	9.0	21.0	26.0	24.0	23.0	24.0
5	20.0	13.0	9.0	7.0	8.0	8.0	14.0	21.0	26.0	24.0	23.0	23.0
6	19.5	13.0	7.5	7.5	9.0	12.0	17.0	24.0	26.0	26.0	23.0	24.0
7	17.0	13.0	8.0	7.0	9.0	9.0	18.0	21.0	26.0	26.0	23.5	24.5
8	16.0	12.0	7.5	7.5	9.0	9.0	17.5	25.0	24.0	26.0	24.0	24.0
9	15.0	15.0	8.0	5.0	9.0	12.5	18.0	24.0	24.0	23.5	25.0	23.0
10	18.0	13.0	8.0	5.0	9.5	12.0	19.0	22.5	29.0	25.0	26.5	22.5
11	16.0	13.0	7.5	4.0	9.5	9.0	18.0	22.5	24.5	25.5	25.0	23.0
12	16.5	12.0	8.0	4.0	9.5	10.5	18.5	22.5	26.0	24.5	24.5	24.0
13	17.5	10.0	7.5	4.5	14.0	13.0	20.0	21.0	26.0	24.0	25.5	22.5
14	18.0	10.0	8.0	5.5	10.5	12.0	18.5	21.0	24.5	24.5	26.5	23.0
15	18.0	8.0	7.5	7.5	12.5	12.0	22.0	24.0	28.5	25.0	25.0	22.5
16	15.5	9.0	8.5	7.5	12.5	12.5	18.5	22.5	24.0	26.0	25.0	22.5
17	15.0	8.0	7.0	6.5	10.0	14.0	22.5	22.5	24.5	26.0	26.5	23.0
18	15.0	9.0	9.0	5.0	11.0	15.0	17.5	22.0	24.5	25.0	26.5	27.5
19	14.0	9.0	9.0	6.0	11.5	15.0	22.5	22.5	27.0	24.0	26.0	23.0
20	14.0	10.5	7.5	7.5	11.5	14.0	20.0	21.0	24.0	25.0	26.0	23.0
21	14.5	11.5	8.0	7.0	13.5	12.0	18.0	21.5	24.5	25.5	26.5	22.5
22	14.0	10.0	7.0	7.0	13.0	13.0	17.5	24.0	24.0	25.0	25.0	22.5
23	14.5	12.0	7.0	9.5	11.5	13.0	20.0	22.5	27.0	24.0	27.0	22.0
24	17.0	11.0	7.5	7.5	11.0	14.0	23.0	22.5	23.5	24.0	27.0	22.5
25	15.0	13.0	8.0	7.5	10.0	13.5	22.5	22.5	24.0	24.5	26.5	24.5
26	14.5	12.0	7.0	8.0	11.0	14.5	21.0	22.5	32.0	26.0	26.5	22.5
27	13.0	8.0	7.0	9.5	9.5	16.0	21.0	22.5	26.0	25.0	25.0	24.0
28	13.0	7.5	8.5	8.0	11.0	15.0	22.5	22.5	26.0	25.0	25.0	23.0
29	11.0	6.5	7.0	7.5	---	13.5	24.0	22.5	26.0	24.5	25.0	23.5
30	15.0	5.5	8.5	7.5	---	15.0	22.5	22.5	26.0	24.0	24.0	24.0
31	15.0	---	7.0	7.0	---	14.0	---	25.0	---	24.0	24.0	---
MEAN	16.5	11.0	7.5	7.0	10.5	12.5	19.0	22.5	25.5	25.0	25.0	23.5
WTR YR 1977	MEAN	17.0		MAX	32.0	MIN	4.0					

08405150 DARK CANYON AT CARLSBAD, NM

LOCATION.--Lat 32°24'24", long 104°13'34", in NE 1/4, SE 1/4, sec. 7, T. 22 S., R. 27 E., Eddy County, Hydrologic Unit 13060011, on downstream side of U.S. Highway 62-285 (Canal Street) bridge in Carlsbad, and 0.6 mi (1.0 km) upstream from mouth. Mouth at Pecos River mile 459.2 (738.9 km).

DRAINAGE AREA.--450 mi² (1,170 km²), approximately.

PERIOD OF RECORD.--January 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,088.21 ft (941.286 m) above mean sea level.

REMARKS.--Records good. A Soil Conservation Service flood control project on Hackberry Draw, an upstream tributary, has some effect on flood peaks and flow duration. Ground-water withdrawals above station for irrigation of approximately 2,100 acres (8.5 km²), 1973 determination, and for municipal supply for Carlsbad.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft³/s (402 m³/s) Oct. 23, 1974, gage height, 10.80 ft (3.290 m): no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 23, 1966, reached a discharge of 66,000 ft³/s (1,870 m³/s) as determined by slope-area measurement at site 1.2 mi (1.9 km) upstream. Another flood of approximately the same magnitude occurred Sept. 20, 1941. Other major peaks occurred July 17, 1906, July 24, 1908, July 24, 1911, Apr. 18, 1915, Aug. 8, 1916, Sept. 15, 1919, Aug. 4, 1925, and May 23, 1941.

EXTREMES FOR CURRENT YEAR.--No flow all year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MEAN	.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 1976	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC=FT	.00		
WTR YR 1977	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC=FT	.00		

RIO GRANDE BASIN

08405200 PECOS RIVER BELOW DARK CANYON, AT CARLSBAD, NM

LOCATION.--Lat 32°24'37", long 104°12'58", in NE¼SW¼NW¼ sec.8, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on left bank, 700 ft (210 m) downstream from mouth of Dark Canyon, 0.3 mi (0.5 km) downstream from Lower Tansill Dam and Bataan recreational area, 0.8 mi (1.3 km) downstream from bridge on U.S. Highway 62-180 in Carlsbad, and at mile 459.1 (738.7 km).

DRAINAGE AREA.--18,550 mi² (48,040 km²), approximately (contributing area.)

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,075.19 ft (937.318 m) above mean sea level.

REMARKS.--Water-discharge records good. Flow regulated by Lake Sumner, Lake McMillan, and Lake Avalon (stations 08384000, 08400500, 08403800), and at low stages by power plant above station. Gage is bypassed on left bank by Carlsbad main canal east which irrigates several hundred acres adjacent to and below gage site, and on right bank by Carlsbad main canal south, which with supplemental ground-water withdrawals irrigates about 23,000 acres (93 km²) below. Diversions and ground-water withdrawals above station for irrigation of about 198,000 acres (800 km²), 1959 determination.

AVERAGE DISCHARGE.--7 years, 55.0 ft³/s (1.558 m³/s), 39,850 acre-ft/yr (49.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft³/s (671 m³/s) Oct. 23, 1974, gage height, 13.1 ft (3.99 m), from flood marks; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 23, 1966, reached a stage of about 22 ft (6.7 m), discharge not determined. (For dates of other historical floods see station 08404000.)

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 122 ft³/s (3.46 m³/s) Apr. 14, gage height, 1.16 ft (0.354 m); no flow at times during July-September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	16	16	15	17	13	42	13	13	.06	.00	.00
2	11	15	14	16	19	16	25	12	12	.04	.00	.00
3	10	14	16	14	17	12	19	13	7.6	.09	.00	.00
4	10	14	14	15	17	14	27	12	8.3	.10	.00	.03
5	9.4	14	14	15	17	21	34	18	7.4	.12	.00	.06
6	10	14	14	15	17	15	22	12	7.8	.21	.00	.08
7	11	13	13	15	16	15	15	14	7.5	.28	.00	.08
8	7.3	13	14	17	17	16	20	15	7.6	.14	.00	.08
9	11	15	14	16	16	14	29	12	8.7	.21	.00	.36
10	11	15	16	16	17	21	20	10	8.6	.20	.00	.31
11	12	14	12	16	16	8.9	20	12	7.7	.16	1.4	8.1
12	11	17	14	17	15	16	21	12	7.9	.14	4.2	7.4
13	11	19	13	17	15	17	24	12	7.6	.12	.15	4.9
14	11	16	16	17	14	16	36	12	6.4	.11	1.4	5.3
15	12	14	14	17	14	15	.58	10	5.2	.10	1.5	6.1
16	10	13	14	16	13	15	.65	12	4.9	.13	.14	6.4
17	11	15	17	16	13	18	.41	10	3.5	.15	.03	6.5
18	14	16	14	16	13	11	.29	9.6	2.0	.11	.02	4.9
19	12	17	13	16	12	12	.15	7.7	1.1	.00	.00	4.7
20	12	16	14	15	13	12	.28	9.3	7.2	.00	.00	5.0
21	13	15	14	16	14	12	17	4.9	3.0	.00	.00	4.7
22	15	15	14	16	20	9.9	.36	7.5	8.1	.00	.00	6.8
23	15	16	16	17	11	10	8.0	15	8.3	.00	.00	2.8
24	14	16	16	17	11	14	9.6	13	1.1	.00	.00	1.9
25	14	18	13	17	18	55	11	10	4.3	.00	.00	2.6
26	16	17	13	19	8.9	96	16	10	5.0	.00	.00	3.3
27	14	14	14	18	13	39	15	11	3.3	.00	.00	5.0
28	21	15	14	16	13	32	13	10	.34	.00	.00	2.1
29	20	16	14	17	---	32	13	11	.18	.00	.00	3.1
30	16	14	15	18	---	19	13	12	.09	.00	.00	4.0
31	16	---	15	17	---	21	---	13	---	.00	.00	---
TOTAL	390.2	456	444	505	416.9	637.8	472.32	355.0	175.71	2.47	8.84	96.60
MEAN	12.6	15.2	14.3	16.3	14.9	20.6	15.7	11.5	5.86	.080	.29	3.22
MAX	21	19	17	19	20	96	42	18	13	.28	4.2	8.1
MIN	7.3	13	12	14	8.9	8.9	.15	4.9	.09	.00	.00	.00
AC-FT	774	904	881	1000	827	1270	937	704	349	4.9	18	192

CAL YR 1976 TOTAL 3834.89 MEAN 10.5 MAX 80 MIN .00 AC-FT 7610
WTR YR 1977 TOTAL 3960.84 MEAN 10.9 MAX 96 MIN .00 AC-FT 7860

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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICHO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
NOV					
02...	1100	16	3320	7.8	14.5
DEC					
03...	1410	19	3210	7.5	7.5
JAN					
04...	1100	15	3090	7.6	6.5
14...	1310	16	2960	7.7	7.0
FEB					
01...	0945	16	3030	7.7	6.5
MAR					
01...	1500	17	3130	7.7	7.0
APR					
04...	1630	34	3320	7.6	16.5
MAY					
03...	0955	12	3420	7.5	21.0
JUN					
02...	1015	9.2	3540	7.3	24.5
02...	1100	9.2	3550	7.3	27.0
SEP					
08...	1540	.07	4180	7.3	25.0

RIO GRANDE BASIN

08405260 PECOS RIVER BELOW SIX MILE DAM, NM
(Surveillance network station)

LOCATION.--Lat 32°22'56", long 104°08'20", in SE 1/4 sec. 24, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, 0.4 mi (0.6 km) below Six Mile Dam, 6.0 mi (9.7 km) southeast of Carlsbad, and at mile 453.8 (730.2 km).

DRAINAGE AREA.--18,560 mi² (48,070 km²), approximately (contributing area).

PERIOD OF RECORD.--Water years 1975 to June 1977 (discontinued).

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	AIR TEMPERATURE (DEG C) (00020)	TEMPERATURE (DEG C) (00010)	TURBIDITY (JTU) (00070)	DISSOLVED OXYGEN (MG/L) (00300)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARDNESS (CA+MG) (MG/L) (00900)
OCT 07...	0910	15	4200	8.4	12.0	17.5	15	9.4	110	1500
NOV 10...	0910	20	3500	8.4	15.0	9.0	10	14.0	81	1300
DEC 15...	0900	22	3600	8.4	10.5	6.5	4	13.8	37	1200
JAN 19...	0845	22	3000	7.8	3.0	5.0	1	12.3	90	1200
FEB 17...	0810	35	3100	7.7	11.0	10.0	2	9.7	17	1200
MAR 23...	0900	17	3400	8.4	14.0	13.0	4	10.8	140	1200
APR 28...	0945	35	3450	8.7	23.0	23.0	25	13.2	120	1200
MAY 19...	0930	27	3710	7.2	24.5	23.0	15	--	69	1300
JUN 30...	1030	20	3900	8.5	34.0	29.0	15	10.8	96	1500

DATE	NON-CARBONATE HARDNESS (MG/L) (00902)	DISSOLVED CALCIUM (CA) (MG/L) (00915)	DISSOLVED MAGNESIUM (MG) (MG/L) (00925)	DISSOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DISSOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DISSOLVED SULFATE (SO4) (MG/L) (00945)
OCT 07...	1300	350	140	400	4.6	7.7	205	0	1200
NOV 10...	1100	320	130	340	4.1	6.1	232	0	1100
DEC 15...	1000	300	110	310	3.9	5.6	223	0	990
JAN 19...	1000	300	110	290	3.6	5.7	220	0	930
FEB 17...	1000	300	110	280	3.5	5.8	220	0	940
MAR 23...	1000	290	110	300	3.8	6.0	217	0	940
APR 28...	1100	300	120	380	4.7	6.6	150	0	1100
MAY 19...	1200	320	120	380	4.6	6.5	130	0	1100
JUN 30...	1300	330	160	480	5.4	8.0	170	0	1200

RIO GRANDE BASIN

08405260 PECOS RIVER BELOW SIX MILE DAM, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)
OCT 07...	650	.8	4.4	3020	2860	.63	.42	.00	2.8
NOV 10...	570	.7	1.6	2680	2590	1.1	1.1	.00	3.3
DEC 15...	490	.7	14	2460	2340	1.2	1.2	1.6	.90
JAN 19...	470	.7	13	2320	2240	.91	.91	3.0	.00
FEB 17...	490	.7	12	2270	2260	4.6	1.0	.00	3.8
MAR 23...	510	.8	12	2420	2280	.93	.93	1.2	1.4
APR 28...	550	.8	.7	2580	2530	1.3	.15	.37	2.8
MAY 19...	600	.7	.3	2820	2590	.07	.07	.20	3.7
JUN 30...	750	.7	20	3210	3030	.14	.14	1.0	11

DATE	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOLVED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDED ORGANIC CARBON (C) (MG/L) (00689)
OCT 07...	3.4	1.1	.47	340	20	10	13	6.5	4.6
NOV 10...	4.4	1.1	.57	280	20	--	--	11	.3
DEC 15...	3.7	1.4	1.2	250	20	30	7.5	--	--
JAN 19...	3.6	1.6	1.3	240	20	--	--	5.0	.7
FEB 17...	8.4	1.6	1.3	230	10	--	5.3	--	--
MAR 23...	3.5	1.3	1.1	260	140	20	8.4	5.9	2.4
APR 28...	4.5	.83	.37	300	20	--	--	7.1	--
MAY 19...	4.0	.79	.13	290	20	--	--	5.1	<5.0
JUN 30...	12	.69	.24	410	90	50	14	13	4.0

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)
OCT 07...	0910	2	0	340	10	1	10	10	100	0	<10	2
DEC 15...	0900	2	2	250	<10	0	0	0	<50	0	<10	2
MAR 23...	0900	1	1	260	10	1	10	0	<50	0	20	1
JUN 30...	1030	1	1	410	10	2	10	0	<50	1	10	10

RIO GRANDE BASIN

08405260 PECOS RIVER BELOW SIX MILE DAM, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL IRON (FE) (01045)	DIS- SOLVED IRON (FE) (01046)	TOTAL LEAD (PB) (01051)	DIS- SOLVED LEAD (PB) (01049)	TOTAL MAN- GANESE (MN) (01055)	DIS- SOLVED MAN- GANESE (MN) (01056)	TOTAL MERCURY (HG) (71900)	DIS- SOLVED MERCURY (HG) (71890)	TOTAL SELE- NIUM (SE) (01147)	DIS- SOLVED SELE- NIUM (SE) (01145)	TOTAL ZINC (ZN) (01092)	DIS- SOLVED ZINC (ZN) (01090)
OCT 07...	330	20	100	8	60	10	.0	.0	1	1	20	20
DEC 15...	70	20	<100	1	40	30	.3	.3	2	1	20	20
MAR 23...	190	140	100	5	40	20	.0	.0	1	1	20	10
JUN 30...	300	90	100	6	120	50	.1	.1	2	1	20	8

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL- PER 100 ML) (31673)
OCT 07...	0910	4300	28	--
NOV 10...	0910	2	4	--
DEC 15...	0900	1	3	--
JAN 19...	0845	140	2	--
FEB 17...	0810	72	2	--
MAR 23...	0900	100	--	9
APR 28...	0945	0	--	5
MAY 19...	0930	10	--	50
JUN 30...	1030	37	--	980

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 07...	0910	15	17.5	26	1.1	95
NOV 10...	0910	20	9.0	11	.59	94
DEC 15...	0900	22	6.5	14	.83	71
JAN 19...	0845	22	5.0	5	.30	46
FEB 17...	0810	35	10.0	3	.28	90
MAR 23...	0900	17	13.0	6	.28	82
APR 28...	0945	35	23.0	20	1.9	88
MAY 19...	0930	27	23.0	29	2.1	70
JUN 30...	1030	20	29.0	25	1.4	84

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 (1.0 km) upstream from Black River diversion dam, 4.6 mi (7.4 km) west of Malaga, and 7.1 mi (11.4 km) upstream from mouth. Mouth at Pecos River mile 436.3 (702.0 km).

DRAINAGE AREA.--343 mi² (888 km²).

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 (936 m), from topographic map. March to December 1940 water-stage recorder and Cippoletti weir at site 0.3 mi (0.5 km) downstream at different datum.

AVERAGE DISCHARGE.--30 years (1948-77), 13.4 ft³/s (0.379 m³/s), 9,710 acre-ft/yr (12.0 hm³/yr).

REMARKS.--Records good. Diversions and ground-water withdrawals for irrigation of about 1,000 acres (4.0 km²), 1959 determination, above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,600 ft³/s (2,110 m³/s) Aug. 23, 1966, gage height, 21.7 ft (6.61 m), from floodmarks, from rating curve extended above 6,000 ft³/s (170 m³/s) on basis of slope-area measurements at gage heights 12.60 and 21.7 ft (3.840 and 6.61 m); minimum, 0.73 ft³/s (0.021 m³/s) June 25, 1969.

The flood of Aug. 23, 1966, exceeded the previous maximum stage which occurred in 1908 by about 1.0 ft (0.30 m), information from local resident.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 20 or 21, 1941, reached a stage of 19.0 ft (5.79 m) determined in 1947 from well defined flood marks, discharge, 33,000 ft³/s (935 m³/s), from rating curve extended above 1,400 ft³/s (39.6 m³/s) on basis of slope-area measurements at gage heights 8.41 and 12.60 ft (2.563 and 3.840 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 87 ft³/s (2.464 m³/s) May 12, gage height, 1.77 ft (0.540 m) no peak above base of 450 ft³/s (13 m³/s); minimum, 1.8 ft³/s (0.057 m³/s) May 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	2.8	10	5.6	12	2.6	6.6	9.5	5.9	5.4	7.2	5.6
2	6.2	2.6	10	5.6	12	2.6	9.1	9.1	6.6	5.1	5.4	4.8
3	6.2	2.6	10	5.6	12	2.6	8.7	8.7	6.6	4.8	4.8	4.0
4	6.9	2.4	10	5.6	12	2.4	9.1	8.7	6.2	4.8	4.5	3.5
5	6.2	2.4	10	5.6	12	2.8	9.5	9.1	6.6	5.1	4.3	4.5
6	6.2	2.4	11	5.6	12	3.1	9.5	9.5	6.6	4.8	4.5	3.5
7	6.2	2.2	10	5.6	12	3.1	9.5	9.5	6.6	14	4.5	3.8
8	5.9	2.2	11	5.9	12	2.8	9.5	9.1	6.9	12	4.5	3.8
9	6.2	2.0	11	8.7	11	2.8	9.1	8.7	7.2	8.3	4.5	3.7
10	6.6	2.0	11	10	12	2.4	9.1	8.7	8.0	6.2	4.8	3.5
11	6.6	2.0	11	11	12	2.2	8.7	9.1	7.2	5.6	4.5	3.8
12	6.6	2.2	11	11	12	2.2	8.7	46	6.6	5.1	14	3.5
13	6.6	2.8	11	11	12	2.2	9.1	21	6.6	4.8	9.1	3.3
14	6.6	3.1	11	11	12	2.2	16	13	6.2	4.8	5.9	3.3
15	6.9	3.1	11	11	12	2.4	21	9.9	5.9	5.1	4.8	3.3
16	6.9	2.8	11	11	8.0	2.4	14	9.1	5.9	5.1	5.1	3.3
17	6.9	2.6	11	11	5.9	2.6	10	8.7	5.9	4.8	5.4	3.3
18	6.9	2.6	11	11	4.8	2.4	9.9	8.3	5.9	4.8	4.3	3.1
19	6.9	2.6	12	11	4.3	2.6	9.5	7.6	5.9	4.8	4.0	3.1
20	6.9	2.4	11	11	3.8	2.8	9.1	7.2	5.9	4.8	4.0	3.1
21	6.9	2.4	11	11	3.5	2.8	9.5	6.6	5.9	4.8	4.3	3.1
22	7.2	4.0	11	11	3.3	3.1	9.5	6.6	8.5	4.8	4.3	2.8
23	5.4	8.7	11	12	2.8	3.1	9.5	6.2	18	5.1	4.3	2.8
24	3.8	9.1	11	12	2.6	3.3	9.5	6.9	11	5.1	4.0	2.8
25	2.8	9.1	11	12	2.6	3.3	9.5	6.6	7.2	6.2	4.0	2.8
26	2.4	9.1	11	12	2.6	3.8	9.5	6.2	6.6	5.1	4.3	2.8
27	2.2	9.1	11	12	2.8	4.5	9.1	4.5	5.9	5.6	4.3	3.1
28	2.6	9.5	7.2	11	2.6	4.3	9.5	3.1	5.9	5.6	4.3	3.1
29	3.3	9.5	6.2	11	---	3.8	9.5	2.4	5.6	5.6	4.0	2.8
30	3.1	9.9	5.6	12	---	3.5	9.5	2.0	5.4	16	5.6	2.8
31	3.1	---	5.6	12	---	3.5	---	2.6	---	12	5.1	---
TOTAL	172.0	130.2	316.6	301.8	228.6	90.2	300.3	284.2	209.2	196.1	158.6	102.7
MEAN	5.55	4.34	10.2	9.74	8.16	2.91	10.0	9.17	6.97	6.33	5.12	3.42
MAX	7.2	9.9	12	12	12	4.5	21	46	18	16	14	5.6
MIN	2.2	2.0	5.6	5.6	2.6	2.2	6.6	2.0	5.4	4.8	4.0	2.8
AC-FT	341	258	628	599	453	179	596	564	415	389	315	204

CAL YR 1976 TOTAL 2587.4 MEAN 7.07 MAX 139 MIN 2.0 AC-FT 5130
WTR YR 1977 TOTAL 2490.5 MEAN 6.82 MAX 46 MIN 2.0 AC-FT 4940

LOCATION.—Lat 32°12'26", long 104°01'22", in SW 1/4 sec.19, T.24 S., R.29 E., Eddy County, Hydrologic Unit 13060011, on right bank 3.1 mi (5.0 km) southeast of Malaga, 4.3 mi (6.9 km) downstream from Black River, and at mile 432.2 (695.4 km). Water-quality sampling site 2.2 mi (3.5 km) upstream.

WATER-DISCHARGE RECORDS

REVISED RECORDS.---WSP 1632: 1925, 1932-37.

REMARKS.--Water-discharge records fair. Flow regulated by storage in Lake Sumner, Lake McMillan, and Lake Avalon (stations 08384000, 08400500, 08403800), and by small diversion dams that divert for power or irrigation. Diversions and ground-water withdrawals above station for irrigation of about 202,000 acres (820 km²), 1959 determination. Harroun canal bypasses gage on left bank and irrigates approximately 1,000 acres (4.0 km²) adjacent to and below gage. This bypass is not gaged.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft³/s (3,400 m³/s) Aug. 23, 1966, gage height, 42.1 ft (12.83 m), from floodmarks, from rating curve extended above 36,000 ft³/s (1,020 m³/s), on basis of slope-area measurement at gage height 42.1 ft (12.83 m); minimum, 5.0 ft³/s (0.14 m³/s) Mar. 9, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in 1904, discharge not determined. Flood of Aug. 7, 1916, reached a discharge of 70,000 ft³/s (1,980 m³/s) at Carlisbad, 27 mi (43.4 km) upstream. Flood in September 1919 reached a stage of 29.4 ft (8.96 m), present datum, discharge, 40,400 ft³/s (1,140 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 84 ft³/s (2.379 m³/s) Mar. 28, gage height, 3.49 ft (1.064 m), no peak above base of 1,800 ft³/s (51 m³/s); minimum 3.7 ft³/s (0.10 m³/s) Oct. 20.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	29	38	17	20	22	21	11	9.1	7.5	7.1	6.8
2	22	28	40	19	22	21	17	10	8.8	7.4	7.0	7.2
3	24	27	40	20	22	23	17	12	9.1	7.1	6.8	8.9
4	21	27	41	23	23	27	26	11	8.9	7.0	6.7	8.4
5	21	27	39	21	23	25	23	11	9.2	7.1	6.8	16
6	17	27	39	22	22	23	19	13	9.8	7.2	7.2	13
7	14	27	39	22	22	26	23	12	9.2	7.3	8.5	8.6
8	12	29	40	21	24	31	28	11	9.5	7.2	8.3	7.6
9	12	31	38	22	24	30	21	11	11	7.6	6.8	7.5
10	13	27	31	24	24	27	16	11	11	7.3	6.3	8.3
11	12	25	25	30	24	28	12	11	9.7	6.8	6.3	9.1
12	12	26	21	34	25	31	11	12	9.5	6.5	6.0	8.3
13	11	30	20	36	24	29	12	22	9.0	6.1	5.9	8.8
14	11	34	20	38	24	24	17	14	8.6	6.2	5.5	8.8
15	5.2	51	19	38	24	24	27	11	8.4	6.6	5.8	9.6
16	4.5	48	18	29	23	24	44	10	8.3	6.2	5.7	8.5
17	29	36	18	25	23	22	27	9.8	8.1	6.2	5.5	8.0
18	16	35	18	24	22	20	18	9.2	8.1	5.8	5.4	7.2
19	5.0	34	18	24	22	17	14	8.6	7.9	5.8	5.4	7.2
20	4.2	33	17	23	22	16	12	8.3	8.2	5.8	5.5	7.0
21	7.3	32	17	23	22	14	11	8.3	8.6	5.7	5.7	7.1
22	14	32	17	24	20	13	11	8.3	8.8	5.9	5.7	7.0
23	19	32	17	24	19	12	12	8.7	11	6.1	5.8	7.8
24	17	35	16	24	20	11	12	11	9.1	6.0	5.7	7.7
25	15	36	16	24	22	11	11	10	8.7	6.1	5.6	7.6
26	14	35	16	26	19	11	11	10	8.8	6.7	5.7	7.3
27	15	35	16	26	21	21	11	9.6	8.4	7.7	6.1	7.7
28	20	37	16	25	24	72	10	9.0	7.8	7.4	5.7	7.2
29	26	38	16	24	---	44	10	9.0	7.7	6.9	6.0	7.1
30	29	37	16	22	---	32	11	9.4	7.5	7.2	5.9	6.8
31	31	---	16	21	---	26	---	9.3	---	7.4	5.8	---
TOTAL	491.2	980	758	775	626	757	515	331.5	267.8	207.8	192.2	248.1
MEAN	15.8	32.7	24.5	25.0	22.4	24.4	17.2	10.7	8.93	6.70	6.20	8.27
MAX.	31	51	41	38	25	72	44	22	11	7.7	8.5	16
MIN	4.2	25	16	17	19	11	10	8.3	7.5	5.7	5.4	6.8
AC-FT	974	1940	1500	1540	1240	1500	1020	658	331	412	381	492
CAL YR 1976	TOTAL	7509.9	MEAN	20.5	MAX	101	MIN	4.2	AC-FT	14900		
WTR YR 1977	TOTAL	6149.6	MEAN	16.8	MAX	72	MIN	4.2	AC-FT	12200		

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.

HARDNESS: July 1937 to current year.

DISSOLVED SOLIDS: July 1937 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, 450 micromhos Sept. 21, 1941.

WATER TEMPERATURES: Maximum, 34.0°C June 25, 1964; minimum, 3.0°C Jan. 13, 1963.

HARDNESS: Maximum, 3,110 mg/L June 7, 1966; minimum, 235 mg/L Oct. 21, 1969.

DISSOLVED SOLIDS: Maximum, 18,700 mg/L June 7, 1966; minimum, 344 mg/L Oct. 21, 1969.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 11,200 micromhos Aug. 30, 31; minimum daily, 5,520 micromhos Dec. 11, 12.

WATER TEMPERATURES: Maximum, 32.0°C Aug. 23; minimum, 4.0°C Jan. 10.

HARDNESS: Maximum, 2,600 mg/L July 1-31; minimum, 1,800 mg/L Nov. 24-30, Dec. 1-12, 13-31.

DISSOLVED SOLIDS: Maximum, 7,490 mg/L Oct. 1-4; minimum, 3,980 mg/L Dec. 1-12.

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HC03) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)
OCT												
01-04	21	10500	7.7	2500	2400	620	240	1500	13	38	169	0
05-22	12	9100	7.7	2400	2300	600	220	1200	11	32	170	0
23-31	21	10200	7.7	2300	2200	570	220	1400	13	43	165	0
NOV												
01-12	28	7400	7.5	2100	2000	510	210	920	8.7	20	166	0
13-23	36	6620	7.7	2000	1800	470	190	790	7.8	17	161	0
24-30	36	5990	7.6	1800	1700	440	170	690	7.1	16	158	0
DEC												
01-12	36	5640	7.6	1800	1700	450	170	650	6.6	14	165	0
13-31	17	6330	7.9	1800	1600	470	150	780	8.0	23	184	0
JAN												
01-10	21	7510	7.7	2100	2000	510	200	990	9.4	24	174	0
11-15	35	6350	7.7	2000	1900	500	180	780	7.6	18	162	0
16-31	24	6650	7.7	1900	1800	480	180	850	8.4	21	172	0
FEB												
01-28	22	7040	7.8	2000	1800	480	190	910	8.9	24	184	0
MAR												
01-27	22	7120	8.2	2000	1900	480	190	930	9.1	25	140	0
28-31	44	6840	7.5	2000	1900	490	190	860	8.4	20	170	0
APR												
01-25	18	7060	7.7	2000	1900	490	190	960	9.3	22	150	0
26-30	11	8120	7.7	2100	2000	540	190	1100	10	33	150	0
MAY												
01-13	12	8190	7.9	2200	2100	560	200	1300	12	38	190	0
14-21	9.9	7910	8.1	2500	2400	580	260	1100	9.5	37	180	0
22-31	9.4	8850	7.8	2300	2200	590	210	1400	13	44	160	0
JUN												
01-19	9.1	9240	7.1	2300	2200	590	210	1500	14	43	180	0
20-24	9.1	9950	6.9	2400	2300	610	220	1400	12	44	170	0
25-30	8.2	9340	6.7	2200	2100	600	180	1500	14	48	180	0
JUL												
01-31	6.7	10700	7.3	2600	2400	610	250	1600	14	52	160	0
AUG												
01-31	6.2	10100	7.6	2200	2100	500	240	1500	14	44	180	0
SEP												
01-05	9.5	9910	7.6	2500	2400	610	240	1400	12	41	180	0
06-09	9.2	7570	7.6	2100	2000	560	180	1000	9.4	29	160	0
10-28	7.9	8680	7.6	2300	2100	560	210	1200	11	36	180	0
29-30	7.0	8850	7.6	2400	2200	580	220	1300	12	36	180	0
WTD. AVG.	--	7520	7.7	2070	1940	508	196	1000	9.6	27	167	0
TIME WTD.												
AVG.	17	8170	7.7	2160	2030	528	205	1140	11	32	169	0
TOT. LOAD (TONS)	--	--	--	--	--	8400	3240	16600	--	441	2760	0

08406500 PECOS RIVER NEAR MALAGA, NM -- Continued

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)	DIS- SOLVED FLUOR- IDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT												
01-04	2000	2500	1.0	14	7490	7010	9.53	397	1.9	.04	600	10
05-22	2000	2100	1.0	15	6570	6260	8.51	203	2.0	.04	530	10
23-31	2000	2400	.9	14	7110	6740	9.17	382	1.8	.03	580	10
NOV												
01-12	1800	1600	.8	11	--	5160	7.02	390	1.7	--	--	--
13-23	1600	1300	.7	7.0	--	4460	6.07	434	1.1	--	--	--
24-30	1500	1100	.7	6.3	--	4010	5.45	390	.97	--	--	--
DEC												
01-12	1500	1100	.8	8.0	--	3980	5.41	387	1.7	--	--	--
13-31	1500	1200	.8	12	--	4230	5.75	194	1.8	--	--	--
JAN												
01-10	1700	1700	.8	11	--	5230	7.11	302	1.2	--	--	--
11-15	1600	1400	.9	9.8	--	4570	6.22	437	1.3	--	--	--
16-31	1600	1500	.9	10	--	4730	6.43	307	1.3	--	--	--
FEB												
01-28	1600	1600	.8	13	--	4920	6.69	292	1.8	--	--	--
MAR												
01-27	1600	1600	.9	.9	--	4900	6.66	291	.14	--	--	--
28-31	1600	1500	1.0	3.7	--	4750	6.46	564	.64	--	--	--
APR												
01-25	1800	1500	.9	9.6	5220	5050	6.87	245	1.5	.04	460	10
26-30	1800	1900	1.0	15	6020	5660	7.70	168	1.5	.05	600	0
MAY												
01-13	1900	2000	1.0	17	--	6110	8.31	198	--	--	--	--
14-21	1900	1900	1.0	16	--	5880	8.00	157	--	--	--	--
22-31	1900	2200	1.0	15	--	6440	8.76	163	--	--	--	--
JUN												
01-19	2100	2300	1.0	21	--	6860	9.33	169	1.7	--	--	--
20-24	2000	2400	1.0	22	--	6790	9.23	167	1.7	--	--	--
25-30	2000	2400	1.0	22	--	6850	9.32	152	1.6	--	--	--
JUL												
01-31	2200	2600	1.1	22	--	7410	10.1	134	--	--	--	--
AUG												
01-31	2000	2400	1.0	24	--	6800	9.25	114	--	--	--	--
SEP												
01-05	2000	2300	1.0	24	7160	6710	9.13	172	--	--	630	60
06-09	1800	1600	1.0	22	5580	5270	7.17	131	--	--	510	30
10-28	1900	2100	1.1	22	6270	6120	8.32	131	--	--	560	30
29-30	2100	2100	1.1	21	6430	6450	8.77	122	--	--	600	20
WTD. AVG.	1730	1680	.9	11	--	5240	7.12	--	--	--	--	--
TIME WTD.												
AVG.	1820	1880	.9	15	--	5710	7.77	--	--	--	--	--
TOT. LOAD (TONS)	28600	27700	15	190	--	86700	--	--	--	--	--	--

08406500 PECOS RIVER NEAR MALAGA, NM -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10400	7970	5680	7810	7160	7220	6740	8200	9500	10400	10400	11000
2	11000	7650	5710	7980	7060	7170	7100	8100	9400	10600	10300	10700
3	10500	7450	5650	7640	7120	7170	7260	8050	9600	10500	10100	10400
4	10100	7340	5560	7410	7180	7270	7570	8150	9250	10600	10100	9900
5	9370	7500	5560	7340	7040	7120	7310	8240	9750	10600	10300	8890
6	8730	7610	5670	7520	7040	6980	7030	8320	9300	10700	10300	7220
7	8800	7390	5770	7400	6930	7070	6950	8260	9150	10600	10400	7500
8	8590	7180	5740	7520	7090	7120	7100	8230	8850	10500	9910	7660
9	8570	7100	5610	7370	7030	6780	7070	8030	8830	---	9720	8060
10	8660	7130	5590	7280	6940	6800	7130	8170	8960	10600	9460	8600
11	8890	7130	5520	7090	6900	6840	7210	8200	9200	10500	9550	8820
12	8970	7300	5520	6710	7030	6890	7340	8440	9040	10700	9380	8400
13	9040	6920	5630	6400	6970	6750	7530	8120	8860	10800	9290	8610
14	8970	6920	6250	5930	6780	6670	7550	7440	10100	11000	9210	8970
15	9040	6750	6110	5830	6770	6750	7720	7860	9000	11000	9210	8270
16	9120	6630	5640	6070	6960	6980	6730	7840	9100	---	9550	8140
17	9200	6630	6150	6190	6940	7030	6590	7900	9240	11100	9720	8270
18	10200	6550	6300	6210	7020	7010	6440	8040	9240	10800	10000	8670
19	10000	6410	6560	6540	7010	7100	6760	8040	9260	10700	10200	8740
20	9900	6410	5740	6650	7150	7200	6760	8240	9880	10800	10200	8680
21	9630	6430	5990	6790	7070	7360	6820	8240	9980	10900	10000	8610
22	9200	6650	6710	6650	7030	7460	6930	8560	10000	10900	10000	8810
23	8310	6470	6060	6790	7100	7690	7050	8750	9960	11000	10100	9210
24	8440	6280	6400	6920	7220	8050	7100	8780	9920	11000	10200	9200
25	7630	6210	6630	6790	7170	8170	7070	8960	9540	11000	10500	9040
26	7850	6100	5960	6770	7120	8370	7870	9040	9500	11000	10500	---
27	8430	5930	6510	7000	7220	8440	8000	8870	9040	---	10800	---
28	7810	5780	6730	6800	7270	7300	7950	8910	9260	10600	10800	---
29	8050	5900	5980	6730	---	6360	8350	8930	9240	10400	11000	8810
30	8960	5780	7380	6780	---	6690	8410	8860	9460	10400	11200	8890
31	8300	---	7890	6790	---	6870	---	8760	---	10300	11200	---
MEAN	9050	6780	6070	6890	7050	7180	7250	8340	9380	10700	10100	8820
WTR YR 1977	MEAN	8120		MAX	11200		MIN	5520				

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.5	12.5	6.5	7.0	8.0	10.5	16.0	22.0	23.0	29.5	26.0	27.0
2	22.0	13.0	6.0	7.0	9.5	13.5	16.0	23.0	29.0	28.0	29.5	25.0
3	21.5	12.5	6.0	7.0	10.5	10.0	15.5	23.5	25.5	26.0	27.0	24.5
4	24.0	13.0	8.0	9.0	9.0	10.0	16.5	25.0	24.0	28.5	26.0	30.5
5	24.0	13.0	7.0	10.0	9.5	10.0	14.5	24.5	28.5	25.0	29.5	29.0
6	23.0	13.0	7.5	8.0	10.0	8.0	16.5	23.0	26.5	29.0	29.5	28.0
7	17.0	13.0	8.0	8.0	10.0	9.5	16.5	25.5	26.5	26.5	25.0	29.5
8	15.0	13.0	6.5	8.5	11.0	11.0	18.0	28.0	26.5	27.0	30.0	28.5
9	19.0	16.0	8.5	6.0	10.0	12.0	19.5	23.5	25.0	26.0	26.0	27.0
10	20.0	13.0	7.0	4.0	10.5	13.0	22.5	24.5	24.0	26.0	28.0	26.0
11	21.0	13.0	7.0	4.5	10.0	12.0	19.0	21.0	30.0	26.0	26.0	25.0
12	17.0	11.0	6.5	5.5	14.0	12.0	24.0	23.0	25.0	28.0	27.0	24.0
13	17.5	8.0	8.0	5.5	11.0	12.5	20.0	23.0	25.0	28.0	26.5	23.5
14	18.0	8.0	9.0	6.5	12.5	13.0	22.0	21.0	25.0	25.0	27.0	24.5
15	18.0	8.5	7.0	7.0	11.0	13.5	19.0	26.0	25.0	27.0	26.5	24.0
16	16.5	9.0	6.5	7.0	11.0	14.5	18.0	22.5	29.0	27.5	26.0	23.0
17	15.0	8.5	7.0	6.0	11.5	17.0	19.0	22.0	28.0	27.5	26.0	23.0
18	16.0	11.0	7.5	6.0	12.0	13.5	24.5	22.5	30.0	27.0	27.0	23.5
19	15.0	12.0	9.0	7.0	15.5	13.0	23.0	22.0	25.0	27.0	27.0	25.0
20	14.5	15.0	10.0	9.0	14.0	13.0	22.0	22.0	26.0	27.0	28.0	24.0
21	15.0	11.0	7.5	8.0	17.0	13.0	19.0	20.0	28.5	28.0	28.0	24.0
22	17.0	10.0	5.5	10.0	14.0	14.0	18.5	22.0	24.0	25.5	28.0	23.0
23	17.5	10.0	8.5	10.0	11.5	14.0	20.0	22.5	24.5	29.0	32.0	24.0
24	15.0	10.0	6.0	8.5	15.5	14.0	20.0	22.0	27.5	25.5	29.0	28.0
25	14.0	10.0	7.5	9.0	14.0	16.0	25.0	22.5	27.0	31.0	31.0	24.0
26	14.0	13.0	7.5	12.5	11.0	15.5	22.0	25.5	26.5	31.0	28.0	---
27	13.0	10.0	7.0	12.5	10.0	15.5	21.0	22.0	27.0	30.0	27.0	---
28	11.0	7.0	11.0	10.5	10.0	14.5	21.5	23.0	29.0	30.0	26.0	---
29	11.0	7.0	7.0	8.0	---	15.5	21.5	23.5	29.0	29.0	26.0	28.0
30	11.0	5.0	12.0	7.5	---	14.0	28.0	26.0	27.5	25.5	25.5	24.0
31	12.0	---	8.0	6.5	---	15.0	---	24.0	---	28.0	29.0	---
MEAN	17.0	11.0	7.5	8.0	11.5	13.0	20.0	23.0	26.5	27.5	27.5	25.5
WTR YR 1977	MEAN	18.0		MAX	32.0		MIN	4.0				

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 (168 m) upstream from Pierce Canyon Crossing, and 6.0 mi (9.7 km) southeast of Malaga, and at mile 425.7 (685.0 km).

DRAINAGE AREA.--19,260 mi² (49,880 km²), 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: 1952.

GAGE.--Water-stage recorder. Datum of gage is 2,889.18 ft (880.622 m) above mean sea level. July 1938 to September 1941 at datum 1.19 ft (0.363 m) higher.

REMARKS.--Water-discharge records good. Flow regulated by storage in Lake Sumner, Lake McMillan, and Lake Avalon (stations 08384000, 08400500, 08403800), and by several small diversion dams that divert for power or irrigation. Diversions and ground-water withdrawals above station for irrigation of about 202,000 acres (820 km²), 1959 determination.

AVERAGE DISCHARGE.--29 years (1939-41, 1952-77), 147 ft³/s (4.163 m³/s), 106,500 acre-ft/yr (131 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 31.6 ft (9.63 m) from floodmarks, Aug.23, 1966, (discharge not determined); minimum discharge, 0.54 ft³/s (0.015 m³/s) May 30, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge not determined, maximum gage height 1.59 ft (0.485 m) Nov. 16 and Mar. 28; minimum, 2.3 ft³/s (0.07 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	34	39	20	24	27	28	12	9.9	8.4	8.9	2.9
2	21	34	41	23	25	28	22	12	9.7	8.4	8.5	4.0
3	24	32	42	24	26	26	20	12	9.6	8.1	8.1	4.3
4	24	31	42	26	25	29	22	13	9.8	8.1	7.9	4.6
5	21	31	41	26	26	33	27	13	9.9	8.4	7.5	11
6	20	31	40	26	27	29	24	13	10	8.6	8.1	12
7	17	30	40	27	25	26	23	14	11	8.8	8.6	6.3
8	14	30	41	27	26	31	31	14	11	9.2	9.7	4.6
9	13	36	41	27	26	34	28	12	10	9.8	10	5.8
10	15	33	37	26	28	32	22	12	12	9.4	9.2	3.7
11	14	31	29	30	26	28	18	12	12	8.5	8.8	3.1
12	13	30	25	35	27	31	15	13	12	7.7	8.8	4.3
13	13	33	23	38	27	33	14	16	11	7.2	8.6	6.1
14	13	36	22	40	28	27	19	23	9.5	7.3	8.1	6.7
15	13	41	21	41	26	24	24	15	9.2	7.8	7.5	8.0
16	7.3	66	21	38	26	25	38	13	9.0	7.8	7.2	9.1
17	7.3	41	20	31	26	25	41	12	8.8	7.6	7.2	9.0
18	29	38	21	28	26	22	25	12	8.7	7.1	7.4	7.7
19	14	37	22	27	25	20	20	11	8.1	7.2	7.6	6.9
20	7.1	36	21	26	26	18	16	10	8.7	7.3	6.9	6.8
21	5.9	35	21	27	26	17	14	9.6	9.7	7.1	5.9	6.8
22	7.9	35	22	26	27	16	12	9.5	9.7	7.4	6.4	6.6
23	18	35	22	27	20	17	12	9.9	11	7.8	7.1	6.8
24	21	35	22	27	21	16	13	12	10	7.8	6.7	6.8
25	18	38	21	27	24	14	13	13	11	7.6	6.5	4.2
26	17	38	19	28	22	15	12	12	9.9	7.6	6.2	3.0
27	17	37	19	29	23	18	12	11	9.6	8.2	6.7	2.7
28	21	40	19	28	25	54	12	10	9.2	9.2	8.9	2.9
29	29	41	20	28	---	58	12	9.5	8.5	9.5	7.2	2.7
30	31	38	19	26	---	39	11	9.4	8.5	9.2	6.1	2.5
31	34	---	17	25	---	31	---	9.8	---	9.2	3.7	---
TOTAL	531.5	1083	850	884	709	843	600	379.7	297.0	253.3	236.0	171.9
MEAN	17.1	36.1	27.4	28.5	25.3	27.2	20.0	12.2	9.90	8.17	7.61	5.73
MAX	34	66	42	41	28	58	41	23	12	9.8	10	12
MIN	5.9	30	17	20	20	14	11	9.4	8.1	7.1	3.7	2.5
AC-FT	1050	2150	1690	1750	1410	1670	1190	753	589	502	468	341
CAL YR 1976	TOTAL	8378.6	MEAN 22.9	MAX 107	MIN 5.9	AC-FT 16620						
WTR YR 1977	TOTAL	6838.4	MEAN 18.7	MAX 66	MIN 2.5	AC-FT 13560						

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.

HARDNESS: March 1938 to September 1941, October 1951 to current year.

DISSOLVED SOLIDS: March 1938 to September 1941, October 1951 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.

HARDNESS: Maximum, 4,850 mg/L Aug. 16, 1969; minimum, 202 mg/L Sept. 21, 1941.

DISSOLVED SOLIDS: Maximum, 40,900 mg/L Aug. 1-7, 1966; minimum, 280 mg/L Sept. 21, 1941.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 42,700 micromhos Sept. 4; minimum daily, 10,600 micromhos Dec. 11.

WATER TEMPERATURES: Maximum, 33.0°C Aug. 23; minimum, 1.5°C Jan 10.

HARDNESS: Maximum, 3,900 mg/L Aug. 1-31, Sept. 1-16; minimum, 2,000 mg/L Dec. 1-12.

DISSOLVED SOLIDS: Maximum, 25,900 mg/L Sept. 1-16; minimum, 7,540 mg/L Dec. 1-12.

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)
OCT												
01-18	16	23000	7.7	2700	2500	590	290	4400	37	200	167	0
19-31	19	18700	7.8	2700	2500	590	290	3100	26	120	185	0
NOV												
01-15	33	14400	7.6	2400	2300	540	260	2400	21	87	172	0
16-17	54	14900	7.5	2300	2200	510	260	2500	22	94	171	0
18-30	37	13000	7.7	2100	2000	480	230	2200	21	80	164	0
DEC												
01-12	38	12100	7.9	2000	1900	470	200	2000	19	74	157	0
13-30	21	14900	8.0	2200	2000	500	220	2600	24	99	182	0
31...	17	31100	8.0	2700	2500	520	350	6300	52	280	199	0
JAN												
01-11	26	16000	7.8	2300	2100	520	240	3000	27	120	186	0
12-31	30	13500	7.8	2200	2100	510	230	2300	21	92	174	0
FEB												
01-22	26	14600	7.5	2300	2100	510	240	2500	23	99	184	0
23-28	22	22300	7.1	2500	2400	500	310	4400	38	190	151	0
MAR												
01-27	24	15600	8.8	2300	2200	500	260	2900	26	110	94	6
28-29	56	21200	7.4	2600	2400	530	300	3900	34	170	170	0
30-31	35	15000	7.6	2300	2200	540	240	2700	24	100	170	0
APR												
01-03	23	15200	7.8	2300	2200	490	260	2900	26	110	170	0
04-15	22	17700	7.6	2500	2300	520	280	3600	32	130	150	0
16-20	28	15800	7.5	2400	2300	520	260	3000	27	110	140	0
21-30	12	21100	7.6	2500	2400	520	290	4200	37	160	130	0
MAY												
01-14	14	24500	7.8	2800	2700	580	330	4500	37	200	160	0
15-16	14	23600	7.8	2800	2700	610	320	4400	36	200	170	0
17-26	11	27300	8.0	3100	3000	640	360	5300	42	240	150	0
27-31	9.9	24700	7.8	2900	2800	620	330	4600	37	200	150	0
JUN												
01-17	10	27000	7.6	3100	3000	640	360	670	5.3	220	150	0
18-24	9.4	29900	7.5	3300	3200	680	390	550	4.2	260	140	0
25-30	9.4	26300	7.5	3200	3000	670	360	480	3.7	220	150	0
JUL												
01-31	8.2	33800	7.1	3400	3300	640	440	6700	50	280	150	0
AUG												
01-31	7.6	35600	7.4	3900	3800	780	470	6300	44	300	150	0
SEP												
01-16	6.0	36800	7.5	3900	3800	770	480	8000	56	340	140	0
17-28	5.8	32200	7.6	3600	3500	730	430	6700	49	310	160	0
29-30	2.6	35600	7.4	3700	3600	740	450	7200	52	360	170	0
WTD. AVG.	--	18600	7.8	2520	2380	545	280	3200	27	139	159	1
TIME WTD.												
AVG.	19	22700	7.7	2800	2680	590	322	3890	31	181	156	0
TOT. LOAD (TONS)	--	--	--	--	--	10000	5150	58900	--	2550	2930	10

RIO GRANDE BASIN

08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM -- Continued

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT												
01-18	2500	7100	1.3	14	15600	15200	20.7	657	1.1	.05	1300	20
19-31	2200	4800	.9	14	11400	11200	15.2	575	1.5	.05	1000	20
NOV												
01-15	2200	3900	.9	13	--	9490	12.9	846	1.4	--	--	--
16-17	2000	4000	.8	9.5	--	9460	12.9	1380	1.1	--	--	--
18-30	1900	3500	.8	7.3	--	8480	11.5	847	.81	--	--	--
DEC												
01-12	1700	3000	.8	7.5	--	7540	10.3	774	1.3	--	--	--
13-30	1800	4000	.8	9.4	--	9320	12.7	528	1.2	--	--	--
31...	2400	10000	.8	12	--	20000	27.2	918	1.3	--	--	--
JAN												
01-11	1900	4700	.9	11	--	10600	14.4	744	1.2	--	--	--
12-31	1800	4000	.9	8.6	--	9030	12.3	739	.79	--	--	--
FEB												
01-22	1800	4200	.9	10	--	9460	12.9	664	1.5	--	--	--
23-28	2200	7300	.8	14	--	15000	20.4	891	1.2	--	--	--
MAR												
01-27	2000	4600	.9	1.0	--	10400	14.1	688	.14	--	--	--
28-29	2200	5900	1.3	7.2	--	13100	17.8	1980	.87	--	--	--
30-31	2100	4200	.9	9.7	--	9980	13.6	943	.88	--	--	--
APR												
01-03	2000	4700	.9	8.5	11000	10600	14.4	658	1.0	.07	910	20
04-15	1800	5600	.8	6.4	12600	12000	16.3	713	1.0	.06	1100	30
16-20	2100	4900	.9	5.6	11300	11000	15.0	832	.98	.06	990	20
21-30	1900	7000	.8	5.8	14900	14100	19.2	457	.88	.06	1300	20
MAY												
01-14	2400	7800	.7	9.2	--	15900	21.6	601	.96	.06	1500	10
15-16	2400	7500	1.1	12	--	15500	21.1	586	.79	.01	1500	10
17-26	2300	9000	.8	8.6	--	17900	24.3	532	.95	.03	1700	30
27-31	2200	7900	.8	9.7	--	15900	21.6	425	.67	.02	1600	10
JUN												
01-17	2700	8700	1.1	11	--	13400	18.2	362	1.0	--	--	--
18-24	2900	9900	1.0	15	--	14800	20.1	376	1.0	--	--	--
25-30	2700	8600	.9	17	--	13100	17.8	332	.85	--	--	--
JUL												
01-31	3100	11000	1.0	22	--	22300	30.3	494	--	--	--	--
AUG												
01-31	2300	11000	1.0	20	--	21200	28.8	435	--	--	--	--
SEP												
01-16	3200	13000	.9	21	25300	25900	35.2	420	--	--	2400	60
17-28	2800	11000	.9	21	22000	22100	30.1	346	--	--	1900	60
29-30	2600	12000	.5	21	24200	23500	32.0	165	--	--	2200	100
WTD. AVG.	2100	5560	.9	10	--	11900	16.2	--	--	--	--	--
TIME WTD.												
AVG.	2280	7060	.9	12	--	14400	19.6	--	--	--	--	--
TOT. LOAD (TONS)	38600	102000	17	185	--	219000	--	--	--	--	--	--

08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38800	14900	11000	21000	12900	13300	13800	23200	27600	29100	34700	38500
2	19500	14300	11500	16500	15700	13400	16400	22900	27900	29200	34700	38900
3	17900	13400	12000	14400	13800	16200	16000	23700	27600	30500	34700	40700
4	18600	15300	12600	13100	14100	15300	19100	24200	27600	33300	34700	42700
5	19100	14700	12000	23200	14400	16000	19200	22900	29100	32500	35100	39600
6	25400	14800	12800	15000	14600	12300	14200	24100	27800	33300	36200	33100
7	20700	13500	12300	14900	13900	12200	15100	25100	26200	32700	36100	31800
8	25100	15000	12000	12800	14600	13400	16200	20700	25800	32800	37000	34500
9	18400	14500	14400	13800	16500	13400	16200	22200	26800	28700	37300	36600
10	33400	13700	11700	18200	15900	13200	16800	24300	27200	30600	35000	35500
11	25100	12100	10600	15100	13600	21500	18500	25900	27100	31700	36000	36200
12	21700	17900	11600	13400	13500	16400	20000	26700	26800	31700	33700	36300
13	19000	16700	12300	13500	14800	13600	20400	27200	25300	32400	33400	36800
14	21700	13400	14700	13800	14200	13100	20400	27500	25600	33100	33300	37600
15	21700	12400	13400	13900	13800	14000	19900	23700	26300	34100	33400	36900
16	23200	16400	14200	13100	14400	14600	17400	23400	---	34800	33800	37200
17	26000	12000	13800	12100	14900	15500	15200	28600	26800	35500	34200	28400
18	26200	14700	14500	13500	14900	19600	15200	25100	27300	35800	34600	31000
19	16900	13500	15100	12300	15200	16300	15300	25300	28600	35900	34900	31400
20	17300	12600	14900	15300	18100	16600	15400	25400	29800	36100	35400	32900
21	23800	14800	15700	11800	14000	18100	17400	25200	30000	36500	35400	33600
22	22100	13600	12100	13000	14100	18600	18200	26200	31300	37200	35400	32800
23	24600	12200	17300	12500	33300	21100	20900	26800	31400	36800	35700	34600
24	19800	12800	15700	13500	26400	18800	21400	28900	30300	37400	36100	33700
25	19100	12700	12700	15300	18900	18600	21600	30100	25200	37400	36600	33700
26	17600	12400	19400	12300	21000	18200	22200	30200	26900	35800	37400	---
27	16900	14700	15500	15200	18400	20300	22200	25100	25300	36300	37800	---
28	22700	11200	15700	14900	16700	24100	22200	24900	26200	35700	38700	---
29	19100	12400	16100	15200	---	19200	22100	23800	27300	35700	38000	34700
30	16200	12200	16500	12800	---	15800	23100	24700	27200	34800	38400	36700
31	14900	---	31100	13200	---	13900	---	25300	---	35100	38500	---
MEAN	21700	13800	14400	14500	16300	16300	18400	25300	27500	34000	35700	35400
WTR YR 1977	MEAN	22700		MAX	42700		MIN	10600				

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.5	12.5	5.0	7.0	5.5	9.5	15.5	23.0	25.0	31.0	27.0	29.0
2	22.5	13.0	4.0	5.0	8.5	10.0	16.0	24.0	29.0	30.0	30.0	26.0
3	22.0	12.0	5.0	5.0	7.5	10.0	15.5	25.0	27.5	28.0	28.5	26.0
4	25.0	12.5	7.0	8.0	7.0	8.0	14.0	25.5	26.0	29.0	28.0	31.0
5	25.0	12.5	6.5	10.0	8.0	8.5	14.0	24.5	25.5	27.0	29.5	26.0
6	24.0	13.0	7.0	5.5	8.5	5.5	16.0	24.0	26.0	27.0	28.5	29.0
7	18.5	13.0	5.0	5.0	9.0	8.0	17.0	25.0	27.0	27.5	26.5	31.0
8	15.5	12.0	5.5	8.5	10.0	10.0	18.5	29.0	28.0	28.5	29.5	29.0
9	15.5	12.0	9.0	4.5	9.5	12.0	19.5	25.5	26.5	26.0	29.0	28.5
10	22.0	12.0	7.0	1.5	10.5	13.5	19.5	24.5	26.0	27.0	29.5	26.0
11	22.0	12.5	6.0	3.0	11.0	11.5	19.0	25.5	29.0	28.0	27.5	26.5
12	17.5	11.0	5.0	4.0	13.0	11.5	24.0	24.0	26.5	29.0	29.5	25.0
13	18.0	7.0	7.0	5.0	9.5	11.5	20.0	23.5	26.5	26.0	27.5	25.0
14	20.0	6.5	8.0	5.5	11.0	12.5	19.0	23.0	27.0	26.5	27.5	25.5
15	18.0	8.0	5.0	6.0	12.5	13.5	18.0	25.0	27.0	29.0	29.5	24.5
16	16.0	8.5	6.0	5.5	10.0	14.0	18.0	25.0	31.0	29.0	27.0	24.5
17	14.5	6.5	5.0	4.0	12.0	14.0	19.5	24.0	30.0	27.0	26.0	24.0
18	15.5	10.0	8.0	5.0	12.0	13.5	23.0	26.0	30.5	29.0	27.0	25.0
19	14.0	12.0	7.5	5.0	14.0	13.0	22.0	24.0	29.0	29.0	28.0	26.5
20	12.5	11.0	7.0	8.0	13.5	12.0	23.0	24.0	28.0	28.5	26.5	25.5
21	15.0	12.0	6.0	8.0	15.0	13.0	20.0	22.5	27.5	28.5	29.0	26.0
22	13.0	10.0	4.5	8.0	14.5	13.0	19.0	22.5	26.0	27.0	29.0	27.0
23	18.5	9.0	5.5	9.0	12.0	13.0	20.5	24.0	26.5	27.5	33.0	26.0
24	15.0	8.5	5.5	8.0	15.0	13.0	20.0	23.5	29.0	28.5	31.0	29.0
25	14.0	9.5	6.0	7.0	12.5	16.0	22.0	23.5	27.0	30.0	32.5	26.0
26	14.0	11.0	6.0	12.0	11.0	15.0	22.5	26.0	28.0	28.0	30.5	---
27	13.0	9.0	8.0	12.0	8.0	16.0	22.5	22.5	29.5	28.0	28.0	---
28	10.0	5.0	6.5	10.0	8.0	15.5	22.5	26.5	31.0	31.0	27.0	---
29	10.0	4.5	6.0	7.5	---	17.0	23.0	25.0	31.0	29.0	27.0	29.0
30	10.0	3.5	8.0	6.0	---	14.0	25.0	27.5	30.5	27.5	27.0	25.0
31	12.0	---	8.5	5.0	---	15.0	---	26.5	---	30.0	30.0	---
MEAN	17.0	10.0	6.5	6.5	10.5	12.5	19.5	24.5	28.0	28.5	28.5	26.5
WTR YR 1977	MEAN	18.0		MAX	33.0		MIN	1.5				

RIO GRANDE BASIN

08407500 PECOS RIVER AT RED BLUFF, NM
(Pesticide program station)

LOCATION.--Lat 32°04'30", long 104°02'21", in SW 1/4 sec. 1, T.26 S., R.28 E., Eddy County, Hydrologic Unit 13060011, on right bank at Red Bluff, 0.2 mi (0.3 km) downstream from Red Bluff Draw, 1.6 mi (2.6 km) northwest of the El Paso Natural Gas (Pecos River) compressor station, 5.2 mi (8.4 km) north of the New Mexico-Texas state line, 5.5 mi (8.8 km) upstream from Delaware River, and at mile 411.2 (661.6 km). Water-quality sampling site 1.4 (2.3 km) downstream at mile 409.8 (659.4 km).

DRAINAGE AREA.--19,540 mi² (50,600 km²), approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,850.05 ft (868.695 m) above mean sea level.

REMARKS.--Water-discharge records fair. Flow regulated by storage in Lake Sumner, Lake McMillan, and Lake Avalon (stations 08384000, 08400500, 08403800), and by several small diversion dams that divert for power or irrigation. Diversions and ground-water withdrawals above station for irrigation of about 202,000 acres (820 km²), 1959 determination.

AVERAGE DISCHARGE.--40 years, (1938-77), 179 ft³/s (5.069 m³/s), 129,700 acre-ft/yr (160 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 111,000 ft³/s (3,140 m³/s) Aug. 23, 1966, gage height, 33.32 ft (10.156 m), from rating curve extended above 30,000 ft³/s (850 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.19 ft³/s (0.005 m³/s) Aug. 1, 1966.
The flood of Aug. 23, 1966, exceeded all floods at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1904 reached a stage of 28.0 ft (8.53 m), from information by Panhandle and Santa Fe Railway Co. (For dates of other historical floods see stations 08405000, 08406500.)

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 287 ft³/s (8.13 m³/s) June 20, gage height 4.62 ft (1.408 m), no peak above base of 1,800 ft³/s (51 m³/s); minimum, 1.1 ft³/s (0.03 m³/s) Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	34	41	20	28	26	31	12	9.4	6.5	6.8	4.2
2	16	34	42	22	27	27	29	12	9.4	6.2	6.5	2.6
3	22	32	43	25	28	26	21	12	9.0	6.2	6.2	1.7
4	25	30	43	26	28	25	19	12	9.0	5.6	5.6	1.3
5	23	31	42	28	27	30	24	17	9.4	6.2	5.3	18
6	22	31	41	28	28	34	28	16	9.4	6.8	4.4	12
7	20	30	40	28	28	28	24	13	9.9	7.4	4.7	12
8	16	29	40	30	27	27	24	14	9.4	9.4	5.3	6.5
9	14	30	40	30	28	34	33	14	9.0	9.0	5.6	3.8
10	14	35	40	29	28	33	27	12	9.0	7.8	6.8	4.2
11	16	33	34	30	28	30	22	11	10	8.2	6.8	3.8
12	15	31	28	35	28	28	18	13	11	6.8	7.1	2.8
13	14	33	24	40	28	33	17	18	11	5.6	5.3	2.1
14	14	34	23	41	28	33	21	15	9.4	4.7	5.0	4.0
15	14	38	22	43	28	28	22	20	8.6	4.7	5.0	5.6
16	13	50	22	43	28	25	25	13	8.2	4.7	4.4	7.4
17	9.4	54	22	38	27	26	47	12	7.8	5.3	4.2	9.4
18	12	41	22	32	27	26	39	12	6.8	5.0	4.0	9.9
19	24	40	23	31	27	22	25	11	6.8	4.4	4.0	7.8
20	14	39	23	30	27	19	20	9.9	44	4.2	4.2	7.1
21	9.0	38	23	30	27	16	17	9.4	54	4.2	4.4	6.5
22	7.8	37	23	30	25	16	14	9.0	11	4.7	4.2	6.2
23	9.4	38	24	29	26	14	13	9.9	18	4.4	3.8	6.2
24	20	36	24	29	22	13	13	13	9.9	4.2	4.4	6.5
25	22	39	24	28	22	14	13	12	9.9	4.4	4.7	6.8
26	20	39	22	29	25	13	13	13	10	4.4	6.0	5.6
27	19	39	22	30	21	14	13	12	9.9	5.6	7.1	3.4
28	22	40	22	30	22	17	12	10	8.6	9.4	4.7	2.4
29	28	43	22	30	---	81	13	9.9	7.4	8.2	6.8	1.8
30	30	42	22	30	---	55	11	9.0	6.8	7.4	6.5	1.4
31	32	---	20	28	---	40	---	9.4	---	7.1	5.6	---
TOTAL	548.6	1100	903	952	743	853	648	385.5	362.0	188.7	165.4	173.0
MEAN	17.7	36.7	29.1	30.7	26.5	27.5	21.6	12.4	12.1	6.09	5.34	5.77
MAX	32	54	43	43	28	81	47	20	54	9.4	7.1	18
MIN	7.8	29	20	20	21	13	11	9.0	6.8	4.2	3.8	1.3
AC-FT	1090	2180	1790	1890	1470	1690	1290	765	718	374	328	343

CAL YR 1976 TOTAL 8968.3 MEAN 24.5 MAX 258 MIN 6.5 AC-FT 17790
WTR YR 1977 TOTAL 7022.2 MEAN 19.2 MAX 81 MIN 1.3 AC-FT 13930

08407500 PECOS RIVER AT RED BLUFF, NM -- Continued

WATER-QUALITY RECORDS

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 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, 51,400 micromhos June 20, 1972; minimum daily, 268 micromhos Sept. 19, 1946.

WATER TEMPERATURES: Maximum, 36.0°C July 31, 1966, July 13, 1970; minimum, 1.0°C Jan. 10, 11, 1962, Jan. 13, 1963.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 45,000 micromhos Sept. 30; minimum daily, 11,100 micromhos Dec. 11, 12.

WATER TEMPERATURES: Maximum, 32.0°C June 25, 26; minimum, 4.0°C Dec. 1, Jan. 11.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	AIR TEMPERATURE (DEG C) (00020)	TEMPERATURE (DEG C) (00010)	TURBIDITY (JTU) (00070)	DISSOLVED OXYGEN (MG/L) (00300)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARDNESS (CA, MG) (MG/L) (00900)
OCT 07...	1200	20	22000	7.9	15.5	18.0	15	9.8	380	2300
NOV 11...	1100	33	14800	7.7	14.0	9.5	4	11.6	84	2700
DEC 15...	1600	22	12000	7.9	14.0	8.0	4	12.4	45	2000
JAN 19...	1420	32	14000	8.1	20.0	8.0	2	12.2	61	2400
FEB 17...	1145	28	15000	8.2	26.0	12.5	4	12.9	57	2400
MAR 23...	1430	14	20000	8.4	21.0	16.5	6	8.5	110	2500
APR 28...	1500	13	19400	8.0	31.0	25.0	4500	13.8	91	2600
MAY 19...	1400	11	39500	8.3	32.5	26.5	5	14.4	940	3000
JUN 30...	0645	6.5	24000	7.6	22.5	26.0	2	3.3	87	2700
JUL 28...	0900	7.4	36500	8.2	29.5	27.0	7	6.3	81	4000
AUG 24...	0745	4.2	42000	8.1	26.5	27.5	3	6.1	87	4400

DATE	NON-CARBONATE HARDNESS (MG/L) (00902)	DISSOLVED CALCIUM (CA) (MG/L) (00915)	DISSOLVED MAGNESIUM (MG) (00925)	DISSOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DISSOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DISSOLVED SULFATE (SO4) (MG/L) (00945)
OCT 07...	2200	480	270	4300	39	170	110	0	2000
NOV 11...	2600	600	290	2600	22	99	148	0	2200
DEC 15...	1900	460	210	2000	19	70	157	0	1800
JAN 19...	2200	530	250	2300	21	82	154	0	2000
FEB 17...	2200	530	250	2600	23	97	158	0	1900
MAR 23...	2400	520	290	3700	32	110	140	0	1900
APR 28...	2500	560	300	3700	31	140	120	0	2400
MAY 19...	2900	600	360	5900	47	230	130	0	2700
JUN 30...	2500	550	310	5000	42	180	130	0	2300
JUL 28...	3900	830	470	8100	56	300	110	0	3500
AUG 24...	4300	850	550	9600	63	360	100	0	3900

RIO GRANDE BASIN

08407500 PECOS RIVER AT RED BLUFF, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CHLOR- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUOR- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)
OCT 07...	6500	.7	12	14300	13800	.04	.01	.00	.82
NOV 11...	4300	.8	9.3	10600	10200	.65	.46	.36	.94
DEC 15...	3100	.8	6.1	8050	7730	.69	.68	.16	.70
JAN 19...	3800	.8	7.6	9320	9050	1.1	1.1	.13	.13
FEB 17...	4300	.8	6.4	10300	9770	.78	.65	.03	.62
MAR 23...	6200	.8	6.8	13200	12800	.03	.03	.01	.83
APR 28...	5900	1.0	.8	13300	13100	.16	.01	.11	.86
MAY 19...	9200	1.0	5.8	19900	19100	.02	.02	.12	1.6
JUN 30...	8000	.8	6.3	16400	16400	.20	.02	.41	.17
JUL 28...	13000	.9	4.2	26400	26300	.05	.05	.11	1.3
AUG 24...	15000	1.4	2.9	30500	30300	.04	.04	.05	1.2

DATE	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDE D ORGANIC CARBON (C) (MG/L) (00689)
OCT 07...	.86	.05	.02	1300	30	30	--	8.6	2.3
NOV 11...	2.0	.09	.01	860	10	--	--	30	.8
DEC 15...	1.6	.05	.01	650	0	40	4.3	--	--
JAN 19...	1.4	.03	.03	770	10	--	--	7.6	.4
FEB 17...	1.4	.04	.04	860	20	--	5.1	--	--
MAR 23...	.87	.05	.05	1100	20	50	8.1	8.3	1.1
APR 28...	1.1	.02	.02	1100	20	--	--	5.5	1.6
MAY 19...	1.7	.07	.00	1600	40	--	--	7.0	.7
JUN 30...	.78	.04	.01	1400	180	140	--	10	1.0
JUL 28...	1.4	.05	.01	2300	30	--	--	8.0	--
AUG 24...	1.2	.14	.05	2800	30	--	--	9.5	1.0

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)
OCT 07...	1200	1	1	1300	60	0	20	10	200	0	20	1
DEC 15...	1600	1	0	650	10	0	0	0	100	0	20	2
MAR 23...	1430	1	1	1100	20	0	10	10	50	0	30	0
JUN 30...	0645	3	3	1400	30	2	20	20	150	1	20	20

08407500 PECOS RIVER AT RED BLUFF, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT 07...	740	30	100	5	70	30	.0	.0	2	1	40	40
DEC 15...	110	0	100	1	40	40	.1	.1	2	1	90	90
MAR 23...	280	20	200	2	90	50	.0	.0	2	1	50	40
JUN 30...	180	180	200	5	180	140	.0	.0	2	2	60	40

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDEO GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDEO GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS AS SR90 (PC/L) (80050)	SUS- PENDEO GROSS BETA AS AS SR90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
NOV 11...	1100	8	<120	<.4	75	1.8	62	1.6	.13	10

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ALDRIN (UG/L) (39330)	ALDRIN IN BOTTOM MA- TERIAL (UG/KG) (39333)	TOTAL ATRA- ZINE (UG/L) (39630)	ATRA- ZINE IN BOTTOM MATERI- AL (UG/ KG DRY SOLIDS) (39631)	TOTAL CHLOR- DANE (UG/L) (39350)	CHLOR- DANE IN BOTTOM MA- TERIAL (UG/KG) (39351)	TOTAL DDD (UG/L) (39360)	DDD IN BOTTOM MA- TERIAL (UG/KG) (39363)	TOTAL DDE (UG/L) (39365)	DDE IN BOTTOM MA- TERIAL (UG/KG) (39368)
DEC 27...	1600	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
FEB 17...	1145	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 19...	1400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 04...	0745	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	TIME	P,P'- DDE IN BOTTOM MA- TERIAL (UG/KG) (39321)	TOTAL DDT (UG/L) (39370)	DDT IN BOTTOM MA- TERIAL (UG/KG) (39373)	TOTAL DI- AZINON (UG/L) (39570)	DI- AZINON IN BOTTOM MA- TERIAL (UG/KG) (39571)	TOTAL DI- ELDRIN (UG/L) (39380)	DI- ELDRIN IN BOTTOM MA- TERIAL (UG/KG) (39383)	TOTAL ENDRIN (UG/L) (39390)	ENDRIN IN BOTTOM MA- TERIAL (UG/KG) (39393)	TOTAL ETHION (UG/L) (39398)	ETHION IN BOTTOM MA- TERIAL (UG/KG) (39399)
DEC 27...	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 17...	--	ND	--	ND	--	ND	--	ND	--	ND	--	--
MAY 19...	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 04...	--	ND	--	ND	--	ND	--	ND	--	ND	--	--

ND Material specifically tested for but not detected.

RIO GRANDE BASIN

08407500 PECOS RIVER AT RED BLUFF, NM -- Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL HEPTA- CHLOR (UG/L) (39410)	HEPTA- CHLOR IN BOTTOM MA- TERIAL (UG/KG) (39413)	TOTAL HEPTA- CHLOR EPOXIDE (UG/L) (39420)	HEPTA- CHLOR EPOXIDE IN BOT- TOM MA- TERIAL (UG/KG) (39423)	TOTAL LINDANE (UG/L) (39340)	LINDANE IN BOTTOM MA- TERIAL (UG/KG) (39343)	TOTAL MALA- THION (UG/L) (39530)	MALA- THION IN BOTTOM MA- TERIAL (UG/KG) (39531)	TOTAL METH- OXY- CHLOR (UG/L) (39480)	METHOX- YCHLOR IN BOT- TOM MA- TERIAL (UG/KG) (39481)	TOTAL METHYL PARA- THION (UG/L) (39600)
DEC 27...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 17...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
MAY 19...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 04...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
DATE	METHYL PARA- THION IN BOT- TOM MA- TERIAL (UG/KG) (39601)	TOTAL METHYL TRI- THION (UG/L) (39790)	METHYL TRI- THION IN BOT- TOM MA- TERIAL (UG/KG) (39791)	TOTAL PARA- THION (UG/L) (39540)	PARA- THION IN BOTTOM MA- TERIAL (UG/KG) (39541)	SIMA- ZINE TOTAL COUL- SON COND. (UG/L) (39025)	SIMA- ZINE IN BOTTOM MATERI- AL (UG/ KG DRY SOLIDS) (UG/L) (39046)	TOX- APHENE IN BOTTOM MA- TERIAL (UG/L) (39400)	TOX- APHENE IN BOTTOM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THION (UG/L) (39786)	TRI- THION IN BOTTOM MA- TERIAL (UG/KG) (39787)
DEC 27...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 17...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 19...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 04...	--	ND	--	ND	--	ND	--	ND	--	ND	--
DATE	TIME	TOTAL 2,4-D (UG/L) (39730)	TOTAL 2,4-D IN BOTTOM MA- TERIAL (UG/KG) (39731)	TOTAL 2,4,5-T (UG/L) (39740)	TOTAL 2,4,5-T IN BOTTOM MA- TERIAL (UG/KG) (39741)	SILVEX IN BOTTOM MA- TERIAL (UG/L) (39760)	SILVEX IN BOTTOM MA- TERIAL (UG/KG) (39761)				
DEC 27...	1600	ND	ND	ND	ND	ND	ND				
FEB 17...	1145	ND	--	ND	--	ND	--				
MAY 19...	1400	ND	ND	ND	ND	ND	ND				
AUG 04...	0745	ND	--	ND	--	ND	--				

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
OCT 07...	1200	67	93	--
NOV 11...	1100	0	0	--
DEC 15...	1600	0	1	--
JAN 19...	1420	5	3	--
FEB 17...	1145	0	0	--
MAR 23...	1430	0	--	--
APR 28...	1500	4	--	58
MAY 19...	1400	6	--	150
JUN 30...	0645	800	--	370
JUL 28...	0900	41	--	800
AUG 24...	0745	0	--	3400

ND Material specifically tested for but not detected.

08407500 PECOS RIVER AT RED BLUFF, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	OCT 7,76 1200	NOV 11,76 1100	DEC 15,76 1600	JAN 19,77 1420	FEB 17,77 1145					
TOTAL CELLS/ML	210000	260000	13000	3500	15000					
DIVERSITY: DIVISION	0.0	0.1	1.6	0.9	1.0					
..CLASS	0.0	0.1	1.6	0.9	1.0					
...ORDER	0.2	0.4	2.2	1.8	1.3					
...FAMILY	0.2	0.4	2.3	2.1	0.0					
....GENUS	0.7	0.7	2.6	2.3	0.0					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES	--	-	--	-	--	-	--	-	4600#	31
...CHARACIACEAE										
...SCHROEDERIA	--	-	--	-	--	-	22	1	--	-
...COELASTRACEAE										
...COELASTRUM	--	-	--	-	--	-	--	-	--	-
...OOCYSTACEAE										
...ANKISTRODESMUS	--	-	--	-	120	1	--	-	250	2
...DICTYOSPHAERIUM	--	-	*	0	--	-	--	-	--	-
...KIRCHNERIELLA	--	-	--	-	--	-	--	-	990	7
...OOCYSTIS	--	-	--	-	240	2	88	3	250	2
...TREUBARIA	--	-	--	-	--	-	22	1	--	-
...SCENEDESMACEAE										
...SCENEDESMUS	--	-	*	0	1600	13	1500#	43	3300#	22
...OEDOGONIALES										
...OEDOGONIACEAE										
...OEDOGONIUM	--	-	--	-	*	0	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
...CARTERIA	--	-	--	-	300	2	--	-	--	-
...CHLAMYDOMONAS	--	-	--	-	420	3	970#	28	--	-
...CHLOROGONIUM	--	-	--	-	360	3	22	1	--	-
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
..CENTRALES										
...CHAETOCERACEAE										
...CHAETOCEROS	--	-	--	-	--	-	--	-	--	-
...COSCINODISCACEAE										
...CYCLOTELLA	--	-	*	0	2400#	19	400	11	3500#	24
...MELOSIRA	--	-	--	-	420	3	180	5	--	-
...PENNALES										
...CYMBELLACEAE										
...CYMBELLA	--	-	--	-	*	0	--	-	--	-
...FRAGILARIACEAE										
...SYNEDRA	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE										
...GYROSIGMA	--	-	--	-	--	-	--	-	*	0
...NAVICULA	*	0	--	-	*	0	130	4	*	0
...PLEUROSIGMA	*	0	--	-	--	-	--	-	--	-
...NITZSCHIIACEAE										
...NITZSCHIA	*	0	--	-	1200	9	44	1	1700	12
..CHRYSTOPHYCEAE										
...CHRYSOMONADALES										
...MALLOMONADACEAE										
...MALLOMONAS	--	-	--	-	--	-	22	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROCOCCOCCALES										
...CHROCOCCOCCAEAE										
...AGMENELLUM	3500	2	11000	4	--	-	--	-	*	0
...ANACYSTIS	--	-	1400	1	5300#	42	--	-	120	1
...HORMOGONALES										
...NOSTOCACEAE										
...ANABAENOPSIS	--	-	*	0	--	-	--	-	--	-
...APHANIZOMENON	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE										
...LYNGBYA	28000	13	9400	4	--	-	--	-	--	-
...OSCILLATORIA	170000#	85	230000#	90	--	-	--	-	--	-
...SPIRULINA	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

RIO GRANDE BASIN

08407500 PECOS RIVER AT RED BLUFF, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	OCT 7,76 1200	NOV 11,76 1100	DEC 15,76 1600	JAN 19,77 1420	FEB 17,77 1145
TOTAL CELLS/ML	210000	260000	13000	3500	15000
DIVERSITY: DIVISION	0.0	0.1	1.6	0.9	1.0
..CLASS	0.0	0.1	1.6	0.9	1.0
..ORDER	0.2	0.4	2.2	1.8	1.3
...FAMILY	0.2	0.4	2.3	2.1	0.0
....GENUS	0.7	0.7	2.6	2.3	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	--	-	--	-	--	-	66	2	--	-
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	--	-	*	0	--	-	--	-
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENAEAE										
....EUGLENA	--	-	*	0	*	0	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...GYMNODINIALES										
...GYMNODINIACEAE										
....GYMNODINIUM	--	-	--	-	--	-	--	-	--	-
...PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	--	-	--	-	--	-
...PERIDINIACEAE										
....PERIDINIUM	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

DATE TIME	MAY 19,77 1400	JUN 30,77 0645	JUL 28,77 0900	AUG 24,77 0745
TOTAL CELLS/ML	34000	930	2900	15000
DIVERSITY: DIVISION	0.8	2.1	1.4	1.0
..CLASS	0.8	2.1	1.4	1.0
..ORDER	0.9	2.6	1.8	1.0
...FAMILY	0.9	2.8	2.4	1.7
....GENUS	1.0	2.8	2.4	1.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES	--	-	--	-	--	-	--	-
...CHARACIACEAE	--	-	--	-	--	-	--	-
...SCHROEDERIA	--	-	--	-	--	-	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	110	4	--	-
...OOCYSTACEAE								
...ANKISTRODESMUS	--	-	--	-	--	-	--	-
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
...KIRCHNERIELLA	1400	4	--	-	--	-	--	-
...OOCYSTIS	890	3	200#	22	--	-	--	-
...TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
...SCENEDESMUS	--	-	--	-	--	-	--	-
...OEDOGONIALES								
...OEDOGONIACEAE								
...OEDOGONIUM	--	-	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CARTERIA	--	-	48	5	56	2	--	-
....CHLAMYDOMONAS	--	-	--	-	70	2	--	-
....CHLOROGONIUM	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

08407500 PECOS RIVER AT RED BLUFF, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	MAY 19,77 1400	JUN 30,77 0645	JUL 28,77 0900	AUG 24,77 0745
TOTAL CELLS/ML	34000	930	2900	15000
DIVERSITY: DIVISION	0.8	2.1	1.4	1.0
..CLASS	0.8	2.1	1.4	1.0
...ORDER	0.9	2.6	1.8	1.0
...FAMILY	0.9	2.8	2.4	1.7
....GENUS	1.0	2.8	2.4	1.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...CHAETOCERACEAE								
....CHAETOCEROS	--	-	48	5	1100#	39	4700#	32
...COSCINODISCACEAE								
...CYCLOTELLA	29000#	84	14	1	28	1	4800#	33
...MELOSIRA	--	-	--	-	--	-	--	-
...PENNALES								
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
...SYNEDRA	--	-	--	-	42	1	--	-
...NAVICULACEAE								
...GYROSIGMA	--	-	7	1	28	1	--	-
...NAVICULA	*	0	280#	30	--	-	--	-
...PLEUROSIGMA	--	-	--	-	--	-	--	-
...NITZSCHACEAE								
....NITZSCHIA	*	0	14	1	110	4	--	-
..CHRYSTOPHYCEAE								
...CHRYSSOMONADALES								
...MALLOMONADACEAE								
....MALLOMONAS	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROCCOCCALES								
...CHROCCOCCACEAE								
....AGMENELLUM	1300	4	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	--	-	--	-
...HORMOGONALES								
...NOSTOCACEAE								
....ANABAENOPSIS	--	-	--	-	--	-	--	-
....APHANIZOMENON	--	-	--	-	700#	24	5100#	35
...OSCILLATORIA								
....LYNGBYA	--	-	--	-	--	-	--	-
....OSCILLATORIA	1200	4	130	14	560#	20	--	-
....SPIRULINA	*	0	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..CRYPTOPHYCEAE								
...CRYPTOMONIDALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	95	10	--	-	*	0
...CRYPTOMONODACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	--	-
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	28	1	--	-
....TRACHELOMONAS	--	-	--	-	*	0	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...GYMNODINIALES								
...GYMNODINIACEAE								
....GYMNODINIUM	--	-	20	2	--	-	--	-
...PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	240	1	7	1	--	-	*	0
...PERIDINIACEAE								
....PERIDINIUM	--	-	68	7	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

RIO GRANDE BASIN

08407500 PECOS RIVER AT RED BLUFF, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

DATE	TIME	LENGTH OF EXPO- SURE (DAYS) (00022)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70958)	SAMPLING METHOD
AUG 24...	0745	27	.013	.007	Polyethylene Strip

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 07...	1200	20	18.0	23	1.2	95
NOV 11...	1100	33	9.5	27	2.4	87
DEC 15...	1600	22	8.0	20	1.2	91
JAN 19...	1420	32	8.0	12	1.0	51
FEB 17...	1145	28	12.5	6	.45	90
MAR 23...	1430	14	16.5	8	.30	96
APR 28...	1500	13	25.0	8	.28	82
MAY 19...	1400	11	26.5	9	.27	94
JUN 30...	0645	6.5	26.0	3	.05	65
JUL 28...	0900	7.4	27.0	7	.14	93
AUG 24...	0745	4.2	27.5	9	.10	73

RIO GRANDE BASIN

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08407500 PECOS RIVER AT RED BLUFF, NM -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16000	20700	13400	16300	15000	21700	20000	18200	28300	20200	36800	43200
2	16300	21200	13400	17100	15100	24100	18100	19100	28700	21200	37900	43200
3	17000	17400	12400	17900	15400	24100	18600	20400	29200	21300	37700	43300
4	18000	17400	12400	17300	15300	22200	18900	21200	29400	22000	38000	43900
5	20000	16500	11500	17300	14800	21500	18700	22500	29400	21900	38600	44300
6	21400	15700	11500	17200	14700	23000	18900	24600	30100	23100	38900	43700
7	22300	14800	11400	17300	14700	17200	18100	25500	30100	24100	39300	35100
8	22600	15100	11400	17600	14600	16800	18400	25300	30500	24900	40700	34200
9	21400	15600	11400	17700	14400	17000	19500	24800	31300	27600	40900	37000
10	21400	15700	11400	18100	14700	14600	19400	24300	31900	29100	41500	39800
11	20900	15000	11100	17400	15200	14900	18800	24600	31500	31200	42000	39800
12	20900	15400	11100	17400	15000	14800	19600	24800	31300	32900	42200	40000
13	21300	15300	12100	16400	15000	14400	19900	25100	31400	33500	41900	40600
14	21300	14000	12300	16900	15000	14400	20000	25900	31400	34100	41700	40900
15	21800	13900	11600	16900	15700	14400	19900	25900	31100	32500	42200	40600
16	21800	14700	11400	14800	15000	17100	20200	26200	31400	33000	42000	40300
17	22500	13900	11500	14100	14600	16800	19600	25500	32100	33700	42400	41300
18	22700	13600	11900	13700	14700	16800	20700	26100	32500	34100	42400	42100
19	24600	13700	12300	13700	14900	15700	20700	26200	32900	34000	42700	42300
20	25400	12100	13600	13600	15000	15300	21300	26200	28500	33900	43100	42600
21	25800	11900	14200	13600	15000	15300	19900	27100	27500	33800	33200	43200
22	26000	11900	14300	13200	15000	16100	19000	27300	17700	34200	39600	43000
23	26000	12400	15100	13200	15000	17400	17600	27800	19100	34100	42000	43300
24	24600	12800	15800	13600	15100	18100	18000	28200	13200	34900	42400	44400
25	24600	12800	15700	13600	15700	18200	16200	29300	14300	34900	42600	44300
26	25500	13700	15600	13800	16300	19700	16400	30100	15800	35700	13600	44300
27	25200	13200	15800	13700	16600	19700	16900	29500	17500	35800	38700	44400
28	24800	13200	16100	14300	21700	19500	16800	29500	17500	36500	40700	44600
29	25600	12600	16000	14400	---	22500	17200	29300	18400	37400	41500	44800
30	23300	12600	16600	15000	---	23500	17800	29200	20100	34000	42200	45000
31	21900	---	16400	15000	---	22100	---	29300	---	35700	42100	---
MEAN	22400	14600	13200	15600	15300	18400	18800	25800	26300	30800	39700	42000
WTR YR 1977	MEAN	23600		MAX	45000		MIN	11100				

RIO GRANDE BASIN

08407500 PECOS RIVER AT RED BLUFF, NM --- Continued

WATER TEMPERATURE (DEG.° C), (CONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	14.5	4.0	5.0	7.0	10.5	18.0	25.5	27.5	29.0	31.0	28.0
2	22.0	15.0	5.0	5.0	7.0	11.0	18.5	25.5	28.5	29.5	29.5	28.0
3	23.5	15.0	5.0	5.5	8.0	11.0	17.0	23.5	28.5	28.0	29.5	28.0
4	22.0	15.0	5.5	5.0	8.5	11.0	16.5	24.5	26.0	28.0	29.5	29.0
5	22.0	15.0	7.0	5.0	9.0	8.0	16.5	25.0	29.5	28.5	27.5	29.0
6	22.0	15.5	7.0	5.5	9.0	10.0	18.0	25.0	29.0	29.5	28.5	29.0
7	18.0	14.0	7.0	5.5	9.0	10.5	19.0	26.5	26.0	30.0	28.5	29.5
8	17.0	13.0	7.0	6.0	10.0	11.5	19.5	27.0	27.0	27.0	30.0	30.0
9	17.0	13.5	7.5	5.0	10.0	12.0	19.5	25.5	28.0	27.0	30.5	27.0
10	17.5	13.5	7.0	4.5	9.5	13.5	19.5	25.0	28.0	30.5	29.0	27.0
11	18.5	13.5	6.5	4.0	11.0	14.0	20.0	24.5	29.0	31.0	29.5	26.0
12	18.5	8.0	6.0	4.5	11.0	14.0	21.5	23.5	28.5	29.0	29.5	27.0
13	18.5	7.0	5.5	5.0	11.0	14.0	20.5	24.0	28.5	29.0	29.0	28.0
14	18.5	6.5	5.5	5.0	10.0	14.5	20.0	24.5	28.5	30.0	29.0	26.5
15	18.5	7.0	7.0	5.5	11.0	14.5	21.5	24.5	30.0	30.0	29.0	25.0
16	18.5	7.0	7.0	5.0	11.5	13.5	21.0	25.5	31.0	30.0	30.0	25.5
17	17.0	6.5	7.0	5.0	12.5	14.0	22.0	25.0	31.0	30.0	30.0	27.0
18	18.0	7.5	7.0	5.5	13.5	14.0	22.0	25.0	30.0	30.0	30.0	26.0
19	17.0	7.5	7.5	6.0	13.5	15.0	22.0	25.0	30.0	30.0	30.0	26.0
20	15.0	11.0	7.5	6.0	13.5	15.5	23.0	25.5	28.5	30.0	30.0	27.0
21	15.0	11.5	6.5	6.5	13.5	16.0	22.5	25.0	26.5	30.0	29.0	27.0
22	15.0	11.0	6.0	7.5	13.0	15.0	22.5	27.0	28.5	26.0	30.5	26.0
23	17.0	11.0	5.5	7.5	12.5	15.0	22.5	24.0	28.5	27.5	31.0	27.0
24	16.0	11.5	6.0	8.0	13.0	16.0	23.0	23.0	31.5	29.5	31.0	27.0
25	16.0	11.5	5.5	8.0	14.0	15.5	23.5	23.0	32.0	30.0	29.0	27.0
26	18.0	12.0	5.0	10.0	12.0	15.5	24.0	24.0	32.0	30.0	25.0	27.0
27	12.0	9.5	6.0	10.5	11.0	15.5	24.5	25.5	31.5	28.0	28.0	27.0
28	11.0	6.5	6.5	10.0	11.0	15.0	24.5	26.0	31.5	29.0	28.0	25.5
29	11.0	5.0	6.5	7.5	---	15.0	24.5	26.5	30.5	29.5	30.0	27.0
30	12.5	5.5	7.0	7.5	---	16.0	25.5	27.5	30.5	31.0	27.5	26.0
31	13.0	---	6.0	7.0	---	17.0	---	28.0	---	30.0	27.5	---
MEAN	17.5	10.5	6.5	6.0	11.0	13.5	21.0	25.0	29.0	29.0	29.0	27.0
WTR YR 1977	MEAN	19.0		MAX	32.0	MIN	4.0					

08408500 DELAWARE RIVER NEAR RED BLUFF, NM

LOCATION.--Lat 32°01'23', long 104°03'15', in NE¼SW¼SE¼ sec.23, T.26 S., R.28 E., Eddy County, Hydrologic Unit 13070002, near center of channel on downstream side of pier of bridge on U.S. Highway 285, 2.1 mi (3.4 km) north of the New Mexico-Texas state line, 3.6 mi (5.8 km) southwest of Red Bluff, 3.7 mi (6.0 km) upstream from mouth and 14 mi (22.5 km) south of Malaga. Mouth at Pecos River mile 405.6 (652.6 km).

DRAINAGE AREA.--689 mi² (1,785 km²).

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 and concrete control. Datum of gage is 2,900.66 ft (884.121 m) above mean sea level. Prior to May 1914, at site 3.0 mi (4.8 km) upstream at different datum. May 1914 to June 1915 at site 2.5 mi (4.0 km) downstream at different datum.

REMARKS.--Records fair. One small upstream diversion. Several observations of water temperature during year.

AVERAGE DISCHARGE.--40 years (1938-77), 13.1 ft³/s (0.371 m³/s), 9,490 acre-ft/yr (11.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,400 ft³/s (2,310 m³/s) Oct. 2, 1955, gage height, 27.0 ft (8.23 m), from floodmarks, from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurements at gage heights 8.65 ft (2.637 m), 12.84 ft (3.914 m), 18.00 ft (5.486 m), and 27.0 ft (8.230 m); no flow many days most years.
Maximum discharge since at least 1911 is that of Oct. 2, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 740 ft³/s (21.0 m³/s) at 0015 hours June 23, gage height, 4.63 ft (1.411 m) no peak above base of 1,700 ft³/s (48 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	2.3	2.9	3.0	2.9	2.8	2.5	1.9	.46	.20	.00	.00
2	1.8	2.3	2.9	3.1	3.0	2.9	2.4	1.7	.40	.09	.00	.00
3	1.9	2.3	3.0	3.2	3.2	2.9	2.3	1.6	.28	.02	.00	.00
4	1.7	2.3	3.0	3.2	3.0	2.9	2.2	1.5	.18	.00	.00	.00
5	1.4	2.3	3.0	3.2	3.0	2.9	2.4	1.5	.10	.00	.00	.00
6	1.4	2.3	2.9	3.1	3.0	3.0	2.5	1.3	.06	.00	.00	.00
7	1.3	2.2	2.9	3.0	2.9	3.0	2.5	1.3	.02	.00	.00	.00
8	1.3	2.2	2.9	3.4	3.0	3.2	2.4	1.2	.00	12	.00	.00
9	1.4	2.2	3.0	3.6	3.2	3.0	2.4	1.1	.00	15	.00	.00
10	1.5	2.3	3.0	3.5	3.2	2.8	2.3	3.3	.00	2.4	.00	.00
11	1.5	2.3	3.0	3.6	3.2	2.7	2.4	1.6	.00	.78	.00	.00
12	1.5	2.6	3.0	3.7	3.2	2.7	2.4	1.3	.00	.27	.00	17
13	1.5	3.1	3.0	3.6	3.2	2.6	2.4	18	.00	.05	.00	1.9
14	1.6	3.3	3.0	3.4	3.1	2.5	16	7.1	.00	.00	.00	.48
15	1.8	3.7	3.0	3.3	3.1	2.4	16	2.1	.00	.00	.00	.12
16	1.9	3.7	3.0	3.2	3.1	2.5	5.0	1.2	.00	.00	.00	.02
17	1.7	3.2	3.0	3.0	3.1	2.5	4.0	.95	.00	.00	.00	.21
18	1.7	3.0	3.0	3.0	3.1	2.5	3.3	.88	.00	.00	.00	.10
19	1.5	3.0	3.1	3.0	3.1	2.4	2.8	.74	.00	.00	.00	.01
20	1.5	2.9	3.0	3.0	3.1	2.5	2.6	.67	.00	.00	.00	.00
21	1.6	2.8	3.0	3.0	3.0	2.4	2.4	.60	.00	.00	.00	.00
22	1.8	2.7	2.9	3.0	2.9	2.4	2.3	.56	16	.00	.00	.00
23	1.9	2.7	2.9	3.1	2.9	2.5	2.3	.56	139	.00	20	.00
24	1.8	2.7	2.9	3.0	3.0	2.6	2.3	22	11	.00	7.1	.00
25	1.8	2.7	3.0	3.0	3.0	2.7	2.2	8.7	3.2	.00	2.8	.00
26	1.8	2.6	3.2	3.0	2.9	2.8	2.2	2.5	1.8	.00	2.1	.00
27	1.8	2.4	3.2	3.0	2.9	3.1	2.1	1.5	1.2	.00	.53	.00
28	2.9	2.4	3.1	2.9	2.9	2.9	2.0	1.2	.83	.00	.08	.00
29	4.1	2.5	3.1	2.8	---	2.8	2.1	.91	.50	.15	.02	.00
30	3.2	2.7	3.2	2.7	---	2.7	2.2	.68	.34	.48	.00	.00
31	2.5	---	3.0	2.8	---	2.6	---	.56	---	.04	.00	---
TOTAL	56.5	79.7	93.1	97.4	85.2	84.2	102.9	90.71	175.37	31.48	32.63	19.84
MEAN	1.82	2.66	3.00	3.14	3.04	2.72	3.43	2.93	5.85	1.02	1.05	.66
MAX	4.1	3.7	3.2	3.7	3.2	3.2	16	22	139	15	20	17
MIN	1.3	2.2	2.9	2.7	2.9	2.4	2.0	.56	.00	.00	.00	.00
AC=FT	112	158	185	193	169	167	204	180	348	62	65	39

CAL YR 1976 TOTAL 1705.57 MEAN 4.66 MAX 200 MIN .00 AC=FT 3380
WTR YR 1977 TOTAL 949.03 MEAN 2.60 MAX 139 MIN .00 AC=FT 1880

08410000 RED BLUFF RESERVOIR NEAR ORLA, TX

LOCATION.--Lat 31°54'06", Long 103°54'42", Reeves County, Hydrologic Unit 13070001, at right end of Red Bluff Dam on the Pecos River, 3 mi (5 km) upstream from Salt Creek, and 4.5 mi (7.2 km) north of Orla.

DRAINAGE AREA.--20,720 mi² (53,660 km²), approximately (contributing area).

PERIOD OF RECORD.--February 1937 to current year. Monthly contents only for some periods, published in WSP 1312.

GAGE.--Nonrecording gage. Datum of gage is 0.43 ft (0.131 m) below mean sea level.

REMARKS.--The reservoir is formed by a rock-faced earthfill dam 9,200 ft (2,800 m) long. The dam was completed and storage began in September 1936. The dam and reservoir are owned and operated by the Red Bluff Water Power Control District. The water is used for power development and for irrigation from Mentone to Grandfalls. The uncontrolled spillway is a cut through natural ground located to the right of right end of dam and is 790 ft (241 m) wide. The controlled spillway is equipped with 12 tainter gates that are 25 by 15 ft (8 by 5 m) high. Inflow is partly regulated by storage in Lake Sumner, Lake McMillan, and Lake Avalon (total combined capacity, 154,400 acre-ft or 190 hm³), and by several small diversion dams that divert water for power or irrigation. The capacity curve is based on Geological Survey topographic map, survey of 1925. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Gage height (feet)	Capacity (acre-feet)
Top of dam.....	2,856.0	-
Crest of spillway.....	2,845.0	340,000
Top of gates (top of conservation pool).....	2,842.0	310,000
Crest of spillway.....	2,827.0	166,500
Lowest gated outlet (invert).....	2,764.0	3,000

COOPERATION.--Gage-height records and capacity curve furnished by Red Bluff Water Power and Control District.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents observed, 352,000 acre-ft (434 hm³) Sept. 27, 28, 1941, gage height, 2,846.2 ft (867.52 m), observed on nonrecording gage at service spillway (affected by variable drawdown due to flow through tainter gates); minimum observed, 11,080 acre-ft (13.7 hm³) May 13, 1948, gage height, 2,781.4 ft (847.77 m).

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents observed, 70,700 acre-ft (87.2 hm³) Feb. 12 to Mar. 1, gage height, 2,809.8 ft (856.43 m); minimum observed, 21,100 acre-ft (26.0 hm³) Sept. 27-30, gage height, 2,790.5 ft (850.54 m).

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

2,790.0	20,400	2,803.0	47,000
2,796.0	30,300	2,810.0	71,500

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66700	66300	67500	68700	70300	70700	62800	61750	51200	48200	38040	24330
2	66700	66300	67500	68700	70300	70300	62800	61750	50900	47900	37320	23570
3	66700	66700	67500	68700	70300	69500	62800	61750	50900	47300	36600	23000
4	66700	66700	67500	68700	70300	69100	62800	61400	50900	46700	35940	22640
5	66700	66700	67500	68700	70300	68300	62800	61400	50900	46400	35500	22640
6	66700	66700	67500	68700	70300	67900	62800	61050	50900	45800	34620	22760
7	66700	66700	67900	68700	70300	67500	62800	61050	50600	45200	34400	22640
8	66700	66300	67900	68700	70300	66700	62800	61050	50600	44600	33560	22520
9	66700	66300	67900	68700	70300	65900	62450	60700	50300	44300	33140	22520
10	66300	66300	67900	69100	70300	65100	62450	60700	50300	44300	33140	22400
11	66300	66300	67900	69100	70300	64300	62450	60000	50000	44300	33140	22400
12	66700	66300	67900	69100	70700	63900	62450	59650	50000	44300	33140	22280
13	66300	66300	68300	69100	70700	63500	62100	58950	50000	44300	33140	22280
14	66300	66300	68300	69100	70700	63150	62450	58250	49700	44300	33140	22160
15	66300	66300	68300	69500	70700	63150	62100	57550	49700	44300	32930	22040
16	66300	66300	68300	69500	70700	63150	62100	56850	49400	44000	32930	21920
17	66300	66300	68300	69500	70700	63150	62100	56150	49400	44000	32720	21920
18	66300	66300	68300	69500	70700	63150	61750	55100	49100	44000	32300	21800
19	66300	66700	68300	69500	70700	62800	61750	54750	49100	43750	31700	21800
20	66300	66700	68700	69500	70700	62800	61750	54050	48800	43750	31300	21660
21	66300	66700	68700	69500	70700	62800	61750	53350	48800	43500	30500	21660
22	66300	66700	68700	69900	70700	62800	61750	53000	48800	43500	30300	21520
23	66300	66700	68700	69900	70700	62800	61750	52100	48800	43500	29730	21520
24	66300	66700	68700	69900	70700	62800	61750	51500	49700	42750	29160	21380
25	66300	67100	68700	69900	70700	62800	61750	50900	49700	42250	28590	21240
26	66300	67100	68700	69900	70700	62800	61750	50900	49700	41750	28220	21240
27	66300	67100	68700	69900	70700	62800	61750	51200	49700	41000	27680	21100
28	66300	67100	68700	69900	70700	62800	61750	51200	49400	40250	27140	21100
29	66300	67100	68700	69900	---	62800	61750	51200	49100	39000	26600	21100
30	66300	67100	68700	69900	---	62800	61750	51200	48500	39000	26090	21100
31	66300	---	68700	70300	---	62800	---	51200	---	38520	25580	---
{+}	2808.7	2808.9	2809.3	2809.7	2809.8	2807.8	2807.5	2804.4	2803.5	2799.8	2793.4	2790.5
{+}	-400	+800	+1600	+1600	+400	-7900	-1050	-10550	-2700	-9980	-12940	-4480
MAX	66700	67100	68700	70300	70700	70700	62800	61750	51200	48200	38040	24330
MIN	66300	66300	67500	68700	70300	62800	61750	50900	48500	38520	25580	21100

CAL YR 1976 MAX 116200 MIN 59300 * -46900
WTR YR 1977 MAX 70700 MIN 21100 * -45600

† Gage height, in feet, at end of month.
* 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 (8.8 km) downstream from Salt Creek (Screw Bean Arroyo), 5.9 mi (9.5 km) northeast of Orla, and 8.5 mi (13.7 km) downstream from Red Bluff Reservoir.

DRAINAGE AREA.--21,210 mi² (54,930 km²), approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1937 to current year.

REVISED RECORDS.--WSP 928: 1937.

GAGE.--Water-stage recorder. Datum of gage is 2,730.86 ft (832.366 m) above mean sea level. Prior to Nov. 16, 1969, at site 6.9 mi (11.1 km) downstream at datum 12.81 ft (3.904 m) lower.

REMARKS.--Water-discharge records fair. Most of flow is release from storage in Red Bluff Reservoir (station 08410000). Occasional run-off from draws between dam and station. Many diversions above Red Bluff Reservoir for irrigation.

AVERAGE DISCHARGE.--40 years (water years 1938-77), 176 ft³/s (4.984 m³/s), 127,500 acre-ft/yr (157 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft³/s (671 m³/s) Sept. 29, 1941, gage height, 20.74 ft (6.322 m), site and datum then in use; no flow at times in 1946 and 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 611 ft³/s (17.3 m³/s) Apr. 14, gage height, 5.11 ft (1.558 m); minimum, 4.0 ft³/s (0.11 m³/s) July 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	26	18	12	9.2	96	10	9.2	7.1	200	289	255
2	18	58	19	12	9.2	322	11	8.7	5.9	200	284	254
3	19	59	19	12	9.2	328	11	8.1	5.0	200	277	248
4	19	59	18	12	9.2	336	17	9.3	4.7	207	274	54
5	16	59	17	12	9.2	335	34	51	4.3	206	273	39
6	15	58	16	12	9.0	334	40	50	28	207	273	38
7	15	58	16	12	8.6	335	39	41	33	207	272	38
8	15	58	16	12	8.6	335	38	12	32	150	271	39
9	15	58	16	12	8.6	334	37	53	32	16	202	39
10	15	58	16	12	8.0	333	36	138	32	14	54	38
11	15	58	16	12	9.7	331	38	278	32	8.8	19	37
12	15	57	16	13	10	333	16	307	33	6.3	12	38
13	15	57	15	14	11	310	53	303	34	5.4	32	36
14	15	53	15	14	12	58	242	300	34	4.7	35	37
15	15	21	15	13	9.7	45	81	292	34	4.3	35	38
16	16	21	15	12	8.8	45	63	298	33	4.4	36	38
17	16	20	15	11	8.5	50	59	296	36	4.7	45	39
18	16	19	14	11	7.9	13	62	296	38	4.7	242	39
19	15	18	14	11	7.5	12	56	294	38	43	250	39
20	15	18	19	10	7.5	11	14	293	34	45	250	39
21	15	17	19	10	7.5	9.7	11	294	26	47	243	39
22	15	16	17	10	8.1	10	10	295	26	47	151	39
23	15	16	17	10	7.8	9.7	9.6	293	27	117	251	39
24	15	16	14	10	8.1	9.2	9.2	294	184	289	250	39
25	15	16	14	10	7.6	9.7	9.2	194	50	291	248	41
26	15	17	14	10	7.5	9.5	9.2	9.8	40	290	249	40
27	15	18	12	10	8.1	11	8.7	7.9	34	288	247	40
28	17	18	12	9.8	9.1	12	8.6	7.3	45	289	246	36
29	25	18	12	9.2	---	13	9.2	6.5	225	289	246	13
30	27	18	12	9.2	---	12	9.2	5.6	199	297	259	11
31	21	---	12	9.2	---	10	---	5.5	---	290	258	---
TOTAL	512	1063	480	348.4	245.2	4411.8	1050.9	4749.9	1386.0	4272.3	6073	1759
MEAN	16.5	35.4	15.5	11.2	8.76	142	35.0	153	46.2	138	196	58.6
MAX	27	59	19	14	12	336	242	307	225	297	289	255
MIN	15	16	12	9.2	7.5	9.2	8.6	5.5	4.3	4.3	12	11
AC-FT	1020	2110	952	691	486	8750	2080	9420	2750	8470	12050	3490
CAL YR 1976	TOTAL	34752.3	MEAN	95.0	MAX	2000	MIN	8.1	AC-FT	68930		
WTR YR 1977	TOTAL	26351.5	MEAN	72.2	MAX	336	MIN	4.3	AC-FT	52270		

RIO GRANDE BASIN

08412500 PECOS RIVER NEAR ORLA, TX -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 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, 29,100 micromhos Sept. 2, 1969, July 22, 1972; minimum daily, 1,610 micromhos June 2, 1948.

WATER TEMPERATURES (1953-61, 1968-77): Maximum, 29.5°C Aug. 23, 1977; minimum, 0.5°C Jan. 6, 1971, Jan. 11, 1973.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 24,100 micromhos Oct. 30, Feb. 26, 27; minimum daily, 10,500 micromhos Apr. 15.

WATER TEMPERATURES: Maximum, 29.5°C Aug. 23; minimum 1.5°C Jan. 10.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (CA+MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)
OCT									
07...	1115	14	21500	7.5	16.0	3600	3400	860	350
JAN									
06...	1025	12	22800	7.8	3.0	3900	3700	920	380
FEB									
16...	1215	9.3	23400	7.7	11.0	3900	3700	940	370
APR									
16...	0830	70	11000	7.3	14.5	1900	1800	480	180
MAY									
11...	1135	279	12400	7.3	20.0	1700	1600	500	120
JUN									
29...	0915	266	13500	7.2	24.0	2100	1900	560	160
JUL									
08...	0800	200	13200	7.3	24.5	2300	2200	560	230
AUG									
10...	1220	113	14100	7.2	26.5	2600	2500	620	250
SEP									
13...	1120	36	15500	7.2	23.0	3600	3500	990	270

DATE	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED SILICA (SI02) (MG/L) (00955)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)
OCT									
07...	4000	29	52	195	0	2900	6500	8.2	14800
JAN									
06...	4000	28	48	169	0	2900	7000	7.2	15300
FEB									
16...	4300	30	46	164	0	3000	7200	2.7	15900
APR									
16...	1700	17	54	130	0	1700	2900	4.5	7080
MAY									
11...	2100	22	64	150	0	1700	3200	5.3	7760
JUN									
29...	2300	22	77	140	0	2600	3000	9.1	8780
JUL									
08...	2200	20	76	130	0	2000	3600	8.3	8740
AUG									
10...	2500	21	81	130	0	2100	4000	11	9630
SEP									
13...	2600	19	84	140	0	3000	4400	12	11400

08412500 PECOS RIVER NEAR ORLA, TX -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20900	22700	21900	22800	22900	23400	21500	21600	19500	13300	13600	14500
2	20800	12600	22400	22800	23100	11200	21400	22100	19900	13200	13600	14500
3	20800	12200	22700	22600	23100	11200	21900	22200	20700	13200	13600	14900
4	21500	12900	22600	22500	23100	11200	22300	21900	20200	13200	13600	15100
5	22000	13500	22500	22200	23300	11300	14200	13900	20200	13200	13600	14500
6	21700	13900	22500	22700	23300	11300	14500	13500	20200	13100	13700	14900
7	21600	14600	22500	21900	23300	11300	13700	13500	13700	13100	13700	15000
8	21500	14500	22500	22800	23100	11300	13900	14100	13700	13100	13700	15100
9	21500	14400	22300	22700	23100	11300	13700	13300	13700	13600	13700	15100
10	21500	14400	22100	22200	23100	11400	14700	14300	13700	13600	14300	15300
11	21300	14400	22200	22700	23100	11300	15000	12300	13700	13700	11600	15400
12	21400	13300	22100	22900	23100	11300	15000	12800	13600	13800	12100	15500
13	21400	13800	22300	22900	23300	11300	14200	12700	13700	13800	13900	15500
14	21300	14700	22300	22800	23500	12200	18300	12600	13600	13900	14100	15600
15	21200	15600	22600	23100	23500	12600	10500	12500	13900	13900	14100	15700
16	21200	22600	22600	23100	23200	12600	11200	12300	13800	13900	15100	15600
17	21800	23400	22700	23900	23100	12300	11500	12200	13600	13900	13500	15200
18	22800	22900	22800	23600	23200	12900	12000	12200	13500	13900	14000	15500
19	22300	22800	22600	22900	23300	16700	12200	12200	13500	13400	13900	15900
20	22000	22800	22700	22700	23200	18400	12400	12200	13400	13400	14100	15800
21	22000	22500	19600	22700	23300	19100	15300	12300	13600	13400	14100	15800
22	21900	22000	19000	22800	23500	19100	17400	12300	13900	13400	14300	15800
23	21700	21700	19900	22700	23500	19400	19100	12300	13900	13500	14100	15900
24	22000	21700	20100	22800	23800	14900	20000	12300	11100	13500	14100	15800
25	22200	21500	21900	22800	23800	19800	19100	12500	13400	13600	14200	15900
26	22100	21900	22100	23100	24100	19800	18700	13000	13400	13600	14300	15800
27	22100	21600	22300	23100	24100	19800	19800	14900	13400	13500	14300	16100
28	21600	21900	22300	22900	23500	20200	20400	17900	14300	13800	14300	15900
29	20500	22000	22500	22900	---	21400	21000	18700	13400	13600	14300	16200
30	24100	22000	22500	22900	---	22700	21400	19200	13500	13700	14400	15700
31	23800	---	22300	21300	---	22000	---	19300	---	13600	14400	---
MEAN	21800	18400	22000	22800	23300	15300	16500	14800	14900	13500	13900	15500
WTR YR 1977	MEAN	17700	MAX	24100	MIN	10500						

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	12.0	3.0	5.0	4.5	8.5	15.0	22.0	24.5	24.5	25.0	26.0
2	20.0	12.0	3.0	5.0	8.5	9.0	14.5	21.5	27.0	27.0	25.0	26.5
3	21.0	12.0	4.0	4.5	7.0	8.5	15.0	22.0	25.0	24.0	25.0	25.0
4	21.0	14.5	3.5	7.0	6.5	8.0	14.0	23.0	25.0	24.0	25.0	25.0
5	19.5	12.0	5.0	8.5	7.0	8.5	13.5	20.0	23.5	24.5	24.5	25.0
6	18.5	11.5	6.0	4.5	7.0	---	14.0	17.0	24.5	24.5	24.5	25.5
7	17.0	12.0	5.0	5.0	10.0	7.0	14.5	19.5	24.5	25.0	27.0	25.0
8	13.5	11.0	5.0	6.0	9.5	6.5	15.0	25.0	23.5	24.5	24.5	24.5
9	14.5	11.5	6.0	5.0	9.5	8.5	15.5	20.0	23.5	---	24.5	24.5
10	15.0	11.5	8.0	1.5	10.0	12.0	16.0	21.0	24.5	---	25.0	24.5
11	15.5	12.0	6.0	2.0	9.5	10.0	16.0	18.5	25.0	---	24.5	24.5
12	16.0	11.0	6.5	4.0	10.0	9.5	18.5	20.0	25.0	---	25.0	23.5
13	---	---	7.0	4.5	9.5	9.0	18.5	20.0	24.5	---	25.0	23.5
14	18.5	5.5	6.0	4.0	9.5	13.5	15.5	21.0	26.0	---	27.0	23.0
15	17.0	7.0	6.0	4.5	11.0	11.0	18.5	20.0	25.0	---	25.5	23.0
16	17.0	8.5	6.0	5.5	9.5	11.0	14.5	20.0	25.5	---	25.5	22.0
17	15.0	7.0	6.0	3.0	9.5	11.0	15.0	20.0	25.0	---	25.5	26.0
18	15.5	7.0	6.5	4.0	10.0	11.0	15.0	20.0	25.5	---	25.0	22.0
19	15.0	9.0	6.5	4.0	10.0	13.0	17.0	20.0	25.0	---	25.0	22.0
20	13.5	12.0	7.0	5.5	11.0	12.0	18.5	22.0	25.0	---	25.5	26.0
21	14.0	11.0	6.5	7.0	10.0	12.0	18.0	20.0	25.0	---	26.0	25.0
22	13.5	9.5	4.0	8.5	11.0	12.0	18.5	19.5	24.5	---	25.5	22.0
23	16.0	9.5	4.0	9.5	10.0	13.0	19.5	20.0	23.5	---	29.5	23.0
24	16.0	9.0	4.0	8.5	10.5	13.5	19.5	20.0	21.0	24.5	25.5	24.0
25	15.0	10.0	6.0	7.0	12.0	14.5	19.5	21.0	24.5	24.5	25.0	23.0
26	15.0	11.0	4.5	9.0	10.0	15.0	20.0	23.5	---	24.5	24.5	22.0
27	14.5	9.5	4.5	9.5	9.5	13.5	20.0	22.0	27.0	25.0	25.5	23.5
28	11.0	---	6.0	9.5	7.0	12.0	21.0	21.0	26.0	27.0	25.0	22.0
29	9.5	3.0	5.5	8.0	---	13.5	20.5	22.0	26.0	25.0	25.5	24.5
30	10.0	2.0	8.5	6.0	---	13.0	21.0	22.0	24.5	25.0	---	23.5
31	11.5	---	5.5	6.5	---	14.0	---	24.5	---	24.5	24.5	---
MEAN	15.5	10.0	5.5	6.0	9.5	11.0	17.0	21.0	25.0	25.0	25.5	24.0
WTR YR 1977	MEAN	16.0	MAX	29.5	MIN	1.5						

TULAROSA VALLEY

08481500 RIO TULAROSA NEAR BENT, NM
(National stream-quality accounting network station)

LOCATION.--Lat 33°08'41", long 105°53'50", in SE 1/4 sec. 32, T.13 S., R.11 E., Otero County, Hydrologic Unit 13050003, on right bank 50 ft (15 m) downstream from old U.S. Highway 70 bridge, 2.6 mi (4.2 km) west of Bent, and 8.5 mi (13.7 km) northeast of Tularosa, and at mile 19.4 (31.2 km).

DRAINAGE AREA.--120 mi² (310 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1947 to current year.

REVISED RECORDS.--WSP 1312: 1949(M).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5,450 ft (1,660 m), from topographic map.

REMARKS.--Water-discharge records poor. Diversion for irrigation of about 1,000 acres (4.0 km²) 1959 determination, above station.

AVERAGE DISCHARGE.--29 years, (1949-77), 9.60 ft³/s (0.272 m³/s), 6,960 acre-ft/yr (8.58 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 4,280 ft³/s (121 m³/s) June 18, 1965, gage height, 5.02 ft (1.530 m), from rating curve extended above 160 ft³/s (4.53 m³/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 ft³/s (273 m³/s) was computed for station approximately 6 mi (10 km) downstream near Tularosa. Another flood may have occurred July 2, 1914.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 125 ft³/s (3.54 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
July 6	1830	759	21.5	3.31	1.009
July 23	1545	*1,060	30.0	3.46	1.055
Aug. 19	2245	286	8.10	2.96	.902
Sept. 4	2045	449	12.7	3.11	.948

Minimum discharge, 1.2 ft³/s (0.033 m³/s) Aug. 29.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	12	9.9	12	12	12	11	8.2	11	11	11	12
2	11	12	9.9	11	13	13	10	9.6	12	11	10	13
3	10	12	9.9	11	13	14	11	9.7	12	7.6	9.5	14
4	10	12	9.9	11	13	13	12	13	12	10	9.0	29
5	9.9	12	10	11	12	13	9.0	13	9.9	7.9	9.7	14
6	10	12	10	11	13	13	11	13	8.1	12	12	14
7	9.9	13	10	11	12	12	11	13	8.4	12	12	13
8	10	13	10	11	13	12	11	13	8.7	10	9.9	12
9	9.9	13	10	11	13	12	9.9	13	7.8	9.5	8.9	12
10	9.9	13	10	11	13	12	9.2	12	7.6	10	9.5	13
11	9.9	13	10	11	13	13	9.5	9.1	7.7	9.4	9.9	12
12	9.9	13	11	12	12	12	9.9	9.5	5.2	9.0	11	13
13	10	13	11	12	13	12	10	11	6.2	9.2	14	12
14	11	13	11	12	13	12	14	10	6.2	10	14	12
15	11	13	11	12	13	12	13	8.4	9.9	9.8	17	12
16	11	13	11	12	13	13	12	9.0	8.7	27	13	11
17	11	13	10	12	13	13	9.9	9.3	7.5	12	13	11
18	11	13	10	12	14	12	9.9	10	8.3	11	12	11
19	12	13	10	12	14	12	9.9	11	5.8	8.0	20	11
20	12	13	11	12	15	10	11	11	5.8	9.4	14	10
21	12	13	10	13	13	9.0	11	11	6.5	9.6	13	10
22	12	13	10	13	13	11	12	10	8.2	9.4	12	10
23	12	12	11	14	12	10	13	7.7	8.5	33	5.2	11
24	12	12	11	13	12	10	13	8.1	9.1	14	4.6	10
25	12	12	11	13	12	12	13	7.8	8.3	13	4.3	7.9
26	12	12	11	12	13	11	12	8.4	8.5	14	3.8	7.3
27	11	12	11	12	13	10	11	8.1	9.2	13	3.9	9.5
28	11	10	11	12	13	11	12	8.1	10	15	3.4	10
29	12	8.5	11	13	---	12	11	6.5	8.9	17	7.1	9.5
30	13	9.5	12	13	---	11	12	6.9	9.4	18	12	8.8
31	12	---	12	13	---	11	---	8.4	---	15	12	---
TOTAL	340.4	368.0	326.6	371	361	365.0	334.2	306.8	255.4	386.8	320.7	355.0
MEAN	11.0	12.3	10.5	12.0	12.9	11.8	11.1	9.90	8.51	12.5	10.3	11.8
MAX	13	13	12	14	15	14	14	13	12	33	20	29
MIN	9.9	8.5	9.9	11	12	9.0	9.0	6.5	5.2	7.6	3.4	7.3
AC-FT	675	730	648	736	716	724	663	609	507	767	636	704
CAL YR 1976	TOTAL	4025.8	MEAN 11.0	MAX 59	MIN 3.8	AC-FT 7990						
WTR YR 1977	TOTAL	4090.9	MEAN 11.2	MAX 33	MIN 3.4	AC-FT 8110						

TULAROSA VALLEY BASIN

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08481500 RIO TULAROSA NEAR BENT, NM -- Continued

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (000061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (000095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA, MG) (MG/L) (00900)
OCT										
06...	1155	9.9	1350	7.9	19.0	14.5	15	8.8	46	710
NOV										
09...	1445	13	1480	7.9	15.5	9.0	30	9.5	14	740
DEC										
16...	1604	11	1500	8.1	9.5	7.5	20	9.0	11	740
JAN										
18...	1218	12	1500	7.9	8.0	8.0	25	10.3	21	770
FEB										
16...	1200	13	1600	7.9	13.5	10.5	30	9.7	41	810
MAR										
22...	1217	11	1550	8.0	16.0	13.5	15	7.6	21	780
APR										
27...	1230	12	1500	8.0	23.0	18.0	75	--	100	820
MAY										
18...	1200	11	1660	7.8	22.0	16.5	25	10.1	2	790
JUN										
29...	1330	7.7	1450	8.1	28.0	21.0	17	--	20	810
JUL										
28...	1800	15	1560	8.0	28.5	21.0	20	8.4	90	920
AUG										
23...	1040	5.4	1590	7.9	29.5	18.5	90	7.9	44	840

DATE	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
OCT									
06...	530	190	57	40	.7	1.2	218	0	490
NOV									
09...	540	200	58	42	.7	1.3	246	0	520
DEC									
16...	540	200	59	45	.7	1.2	247	0	510
JAN									
18...	570	210	60	45	.7	1.2	251	0	520
FEB									
16...	620	220	64	48	.7	1.1	237	0	560
MAR									
22...	570	210	61	46	.7	1.3	245	0	560
APR									
27...	630	220	65	49	.7	1.4	230	0	590
MAY									
18...	600	220	58	46	.7	1.3	230	0	560
JUN									
29...	630	220	62	46	.7	1.6	210	0	580
JUL									
28...	730	270	60	47	.7	1.9	230	0	690
AUG									
23...	640	240	58	45	.7	1.7	240	0	620

TULAROSA VALLEY BASIN

08481500 RIO TULAROSA NEAR BENT, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SiO2) (MG/L) (00955)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF TUEINIS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITROGEN (N) (MG/L) (00610)	TOTAL ORGANIC NITROGEN (N) (MG/L) (00605)
OCT 06...	56	.5	14	966	959	.49	.49	.00	.21
NOV 09...	59	.4	13	1030	1020	.60	.46	.00	.56
DEC 16...	58	.5	14	1080	1010	.63	.62	.01	.19
JAN 18...	64	.5	13	1080	1040	.53	.53	.00	.49
FEB 16...	72	.4	13	1180	1100	1.5	1.5	.01	.12
MAR 22...	69	.6	13	1150	1080	.46	.46	.01	.21
APR 27...	66	.6	13	1200	1120	.70	.70	.01	.77
MAY 18...	59	.5	13	1110	1070	.43	.43	.01	.23
JUN 29...	65	.5	14	1140	1090	.40	.40	.00	.29
JUL 28...	62	.6	15	1360	1260	.67	.67	.02	.38
AUG 23...	59	.5	15	1210	1160	.78	.78	.03	.61

DATE	TOTAL NITROGEN (N) (MG/L) (00600)	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS-SOLVED ORTHO. PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS-SOLVED ORGANIC CARBON (C) (MG/L) (00681)	SUSPENDED ORGANIC CARBON (C) (MG/L) (00689)
OCT 06...	.70	.01	.01	50	20	30	--	1.0	.8
NOV 09...	1.2	.07	.01	40	20	--	--	8.9	.6
DEC 16...	.83	.03	.02	50	10	50	2.4	--	--
JAN 18...	1.0	.05	.03	40	10	--	--	1.7	.6
FEB 16...	1.6	.06	.03	40	20	--	3.2	--	--
MAR 22...	.68	.08	.03	50	30	30	2.1	2.4	--
APR 27...	1.5	.02	.01	60	20	--	--	2.1	--
MAY 18...	.67	.01	.01	50	20	--	--	2.2	1.2
JUN 29...	.69	.02	.01	60	20	30	3.4	2.6	1.2
JUL 28...	1.1	.03	.02	50	10	--	--	2.9	.8
AUG 23...	1.4	2.1	.01	50	20	--	--	2.2	1.0

TULAROSA VALLEY BASIN

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08481500 RIO TULAROSA NEAR BENT, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)
OCT 06...	1155	1	0	50	10	1	10	0	<50	0	10	0
DEC 16...	1604	1	0	50	<10	0	0	0	<50	0	<10	0
MAR 22...	1217	1	1	50	10	0	10	0	<50	0	<10	0
JUN 29...	1330	1	1	60	10	1	10	0	50	1	<10	<10

DATE	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT 06...	680	20	<100	9	60	30	.0	.0	1	1	10	10
DEC 16...	800	10	<100	1	60	50	.0	.0	1	1	30	30
MAR 22...	740	30	100	2	60	30	.0	.0	1	1	10	10
JUN 29...	1100	20	100	2	70	30	.0	.0	2	1	20	4

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCT (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCT KF AGAR (COL. PER 100 ML) (31673)
OCT 06...	1155	37	49	--
NOV 09...	1445	8	6	--
DEC 16...	1604	6	9	--
JAN 18...	1218	5	21	--
FEB 16...	1200	3	27	--
MAR 22...	1217	100	--	55
APR 27...	1230	14	--	43
MAY 18...	1200	22	--	86
JUN 29...	1330	110	--	450
JUL 28...	1800	41	--	800
AUG 23...	1040	220	--	1000

TULAROSA VALLEY BASIN

08481500 RIO TULAROSA NEAR BENT, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

IDENTIFICATION OF PHYTOPLANKTON

DATE TIME	OCT 6,76 1155	NOV 9,76 1445	DEC 16,76 1604	JAN 18,77 1218	FEB 16,77 1200	
TOTAL CELLS/ML	190	64	290	720	780	
DIVERSITY: DIVISION	1.5	0.0	1.0	0.8	1.0	
..CLASS	1.5	0.0	1.0	0.8	1.0	
...ORDER	1.5	0.4	1.0	0.9	1.0	
...FAMILY	2.4	1.8	2.2	1.0	2.0	
....GENUS	2.4	1.8	2.2	1.0	2.0	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...OOCYSTACEAE						
....CLOSTERIOPSIS	--	-	--	-	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	--	-	14	2
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	--	-	4	7	--	-
....STEPHANODISCUS	--	-	--	-	7	1
...PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	310#	40
....COCCONEIS	5	3	--	-	--	-
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	4	1
...DIATOMACEAE						
....DIATOMA	--	-	4	7	--	-
...FRAGILARIACEAE						
....FRAGILARIA	--	-	34#	53	--	-
....SYNEDRA	16	8	--	-	12	4
...GOMPHONEMACEAE						
....GOMPHONEMA	16	8	4	7	--	-
...NAVICULACEAE						
....CALONEIS	--	-	--	-	--	-
....GYROSIGMA	--	-	--	-	--	-
...NAVICULA	32#	17	17#	27	20	7
....NEIDIUM	--	-	--	-	--	-
...NITZSCHACEAE						
....NITZSCHIA	11	6	--	-	32	11
...SURIPELLACEAE						
....CYMATOPLEURA	--	-	--	-	21	3
....SURIPELLA	--	-	--	-	16	6
...CHRYSOPHYCEAE						
...CHRYSONOMADALES						
...OCHROMONADACEAE						
....OCHROMONAS	--	-	--	-	7	1
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROCOCCALES						
...CHROCOCCACEAE						
....ANACYSTIS	--	-	--	-	--	-
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	76#	39	--	-	--	-
...OSCILLATORIACEAE						
....LYNGBYA	--	-	--	-	--	-
....OSCILLATORIA	--	-	--	-	150#	51
EUGLENOPHYTA (EUGLENOIDS)						
..CRYPTOPHYCEAE						
...CRYPTOMONIDALES						
...CRYPTOMONODACEAE						
....CRYPTOMONAS	--	-	--	-	7	1
...EUGLENOPHYCEAE						
....EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	38#	19	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	--	-	7	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

08481500 RIO TULAROSA NEAR BENT, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

IDENTIFICATION OF PHYTOPLANKTON									
DATE TIME	MAY 18,77 1200		JUN 29,77 1330		JUL 28,77 1800		AUG 23,77 1040		
TOTAL CELLS/ML	620		940		77		1700		
DIVERSITY: DIVISION	0.1		1.0		1.0		0.2		
..CLASS	0.1		1.0		1.0		0.2		
..ORDER	0.2		1.0		1.0		0.2		
...FAMILY	2.2		2.0		1.8		0.2		
....GENUS	2.4		2.0		2.2		0.2		
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	
CHLOROPHYTA (GREEN ALGAE)									
..CHLOROPHYCEAE									
...CHLOROCOCCALES									
...OOCYSTACEAE									
....CLOSTERIOPSIS	6	1	--	-	--	-	--	-	
...VOLVOCALES									
...CHLAMYDOMONADACEAE									
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	
CHRYSTOPHYTA									
..BACILLARIOPHYCEAE									
...CENTRALES									
...COSCINODISCACEAE									
....CYCLOTELLA	6	1	--	-	--	-	--	-	
....STEPHANODISCUS	--	-	--	-	--	-	--	-	
...PENNALES									
...ACHNANTHACEAE									
....ACHNANTHES	12	2	240#	26	10	13	--	-	
...COCCONEIS	--	-	--	-	--	-	--	-	
...CYMBELLACEAE									
....CYMBELLA	99#	16	14	2	--	-	--	-	
...DIATOMACEAE									
....DIATOMA	--	-	--	-	--	-	--	-	
...FRAGILARIACEAE									
....FRAGILARIA	--	-	--	-	--	-	--	-	
...SYNEDRA	--	-	--	-	10	13	--	-	
...GOMPHONEMACEAE									
....GOMPHONEMA	74	12	--	-	--	-	--	-	
...NAVICULACEAE									
....CALONEIS	6	1	--	-	--	-	--	-	
...GYROSIGMA	18	3	--	-	--	-	--	-	
...NAVICULA	280#	45	170#	18	10	13	--	-	
...NEIDIUM	--	-	--	-	19#	25	65	4	
...NITZSCHACEAE									
....NITZSCHIA	92	15	57	6	--	-	--	-	
...SURIPELLACEAE									
....CYMATOPLEURA	6	1	--	-	--	-	--	-	
...SURIPELLA	25	4	28	3	--	-	--	-	
..CHRYSTOPHYCEAE									
...CHRYDOMONADALES									
...OCHROMONADACEAE									
....OCHROMONAS	--	-	--	-	--	-	--	-	
CYANOPHYTA (BLUE-GREEN ALGAE)									
..CYANOPHYCEAE									
...CHROCOCCOCCALES									
...CHROCOCCOCCAEAE									
....ANACYSTIS	--	-	--	-	--	-	1600#	96	
...HORMOGONALES									
...NOSTOCACEAE									
....ANABAENA	--	-	--	-	--	-	--	-	
...OSCILLATORIACEAE									
....LYNGBYA	--	-	--	-	--	-	--	-	
...OSCILLATORIA	--	-	430#	45	--	-	--	-	
EUGLENOPHYTA (EUGLENOIDS)									
..CRYPTOPHYCEAE									
...CRYPTOMONIDALES									
...CRYPTOMONODACEAE									
....CRYPTOMONAS	--	-	--	-	--	-	--	-	
..EUGLENOPHYCEAE									
...EUGLENALES									
...EUGLENACEAE									
....TRACHELOMONAS	--	-	--	-	29#	38	--	-	
PYRRHOPHYTA (FIRE ALGAE)									
..DINOPHYCEAE									
...PERIDINIALES									
...GLENODINIACEAE									
....GLENODINIUM	--	-	--	-	--	-	--	-	

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

TULAROSA VALLEY BASIN

08481500 RIO TULAROSA NEAR BENT, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT						
06...	1155	9.9	14.5	43	1.1	70
NOV						
09...	1445	13	9.0	90	3.2	66
DEC						
16...	1604	11	7.5	35	1.0	64
JAN						
18...	1218	12	8.0	74	2.4	54
FEB						
16...	1200	13	10.5	47	1.6	57
MAR						
22...	1217	11	13.5	26	.77	71
APR						
27...	1230	12	18.0	52	1.7	55
MAY						
18...	1200	11	16.5	62	1.8	72
JUN						
29...	1330	7.7	21.0	81	1.7	84
JUL						
28...	1800	15	21.0	36	1.5	58
AUG						
23...	1040	5.4	18.5	325	4.7	61

COLORADO RIVER BASIN

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SAN JUAN RIVER BASIN

09346400 SAN JUAN RIVER NEAR CARRACAS, CO

LOCATION.--Lat 37°00'49", long 107°18'42", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.17, T.32 N., R.4 W., Archuleta County, Hydrologic Unit 14080101, on right bank just upstream from flow line of Navajo Reservoir, 3 mi (5 km) northwest of Carracas, 7.2 mi (11.6 km) upstream from Piedra River, and at mile 332.8 (535.5 km).

DRAINAGE AREA.--1,230 mi² (3,190 km²), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 6,090 ft (1,856 m), from river-profile map.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 11,000 acres (45 km²) above station. Highwater diversions above station into Rio Grande Basin through Azotea tunnel (08284160) began in March 1971. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years (water years 1962-70), 632 ft³/s (17.90 m³/s), 457,900 acre-ft/yr (565 hm³/yr) prior to completion of Azotea tunnel.

7 years (water years 1971-77), 500 ft³/s (14.16 m³/s), 362,200 acre-ft/yr (447 hm³/yr) since completion of Azotea tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,730 ft³/s (276 m³/s) Sept. 6, 1970, gage height, 8.34 ft (2.542 m), from rating curve extended above 6,000 ft³/s (170 m³/s) on basis of slope-area measurement of peak flow; minimum, about 5 ft³/s (0.1 m³/s) Dec. 10, 1961, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Other major floods occurred Sept. 5 or 6, 1909; Oct. 5, 1911; June 29, 1927.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,070 ft³/s (58.6 m³/s) at 1215 hours Aug. 18, gage height, 4.36 ft (1.329 m), no peak above base of 2,500 ft³/s (71 m³/s); minimum daily, 56 ft³/s (1.59 m³/s) Dec. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	331	144	130	69	78	118	144	410	513	128	204	186
2	321	143	105	72	79	116	130	440	489	100	164	180
3	301	140	104	74	81	126	120	480	446	91	143	410
4	281	141	100	77	82	111	115	430	466	85	135	262
5	264	139	110	75	81	108	118	425	438	152	125	250
6	243	132	105	71	89	126	138	485	437	196	105	236
7	231	126	90	82	86	101	182	520	404	144	96	186
8	227	133	90	68	82	102	210	540	431	116	76	163
9	219	130	94	77	80	106	246	560	396	102	70	141
10	208	126	99	78	82	123	294	540	378	92	68	136
11	199	125	102	79	83	105	298	500	321	82	96	173
12	192	122	90	85	85	96	263	400	280	70	190	420
13	187	123	88	86	88	104	238	380	258	66	385	448
14	184	128	83	85	88	130	238	370	229	66	185	308
15	186	123	80	84	89	128	224	360	182	88	578	263
16	182	113	74	79	91	122	228	380	179	289	650	269
17	177	110	72	76	97	134	252	360	172	281	679	238
18	154	108	70	79	98	108	294	338	159	218	1280	212
19	154	114	70	81	105	96	334	318	141	220	854	195
20	158	116	70	82	110	104	310	299	129	127	780	182
21	176	110	64	86	112	112	260	285	118	301	732	167
22	177	108	62	88	120	122	242	272	106	388	656	164
23	174	104	62	88	105	162	235	285	98	296	571	400
24	167	97	64	87	105	182	252	315	93	289	475	291
25	166	86	66	80	100	217	270	338	107	318	426	228
26	172	84	60	73	106	199	249	312	105	370	374	204
27	165	88	64	74	115	175	249	282	112	535	324	193
28	150	88	62	75	125	242	260	292	116	429	283	191
29	149	92	56	77	---	194	290	353	111	348	255	197
30	149	120	58	81	---	135	302	460	110	279	217	171
31	145	---	61	80	---	144	---	501	---	235	206	---
TOTAL	6189	3513	2505	2448	2642	4148	6985	12230	7524	6501	11382	7064
MEAN	200	117	80.8	79.0	94.4	134	233	395	251	210	367	235
MAX	331	144	130	88	125	242	334	560	513	535	1280	448
MIN	145	84	56	68	78	96	115	272	93	66	68	136
AC-FT	12280	6970	4970	4860	5240	8230	13850	24260	14920	12890	22580	14010

CAL YR 1976 TOTAL 169854 MEAN 464 MAX 2520 MIN 56 AC-FT 336900
WTR YR 1977 TOTAL 73131 MEAN 200 MAX 1280 MIN 56 AC-FT 145100

SAN JUAN RIVER BASIN

09349800 PIEDRA RIVER NEAR ARBOLES, CO

LOCATION.--Lat 37°05'18", long 107°23'50", in NE¼SW¼ sec.21, T.33 N., R.5 W., Archuleta County, Hydrologic Unit 14080102, on left bank 3 mi (5 km) downstream from Ignacio Creek, 5.2 mi (8.4 km) northeast of Arboles Post Office, and 8 mi (13 km) upstream from mouth.

DRAINAGE AREA.--629 mi² (1,629 km²).

PERIOD OF RECORD.--August 1962 to current year. Gage operated 1895-1899, 1910-1927 at a site 7.5 mi (12.1 km) downstream at altitude 6,000 ft (1,830 m). Low flow records probably not equivalent.

GAGE.--Water-stage recorder. Datum of gage is 6,147.52 ft (1,873.764 m) above mean sea level, from Colorado State Highway Department bench mark.

REMARKS.--Records good except those for winter period and period of no gage-height record June 13 to August 11, which are poor. Diversions for irrigation of about 2,800 acres (11 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years, 337 ft³/s (9.544 m³/s), 244,200 acre-ft/yr (301 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,370 ft³/s (237 m³/s) Sept. 6, 1970, gage height, 6.38 ft (1.945 m) recorded, 7.55 ft (2.301 m) from floodmarks, from rating curve extended above 3,300 ft³/s (93 m³/s) on basis of slope-area measurement of peak flow; minimum, 11 ft³/s (0.31 m³/s) Dec. 9, 1963, Oct. 1, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Other major floods occurred Sept. 5 or 6, 1909; Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 906 ft³/s (25.7 m³/s) at 2345 hours Aug. 17, gage height, 2.94 ft (0.896 m), no peak above base of 1,500 ft³/s (42 m³/s); minimum daily, 32 ft³/s (0.91 m³/s) July 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	229	75	56	33	39	39	63	177	259	50	80	97
2	216	71	56	36	41	38	61	174	243	44	70	95
3	213	75	56	38	39	40	59	207	220	40	62	122
4	203	76	56	38	38	39	55	179	233	62	54	134
5	188	73	58	35	39	40	57	181	225	87	48	128
6	174	70	58	36	45	38	66	215	216	76	43	112
7	162	70	48	40	41	39	76	239	210	62	43	103
8	145	70	49	34	39	39	100	246	204	50	42	89
9	137	68	50	39	38	41	124	235	185	43	36	80
10	132	66	56	39	40	42	167	229	182	40	36	71
11	127	65	54	39	41	43	170	166	159	34	36	72
12	121	64	47	43	42	41	146	137	137	33	49	135
13	112	64	46	43	43	41	131	160	115	32	49	142
14	110	67	45	42	40	44	128	160	98	36	43	116
15	107	65	44	41	40	47	121	174	90	55	165	108
16	104	62	41	40	39	44	124	149	85	61	251	135
17	102	63	40	38	37	49	136	135	80	50	315	125
18	98	61	38	41	38	46	181	126	70	52	586	108
19	95	62	38	39	37	45	226	124	60	51	346	98
20	81	61	36	40	38	43	180	121	55	50	301	92
21	83	60	34	42	38	46	140	120	52	75	381	86
22	83	59	33	43	38	54	121	108	48	104	383	84
23	88	57	33	43	39	86	121	116	43	82	274	114
24	87	55	35	42	38	85	131	155	53	84	233	128
25	86	52	35	38	38	100	142	155	50	140	208	109
26	80	50	37	36	38	78	138	142	51	225	188	100
27	79	57	39	37	41	75	139	131	53	285	161	98
28	78	54	39	37	40	90	142	130	54	220	141	93
29	77	46	37	38	---	79	156	162	50	148	129	89
30	75	50	37	38	---	64	164	202	64	118	115	89
31	72	---	38	38	---	70	---	250	---	98	106	---
TOTAL	3744	1888	1369	1206	1104	1665	3765	5205	3644	2587	4974	3152
MEAN	121	62.9	44.2	38.9	39.4	53.7	126	168	121	83.5	160	105
MAX	229	76	58	43	45	100	226	250	259	285	586	142
MIN	72	46	33	33	37	38	55	108	43	32	36	71
AC=FT	7430	3740	2720	2390	2190	3300	7470	10320	7230	5130	9870	6250
CAL YR 1976 TOTAL	115854			317		1640						
WTR YR 1977 TOTAL	34303			94.0		586						
MEAN												
MAX												
MIN												
AC=FT												

NOTE.--No gage-height record June 13 to August 11.

09354500 LOS PINOS RIVER AT LA BOCA, CO

LOCATION.--Lat 37°00'34", long 107°35'56", in NE¼NW¼ sec. 22, T.32 N., R.7 W., La Plata County, Hydrologic Unit 14080101, on downstream end of right abutment of the Denver & Rio Grande Western Railroad Co. bridge, at southeast edge of La Boca, 0.1 mi (0.2 km) upstream from Spring Creek, and 13 mi (21 km) upstream from mouth.

DRAINAGE AREA.--510 mi² (1,320 km²), approximately.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733.

GAGE.--Water-stage recorder. Datum of gage is 6,143.58 ft (1,872.563 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by Vallecito Reservoir (station 09353000) 24 mi (39 km) upstream since April 1941. Diversions for irrigation of about 33,000 acres (130 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--27 years, 201 ft³/s (5.692 m³/s), 145,600 acre-ft/yr (180 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft³/s (181 m³/s) July 27, 1957, gage height, 8.95 ft (2.728 m), from rating curve extended above 5,100 ft³/s (140 m³/s); minimum determined, 5.6 ft³/s (0.16 m³/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, 948 ft³/s (26.8 m³/s) July 26, gage height, 5.44 ft (1.658 m); minimum daily, 6.1 ft³/s (0.17 m³/s) May 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340	249	70	40	40	37	41	6.1	64	75	60	67
2	310	251	70	38	40	35	47	6.5	64	70	51	74
3	300	254	69	36	39	41	49	11	65	61	45	78
4	290	269	69	36	38	55	45	10	67	73	40	83
5	280	261	73	33	37	53	46	9.2	64	85	35	79
6	270	257	74	33	37	51	44	8.7	67	75	37	73
7	260	256	64	32	37	56	42	12	66	71	41	70
8	240	255	62	33	38	54	42	14	58	72	46	69
9	225	180	65	31	38	52	41	17	58	65	39	68
10	220	162	64	30	39	53	42	19	60	62	44	64
11	210	155	49	29	39	49	42	24	59	52	48	77
12	200	152	47	30	39	48	39	27	63	53	64	101
13	190	105	45	31	40	49	32	56	68	48	94	94
14	180	110	45	32	42	47	30	97	64	58	63	69
15	175	110	43	32	42	43	29	120	60	56	206	79
16	170	105	46	33	42	47	28	89	64	117	148	71
17	165	97	45	34	43	44	28	71	67	79	218	70
18	160	93	46	36	43	44	37	65	69	77	192	62
19	150	91	46	38	44	42	23	65	67	123	103	65
20	140	86	46	40	45	42	42	65	75	119	85	65
21	140	85	46	40	46	41	34	71	81	172	96	58
22	135	82	47	41	46	41	18	76	79	190	100	54
23	140	81	47	43	40	41	13	67	84	130	88	57
24	135	76	47	43	40	41	17	66	104	188	77	49
25	135	73	48	40	39	43	13	85	105	224	77	44
26	140	72	49	39	35	44	12	85	99	336	70	54
27	186	72	50	38	36	42	11	90	99	148	70	52
28	232	84	52	38	34	41	13	79	102	95	66	56
29	257	63	50	38	---	39	8.9	75	100	89	63	53
30	258	84	48	39	---	40	6.4	72	92	78	59	66
31	253	---	51	40	---	42	---	64	---	69	67	---
TOTAL	6486	4270	1673	1116	1118	1397	915.3	1622.5	2234	3210	2492	2021
MEAN	209	142	54.0	36.0	39.9	45.1	30.5	52.3	74.5	104	80.4	67.4
MAX	340	269	74	43	46	56	49	120	105	336	218	101
MIN	135	63	43	29	34	35	6.4	6.1	58	48	35	44
AC-FT	12860	8470	3320	2210	2220	2770	1820	3220	4430	6370	4940	4010
CAL YR 1976 TOTAL	63609.0		MEAN	174	MAX	1070	MIN	43	AC-FT	126200		
WTR YR 1977 TOTAL	28554.8		MEAN	78.2	MAX	340	MIN	6.1	AC-FT	56640		

SAN JUAN RIVER BASIN

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09355100 NAVAJO RESERVOIR NEAR ARCHULETA, NM

LOCATION.--Lat 36°48'28", long 107°36'31", in SW¼SE¼, sec.18, T.30 N., R.7 W., San Juan County, Hydrologic Unit 14080101, in gate shaft of outlet works structure near right abutment of Navajo Dam on San Juan River, 5.5 mi (8.8 km) east of Archuleta, 33 mi (53 km) east of Farmington, and at mile 298.6 (480.4 km).

DRAINAGE AREA.--3,230 mi² (8,370 km²), approximately.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1968 dead storage included.

REMARKS.--Reservoir is formed by earth-rock-fill dam, completed in June 1963; storage began June 27, 1962. Capacity, 1,708,600 acre-ft (2.11 km³) between elevation 5,720 ft (1,743 m) upstream toe of dam and 6,085 ft (1,855 m) crest of spillway. Usable capacity 1,696,000 acre-ft (2.09 km³) above elevation 5,774.9 ft (1,760.19 m) minimum operating level. Dead storage below elevation 5,774.9 ft (1,760.19 m) is 12,600 acre-ft (15.5 hm³). Figures given herein are usable contents. Reservoir is used for irrigation storage, river regulation, desilting, flood control, and recreation.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 1,731,000 acre-ft (2.13 km³) July 2-4, 1973, elevation, 6,087.25 ft (1,855.394 m); minimum daily contents after June 1964 (initial filling period), 234,300 acre-ft (289 hm³) Mar. 10, 11, 1965, elevation, 5,906.36 ft (1,800.259 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 1,285,000 acre-ft (1.58 km³) Oct. 5, elevation, 6,055.30 ft (1,845.655 m); minimum daily contents, 1,038,000 acre-ft (1.28 km³) Sept. 30, elevation, 6,033.16 ft (1,838.907 m).

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

6,015	864.5	6,035	1,056.7	6,055	1,281.3	6,075	1,546.2
6,020	910.1	6,040	1,109.4	6,060	1,343.5	6,080	1,619.5
6,025	957.2	6,045	1,164.3	6,065	1,408.3	6,085	1,696.0
6,030	1,006.0	6,050	1,221.6	6,070	1,475.8	6,090	1,775.7

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1284000	1279000	1266000	1204000	1144000	1120000	1102000	1092000	1094000	1072000	1054000	1052000
2	1285000	1279000	1265000	1202000	1142000	1119000	1102000	1092000	1094000	1072000	1053000	1052000
3	1285000	1279000	1263000	1200000	1142000	1118000	1101000	1092000	1094000	1071000	1051000	1051000
4	1285000	1279000	1261000	1198000	1141000	1118000	1100000	1092000	1093000	1071000	1050000	1051000
5	1285000	1279000	1259000	1196000	1140000	1117000	1100000	1091000	1093000	1070000	1049000	1051000
6	1285000	1279000	1257000	1194000	1138000	1116000	1099000	1091000	1092000	1070000	1048000	1050000
7	1285000	1279000	1255000	1192000	1137000	1116000	1098000	1092000	1092000	1069000	1046000	1049000
8	1285000	1278000	1253000	1189000	1136000	1115000	1098000	1092000	1091000	1068000	1044000	1048000
9	1284000	1278000	1251000	1187000	1135000	1114000	1098000	1092000	1091000	1067000	1043000	1048000
10	1284000	1277000	1249000	1185000	1134000	1114000	1098000	1092000	1091000	1066000	1042000	1047000
11	1284000	1277000	1247000	1183000	1133000	1113000	1098000	1092000	1090000	1064000	1042000	1047000
12	1284000	1277000	1245000	1181000	1132000	1113000	1098000	1093000	1090000	1064000	1042000	1046000
13	1284000	1276000	1243000	1179000	1130000	1112000	1097000	1094000	1090000	1063000	1041000	1049000
14	1284000	1276000	1241000	1177000	1129000	1112000	1097000	1094000	1089000	1062000	1041000	1049000
15	1283000	1275000	1239000	1175000	1129000	1111000	1096000	1095000	1088000	1062000	1042000	1048000
16	1283000	1275000	1237000	1174000	1128000	1110000	1096000	1095000	1087000	1062000	1044000	1048000
17	1283000	1274000	1235000	1171000	1127000	1110000	1096000	1095000	1086000	1061000	1048000	1047000
18	1282000	1274000	1233000	1169000	1127000	1109000	1095000	1095000	1085000	1060000	1051000	1047000
19	1282000	1274000	1231000	1168000	1126000	1109000	1095000	1094000	1084000	1060000	1052000	1046000
20	1281000	1273000	1229000	1166000	1126000	1108000	1095000	1094000	1083000	1059000	1053000	1045000
21	1281000	1273000	1227000	1164000	1125000	1107000	1095000	1094000	1082000	1059000	1054000	1044000
22	1281000	1273000	1225000	1162000	1124000	1107000	1095000	1094000	1081000	1059000	1055000	1044000
23	1281000	1272000	1223000	1160000	1124000	1106000	1094000	1094000	1080000	1058000	1055000	1043000
24	1281000	1271000	1220000	1159000	1123000	1106000	1094000	1094000	1079000	1058000	1056000	1043000
25	1280000	1270000	1218000	1157000	1123000	1106000	1094000	1094000	1077000	1058000	1056000	1042000
26	1280000	1269000	1216000	1155000	1122000	1106000	1094000	1094000	1077000	1058000	1056000	1042000
27	1280000	1269000	1214000	1153000	1121000	1105000	1094000	1093000	1076000	1058000	1055000	1040000
28	1280000	1268000	1212000	1151000	1121000	1104000	1094000	1093000	1076000	1058000	1055000	1040000
29	1280000	1267000	1210000	1149000	---	1104000	1093000	1093000	1075000	1057000	1054000	1039000
30	1279000	1266000	1208000	1147000	---	1104000	1093000	1094000	1074000	1056000	1054000	1038000
31	1279000	---	1206000	1145000	---	1104000	---	1094000	---	1055000	1053000	---
MAX	1285000	1279000	1266000	1204000	1144000	1120000	1102000	1095000	1094000	1072000	1056000	1052000
MIN	1279000	1266000	1206000	1145000	1121000	1104000	1093000	1091000	1074000	1055000	1041000	1038000
(†)	6054.80	6053.74	6048.60	6043.26	6041.02	6039.43	6038.40	6038.52	6036.65	6034.85	6034.60	6033.16
(‡)	-4.0	-13.0	-60.0	-61.0	-24.0	-17.0	-11.0	+1.0	-20.0	-19.0	-2.0	-15.0
CAL YR 1976	MAX	1291000	MIN	1083000	(†)	+24.0						
WTR YR 1977	MAX	1285000	MIN	1038000	(‡)	-245.0						

† Elevation, in feet, at end of month.

‡ Change in contents, in thousands of acre-feet.

SAN JUAN RIVER BASIN

09355500 SAN JUAN RIVER NEAR ARCHULETA, NM

LOCATION.--Lat 36°48'05", long 107°41'51", in N½ sec.20, T.30 N., R.8 W., San Juan County, Hydrologic Unit 14080101, on left bank 0.5 mi (0.8 km) upstream from Gobernador Canyon, 0.8 mi (1.3 km) northeast of Archuleta, 7.2 mi (11.6 km) downstream from Navajo Dam, and at mile 291.4 (468.9 km).

DRAINAGE AREA.--3,260 mi² (8,440 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1954 to current year.

REVISED RECORDS.--The annual runoff for the 1958 water year as published in table 2, WSP 1733, is 455,000 acre-ft (561 hm³). The correct value is 1,455,000 acre-ft (1,790 hm³).

GAGE.--Water-stage recorder. Altitude of gage is 5,655 ft (1,723.6 m), from river-profile survey. Prior to Dec. 29, 1959, at site 5.0 mi (8.0 km) upstream at altitude 55 ft (17 m) higher. Dec. 29, 1959 to Dec. 15, 1964, at site 0.4 mi (0.6 km) upstream at altitude 5 ft (1.5 m) higher.

REMARKS.--Water-discharge records good. Flow completely regulated by Navajo Reservoir (station 09355100) 7 mi (11 km) upstream except for minor inflow from 30 mi² (80 km²) intervening drainage area. Highwater diversions through Azotea tunnel (station 08284160) into Rio Grande Basin began in March 1971. Diversions for irrigation of about 47,000 acres (190 km²) 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft³/s (535 m³/s) July 27, 1957, gage height, 11.00 ft (3.33 m), site and datum then in use; minimum determined, 8 ft³/s (0.23 m³/s) Feb. 28, 1963. Maximum discharge since construction of Navajo Dam in 1962, 6,500 ft³/s (184 m³/s) June 20, 1965, gage height, 4.57 ft (1.39 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft³/s (37.9 m³/s) Aug. 11, gage height, 4.19 ft (1.27 m); minimum daily, 443 ft³/s (12.5 m³/s) Dec. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	461	455	443	1250	976	547	510	605	516	486	638	497
2	462	455	653	1240	780	551	509	674	748	486	646	502
3	462	455	1220	1250	780	547	507	744	1010	492	654	497
4	469	455	1230	1250	776	548	502	749	1010	486	651	497
5	473	455	1220	1250	780	545	503	740	1010	482	651	497
6	472	455	1220	1240	783	546	500	654	1020	488	655	497
7	473	455	1230	1250	767	532	501	588	1010	485	659	497
8	473	461	1230	1250	709	501	501	594	732	485	662	497
9	475	461	1220	1250	707	505	500	558	486	485	666	497
10	479	461	1230	1250	710	513	503	510	486	488	666	497
11	479	461	1220	1230	713	509	500	510	492	491	738	497
12	481	461	1220	1210	718	505	503	516	492	491	683	501
13	485	461	1220	1200	718	506	504	522	492	491	673	504
14	485	461	1230	1200	714	511	508	516	492	491	661	503
15	485	461	1240	1200	674	504	509	516	498	511	640	503
16	487	461	1220	1200	575	501	509	522	498	625	486	503
17	493	461	1220	1200	573	510	516	516	504	601	487	507
18	496	461	1220	1200	559	513	516	528	510	601	485	509
19	496	463	1230	1200	559	506	516	522	516	619	484	509
20	494	468	1230	1200	552	503	515	516	522	611	473	509
21	497	473	1230	1200	551	507	512	504	522	623	475	509
22	497	473	1230	1210	555	501	513	504	528	656	477	510
23	497	473	1230	1210	558	504	518	504	522	621	486	519
24	500	473	1230	1210	554	506	516	504	522	631	492	516
25	503	472	1230	1200	553	509	515	504	528	630	485	516
26	483	467	1240	1200	554	509	519	504	516	630	485	637
27	455	467	1240	1200	555	510	521	516	475	636	488	753
28	455	467	1230	1200	550	511	519	516	480	637	491	745
29	455	460	1240	1200	---	510	549	516	486	637	491	511
30	455	444	1240	1200	---	510	588	528	480	637	493	509
31	455	---	1240	1200	---	512	---	522	---	637	497	---
TOTAL	14832	13856	36726	37750	18553	15992	15402	17222	18103	17370	17718	15745
MEAN	478	462	1185	1218	663	516	513	556	603	560	572	525
MAX	503	473	1240	1250	976	551	588	749	1020	656	738	753
MIN	455	444	443	1200	550	501	500	504	475	482	473	497
AC-FT	29420	27480	72850	74880	36800	31720	30550	34160	35910	34450	35140	31230
(†)	1600	0	0	0	0	306	2770	4420	8140	5970	6510	8120
CAL YR 1976 TOTAL	322024		MEAN 880	MAX 1570	MIN 406	AC-FT 638700	(†) 35460					
WTR YR 1977 TOTAL	239269		MEAN 656	MAX 1250	MIN 443	AC-FT 474600	(†) 38440					

† Discharge in acre-feet, through Navajo Project tunnel.

09355500 SAN JUAN RIVER NEAR ARCHULETA, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA, MG) (MG/L) (00900)
OCT 26...	1345	480	280	8.6	12.5	8.0	4	--	8	100
NOV 16...	1210	480	295	8.1	12.5	4.0	8	13.5	110	100
DEC 08...	0915	1230	270	7.5	-2.0	5.5	8	11.2	8	99
JAN 07...	1155	1250	280	7.8	-9.0	5.5	10	10.8	21	95
FEB 01...	1250	810	280	7.9	10.5	6.0	7	13.0	4	94
MAR 08...	1230	524	274	8.0	16.0	6.5	9	13.2	18	99
APR 12...	1230	504	295	8.4	16.5	9.5	5	6.6	83	98
27...	0920	510	290	8.1	--	6.0	--	--	--	98
MAY 10...	1208	522	480	8.0	14.5	9.0	4	10.6	4	100
JUN 13...	1418	551	310	8.3	30.5	14.0	3	--	17	98
JUL 12...	1430	522	199	8.7	30.5	14.0	2	11.4	10	100
AUG 30...	1230	540	299	8.2	27.5	9.5	2	10.2	16	100
SEP 27...	1200	820	280	7.9	22.0	10.0	4	12.6	10	98

DATE	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
OCT 26...	31	31	5.6	15	.7	1.9	85	0	51
NOV 16...	22	31	5.6	15	.7	1.8	96	0	50
DEC 08...	27	30	5.8	14	.6	2.1	87	0	48
JAN 07...	16	29	5.5	14	.6	1.8	97	0	45
FEB 01...	14	29	5.2	15	.7	1.7	97	0	48
MAR 08...	21	30	5.9	16	.7	2.0	95	0	54
APR 12...	18	30	5.7	16	.7	1.9	97	0	52
27...	22	30	5.6	14	.6	1.9	93	0	47
MAY 10...	21	31	5.5	16	.7	1.9	96	0	56
JUN 13...	21	30	5.5	14	.6	1.9	93	0	47
JUL 12...	23	31	5.4	14	.6	1.8	92	1	48
AUG 30...	20	31	5.4	15	.7	1.8	97	0	49
SEP 27...	20	30	5.6	14	.6	1.8	95	0	46

SAN JUAN RIVER BASIN

09355500 SAN JUAN RIVER NEAR ARCHULETA, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUEINIS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)
OCT									
26...	2.8	.2	9.8	155	160	.07	.07	.00	.09
NOV									
16...	2.6	.2	9.6	171	164	.11	.10	.00	.39
DEC									
08...	2.8	.2	10	165	157	.15	.15	.03	.45
JAN									
07...	2.3	.2	10	161	156	.12	.12	.00	.21
FEB									
01...	2.8	.2	9.7	165	160	.11	.11	.00	.30
MAR									
08...	3.3	.2	9.3	169	168	.14	.14	.01	.44
APR									
12...	2.8	.6	9.6	152	167	.17	.17	.02	.05
27...	2.7	.2	10	--	157	--	.02	--	--
MAY									
10...	2.9	.3	9.4	169	171	.07	.04	.00	.23
JUN									
13...	2.7	.2	9.9	154	157	.04	.04	.00	.15
JUL									
12...	2.7	.2	10	158	160	.06	.06	.00	.19
AUG									
30...	2.6	.2	11	159	164	.06	.06	.02	.19
SEP									
27...	3.0	.2	11	162	159	.06	.06	.03	.15

DATE	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDED ORGANIC CARBON (C) (MG/L) (00689)
OCT									
26...	.16	.01	.01	20	20	--	--	4.2	.2
NOV									
16...	.50	.03	.01	20	10	10	--	5.1	.9
DEC									
08...	.63	.04	.01	20	20	--	3.6	--	--
JAN									
07...	.33	.03	.01	30	0	--	--	7.4	.8
FEB									
01...	.41	.02	.00	20	0	--	--	3.2	.9
MAR									
08...	.59	.01	.01	20	0	10	--	4.3	.7
APR									
12...	.24	.03	.01	30	10	--	--	--	.4
27...	--	--	.01	30	20	--	--	--	--
MAY									
10...	.30	.02	.00	30	20	--	--	3.2	.3
JUN									
13...	.19	.01	.01	20	10	--	--	5.6	.6
JUL									
12...	.25	.03	.02	30	40	--	--	4.1	.3
AUG									
30...	.27	.03	.03	20	10	--	--	2.3	.5
SEP									
27...	.24	.01	.00	30	20	10	3.2	3.1	.5

SAN JUAN RIVER BASIN

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09355500 SAN JUAN RIVER NEAR ARCHULETA, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)
NOV 16...	1210	0	0	20	<10	0	0	0	<50	1	<10	5
MAR 08...	1230	1	1	20	<10	0	0	0	<50	0	10	2
SEP 27...	1200	1	1	30	<10	2	4	0	<50	1	<10	1

DATE	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
NOV 16...	220	10	<100	6	10	10	.0	.0	1	1	0	0
MAR 08...	19000	0	<100	1	20	10	.0	.0	1	1	10	10
SEP 27...	100	20	<100	4	10	10	.0	.0	0	0	20	0

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 27...	0920	510	6.0	16	22	99

SAN JUAN RIVER BASIN

09357300 SAN JUAN RIVER ABOVE ANIMAS RIVER, AT FARMINGTON, NM

LOCATION.--Lat 36°43'10", long 108°12'45", in NE¼SE¼NE¼ sec.20, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080101, 100 ft (30 m) upstream from mouth of Animas River, at south edge of Farmington, and at mile 99 (159 km).

DRAINAGE AREA.--5,800 mi² (15,000 km²), approximately.

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

REMARKS.--Discharges are estimated from the streamflow records of the San Juan River at Farmington and Animas River at Farmington stations

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00920)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	HARD- NESS (CA.MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)
OCT 26...	1630	573	550	8.0	14.5	9.0	--	170	73
NOV 16...	1600	518	540	7.8	15.0	4.0	12.0	170	70
DEC 07...	1200	1390	365	7.5	8.0	4.0	10.5	120	41
JAN 04...	1600	1390	370	7.6	1.0	4.0	10.9	120	33
FEB 01...	1505	888	360	7.6	7.0	5.5	10.9	120	31
MAR 11...	0930	572	510	8.6	4.0	2.5	11.2	170	87
APR 15...	0830	321	520	8.2	8.0	9.0	10.8	160	65
MAY 10...	1555	132	600	8.4	18.5	21.0	8.8	190	83
JUN 16...	0753	250	539	8.2	17.0	16.0	--	180	76
JUL 13...	1600	326	510	8.7	32.0	26.0	8.7	170	62
SEP 02...	0715	510	538	8.0	17.5	16.5	9.2	170	67

DATE	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
OCT 26...	55	8.8	45	1.5	2.2	123	0	170	4.7
NOV 16...	53	9.0	44	1.5	2.1	121	0	160	4.4
DEC 07...	38	6.9	24	.9	2.3	100	0	90	3.5
JAN 04...	37	6.6	23	.9	1.9	106	0	85	2.8
FEB 01...	37	6.6	25	1.0	1.8	108	0	89	3.3
MAR 11...	54	8.6	43	1.4	2.1	100	1	170	6.7
APR 15...	52	8.2	46	1.6	2.3	120	0	150	4.8
MAY 10...	60	9.4	50	1.6	2.5	120	4	190	5.2
JUN 16...	55	9.1	55	1.8	2.3	120	0	190	7.9
JUL 13...	53	8.4	44	1.5	2.1	120	4	160	4.8
SEP 02...	57	7.6	40	1.3	2.2	130	0	150	5.0

SAN JUAN RIVER BASIN

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09357300 SAN JUAN RIVER ABOVE ANIMAS RIVER, AT FARMINGTON, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT								
26...	.2	9.5	--	357	.17	.01	30	20
NOV								
16...	.3	7.4	344	341	.20	.00	40	10
DEC								
07...	.2	10	--	225	.22	.01	50	20
JAN								
04...	.2	11	--	221	.22	.01	20	20
FEB								
01...	.2	9.9	--	227	.14	.00	30	20
MAR								
11...	.2	8.7	--	344	.18	.02	30	0
APR								
15...	.2	9.0	--	332	.08	.05	50	30
MAY								
10...	.3	9.1	383	390	.08	.00	40	30
JUN								
16...	.3	9.5	--	390	.44	.02	50	20
JUL								
13...	.2	9.2	--	345	.01	.02	40	30
SEP								
02...	.3	11	--	338	.14	.04	40	10

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 (1.3 km) downstream from Florida River, 2.5 mi (4.0 km) upstream from Colorado-New Mexico State line, and 8.5 mi (13.7 km) north of Cedar Hill.

DRAINAGE AREA.--1,090 mi² (2,820 km²), approximately.

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for October and November 1933, published in WSP 1313.

REVISED RECORDS.--WSP 1563: 1940 and 1946 (monthly figures only).

GAGE.--Water-stage recorder. Altitude of gage is 5,960 ft (1,817 m), from topographic map. Prior to Sept. 14, 1937, at datum between 1.52 ft (0.46 m) and 1.36 ft (0.41 m) higher. Sept. 15, 1937, to Sept. 30, 1946, at datum 1.36 ft (0.41 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 20,000 acres (81 km²) above station. During water years 1944-49, Twin Rocks Canal diverted above station for irrigation below. Slight regulation by Lemon Dam about 30 mi (48 km) upstream on Florida River since November 1963 (capacity, 40,100 acre-ft or 49.4 hm³). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--44 years, 880 ft³/s (24.92 m³/s), 637,600 acre-ft/yr (786 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s (371 m³/s) June 19, 1949, gage height, 11.45 ft (3.490 m); minimum, 63 ft³/s (1.78 m³/s) Jan. 21, 1935.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in October 1911 at this location.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,340 ft³/s (94.6 m³/s) at 2145 hours Aug. 16, gage height, 7.18 ft (2.188 m), no peak above base of 4,000 ft³/s (110 m³/s); minimum daily, 129 ft³/s (3.65 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	545	266	220	249	205	145	180	396	1090	253	420	333
2	515	274	220	248	200	159	169	410	1200	222	357	314
3	495	274	220	210	200	152	173	403	1110	215	293	368
4	488	254	240	240	200	152	149	457	1090	214	241	409
5	497	250	240	220	200	136	139	431	1070	246	216	442
6	494	250	220	230	200	149	136	480	1150	246	206	390
7	474	242	230	240	200	139	129	561	1240	238	199	346
8	454	242	230	230	200	145	159	669	1230	221	194	313
9	434	235	250	230	210	145	198	769	1290	193	191	274
10	415	239	225	230	205	142	294	960	1140	174	192	258
11	398	235	210	220	200	136	385	695	963	152	200	275
12	379	235	210	230	175	129	345	480	844	139	229	334
13	369	227	220	240	180	129	242	453	789	246	248	382
14	357	231	210	250	175	136	198	473	743	459	247	352
15	342	227	210	240	170	139	194	444	692	466	479	342
16	336	220	220	250	170	132	201	358	631	516	931	408
17	331	212	240	220	160	139	254	343	564	564	1160	455
18	331	208	230	230	165	142	396	336	531	562	876	446
19	318	216	210	230	160	142	500	324	481	625	813	400
20	333	220	200	230	155	129	407	302	430	695	716	360
21	330	214	200	230	152	132	274	276	399	637	625	345
22	349	213	200	230	155	129	212	258	369	599	585	317
23	360	207	210	210	154	139	212	265	343	572	569	289
24	317	201	220	200	152	139	270	316	344	622	526	310
25	322	198	220	215	162	142	360	383	345	645	599	286
26	322	203	215	210	152	142	373	366	325	829	617	262
27	317	214	230	210	150	142	456	335	337	974	539	247
28	326	213	240	210	148	145	420	305	319	853	465	250
29	317	198	230	210	---	162	405	334	294	771	418	245
30	312	228	240	205	---	145	364	502	271	601	380	236
31	290	---	250	205	---	149	---	842	---	502	355	---
TOTAL	11867	6846	6910	7002	4955	4383	8194	13926	21624	14251	14086	9988
MEAN	383	228	223	226	177	141	273	449	721	460	454	333
MAX	545	274	250	250	210	162	500	960	1290	974	1160	455
MIN	290	198	200	200	148	129	129	258	271	139	191	236
AC-FT	23540	13580	13710	13890	9830	8690	16250	27620	42890	28270	27940	19810
CAL YR 1976	TOTAL	253951	MEAN	694	MAX	3510	MIN	198	AC-FT	503700.		
WTR YR 1977	TOTAL	124032	MEAN	340	MAX	1290	MIN	129	AC-FT	246000		

LOCATION.--Lat 36°43'17"N, long 108°12'05"W, in SW¼SW¼ sec.15, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080104, in Boyd City Park, on right bank 900 ft (274 m) upstream from bridge on former State Highway 17, 0.4 mi (0.6 km) downstream from bridge on State Highway 17, and 1.5 mi (2.4 km) upstream from mouth.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 1243: 1931. WSP 1313: 1913.

REMARKS.--Water-discharge records good except those for winter period, which are poor. Diversions for irrigation of about 30,000 acres (120 km²) above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 25,000 ft³/s (710 m³/s) June 29, 1927, gage height, 8.5 ft (2.59 m), site and datum then in use, from rating curve extended above 10,000 ft³/s (283 m³/s); minimum, 1.0 ft³/s (0.028 m³/s) Aug. 11, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,360 ft³/s (66.8 m³/s) at 0415 hours Aug. 17, gage height, 6.02 ft (1.835 m), no peak above base of 4,000 ft³/s (110 m³/s); minimum discharge, 5.3 ft³/s (0.15 m³/s) Apr. 23, 24.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	580	295	228	244	197	134	73	95	708	72	286	193
2	532	268	218	233	210	151	93	99	851	31	196	160
3	510	281	242	204	205	156	110	126	821	21	76	158
4	494	267	236	180	209	144	108	147	807	20	46	178
5	503	305	207	193	205	124	65	147	799	27	25	196
6	491	289	220	157	208	122	54	144	849	33	17	190
7	459	282	216	159	214	117	44	175	1070	33	18	160
8	422	277	230	201	218	106	46	255	1050	22	17	136
9	382	261	224	165	248	110	37	400	1050	15	26	122
10	358	252	244	199	244	117	28	530	1060	39	15	108
11	351	266	185	208	212	114	36	560	902	47	36	95
12	331	266	232	190	197	112	67	425	795	46	49	158
13	294	270	214	222	202	110	44	400	697	39	27	255
14	275	263	205	227	193	102	25	237	638	19	63	220
15	262	262	206	218	195	106	14	248	586	11	194	170
16	249	269	209	224	193	113	11	181	524	8.4	650	290
17	248	257	210	238	188	125	8.8	124	456	19	1300	370
18	250	246	203	244	190	124	9.8	102	395	31	1010	320
19	237	233	218	241	179	119	28	119	336	150	889	250
20	243	261	195	263	179	119	108	141	278	178	824	193
21	257	255	198	261	184	100	50	104	211	373	759	171
22	270	254	214	249	157	102	25	84	157	306	629	168
23	278	239	203	241	153	88	10	67	113	296	606	176
24	315	238	222	236	157	100	5.3	67	96	355	548	164
25	274	224	214	200	142	86	17	99	105	388	561	155
26	240	218	205	210	139	118	68	160	116	432	725	146
27	263	230	216	208	158	86	82	118	118	622	618	148
28	295	226	238	199	134	86	119	102	147	640	502	138
29	312	210	249	213	---	101	124	85	132	615	434	131
30	309	195	238	211	---	114	112	130	129	516	367	131
31	318	---	243	198	---	80	---	360	---	383	283	---
TOTAL	10602	7659	6782	6636	5310	3486	1621.9	6031	15996	5787.4	11796	5450
MEAN	342	255	219	214	190	112	54.1	195	533	187	381	182
MAX	580	305	249	263	248	156	124	560	1070	640	1300	370
MIN	237	195	185	157	134	80	5.3	67	96	8.4	15	95
AC-FT	21030	15190	13450	13160	10530	6910	3220	11960	31730	11480	23400	10810
CAL YR 1976	TOTAL	229813.0	MEAN	628	MAX	3650	MIN	99	AC-FT	455800		
WTR YR 1977	TOTAL	87157.3	MEAN	239								

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, 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, and 1974.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,430 micromhos July 17; minimum daily, 386 micromhos June 4.

WATER TEMPERATURES: Maximum, 32.0°C July 16; minimum, 0.0°C on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 22,500 mg/L Aug. 16; minimum daily, 24 mg/L Mar. 27.

SEDIMENT LOADS: Maximum daily, 84,700 tons (76,800 tonnes) Aug. 17; minimum daily, .25 tons (.23 tonnes) Apr. 24.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	AIR TEMPERATURE (DEG C) (00020)	TEMPERATURE (DEG C) (00010)	TURBIDITY (JTU) (00070)	DISSOLVED OXYGEN (MG/L) (00300)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARDNESS (CA+MG) (MG/L) (00900)
OCT 26...	1320	254	750	8.3	16.0	10.5	9	--	6	290
NOV 16...	1635	279	825	8.0	14.5	4.0	9	11.2	0	320
DEC 07...	1235	207	850	7.9	6.0	1.0	15	12.4	13	350
JAN 07...	0845	156	883	7.8	-6.0	.5	6	11.6	17	370
FEB 04...	0930	192	950	8.0	-1.5	.0	10	12.6	110	350
MAR 08...	1505	104	990	8.4	19.0	12.0	5	11.7	13	370
APR 12...	1500	67	930	8.6	20.5	18.0	20	6.5	46	380
27...	1600	93	800	8.1	--	21.0	--	--	13	340
MAY 10...	1420	573	495	7.8	22.0	18.5	140	7.6	34	210
JUN 16...	0841	592	540	7.8	18.0	15.5	30	--	16	220
JUL 15...	0615	16	1125	8.1	18.5	18.5	8	7.2	10	470
AUG 30...	1430	365	655	8.0	30.5	22.0	60	7.6	15	280

DATE	NON-CARBONATE HARDNESS (MG/L) (00902)	DISSOLVED CALCIUM (CA) (MG/L) (00915)	DISSOLVED MAGNESIUM (MG) (MG/L) (00925)	DISSOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DISSOLVED PHOSPHATE (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DISSOLVED SULFATE (SO4) (MG/L) (00945)
OCT 26...	160	92	15	39	1.0	3.2	164	0	220
NOV 16...	170	100	16	42	1.0	3.5	175	0	210
DEC 07...	170	110	18	46	1.1	4.1	213	0	220
JAN 07...	180	120	18	47	1.1	3.8	233	0	250
FEB 04...	170	110	18	49	1.1	3.9	216	0	250
MAR 08...	230	120	18	52	1.2	4.2	178	1	280
APR 12...	230	120	19	51	1.1	4.6	180	0	290
27...	200	110	15	43	1.0	3.7	170	0	240
MAY 10...	110	68	9.6	24	.7	3.0	120	0	140
JUN 16...	100	72	9.5	26	.8	2.5	140	0	140
JUL 15...	290	150	23	75	1.5	4.0	220	0	390
AUG 30...	130	91	12	33	.9	3.1	180	0	180

SAN JUAN RIVER BASIN

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09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUORIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITROGEN (N) (MG/L) (00610)	TOTAL ORGANIC NITROGEN (N) (MG/L) (00605)
OCT 26...	22	.4	6.8	442	479	.01	.01	.00	.10
NOV 16...	24	.4	6.3	480	489	.02	.00	.00	.24
DEC 07...	29	.4	7.3	543	541	.28	.28	.10	.06
JAN 07...	31	.5	8.9	615	596	.44	.44	.05	.41
FEB 04...	30	.5	8.2	623	578	.42	.42	.06	.21
MAR 08...	34	.6	5.2	603	603	.07	.07	.02	1.3
APR 12...	29	.7	6.9	628	610	.06	.06	.06	.41
27...	21	.6	6.6	--	525	--	.01	--	--
MAY 10...	15	.5	6.8	333	328	.45	.45	.10	1.3
JUN 16...	18	.5	7.1	328	345	.14	.14	.01	.13
JUL 15...	38	.6	8.6	818	798	.04	.04	.01	.47
AUG 30...	23	.6	9.0	426	442	.21	.21	.03	.32

DATE	TOTAL NITROGEN (N) (MG/L) (00600)	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOSPHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOLVED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDE ORGANIC CARBON (C) (MG/L) (00689)
OCT 26...	.11	.01	.01	70	10	--	--	1.9	.3
NOV 16...	.26	.03	.05	80	0	40	--	1.9	1.1
DEC 07...	.44	.04	.01	90	20	--	2.3	--	--
JAN 07...	.90	.05	.03	90	160	--	--	1.8	.5
FEB 04...	.69	.07	.03	90	10	--	--	2.3	1.8
MAR 08...	1.4	.02	.02	100	0	70	1.8	2.7	.4
APR 12...	.53	.06	.05	100	30	--	--	3.0	1.3
27...	--	--	.01	80	30	--	7.5	--	--
MAY 10...	1.8	.31	.01	50	30	--	--	2.4	5.0
JUN 16...	.28	.06	.01	60	10	--	--	1.4	1.1
JUL 15...	.52	.04	.02	120	20	--	--	2.4	.6
AUG 30...	.56	.12	.03	70	10	--	--	2.6	1.3

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ALUMINUM (AL) (UG/L) (01105)	DIS- SOLVED ALUMINUM (AL) (UG/L) (01106)	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CADMIUM (CD) (UG/L) (01027)	DIS- SOLVED CADMIUM (CD) (UG/L) (01025)	TOTAL CHROMIUM (CR) (UG/L) (01034)
NOV 16...	1635	--	--	0	0	--	--	--	80	<10	0	0
MAR 08...	1505	--	--	1	0	--	--	--	100	<10	1	10
APR 27...	1600	1100	0	2	1	100	100	110	80	<10	0	10

SAN JUAN RIVER BASIN

09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (010130)	TOTAL COBALT (CO) (UG/L) (010137)	DIS- SOLVED COBALT (CO) (UG/L) (010135)	TOTAL COPPER (CU) (UG/L) (010142)	DIS- SOLVED COPPER (CU) (UG/L) (010140)	TOTAL IRON (FE) (UG/L) (010145)	DIS- SOLVED IRON (FE) (UG/L) (010146)	TOTAL LEAD (PB) (UG/L) (010151)	DIS- SOLVED LEAD (PB) (UG/L) (010149)	TOTAL LITHIUM (LI) (UG/L) (011132)	DIS- SOLVED LITHIUM (LI) (UG/L) (011130)	TOTAL MAN- GANESE (MN) (UG/L) (010155)
NOV 16...	0	<50	0	<10	5	540	0	<100	3	--	--	40
MAR 08...	0	<50	0	<10	3	200	0	<100	3	--	--	80
APR 27...	0	<50	0	20	0	2100	30	<100	1	50	50	380

DATE	DIS- SOLVED MAN- GANESE (MN) (UG/L) (010156)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL MOLYB- DENUM (MO) (UG/L) (010162)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (010160)	TOTAL SELE- NIUM (SE) (UG/L) (011147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (011145)	TOTAL STRON- TIUM (SR) (UG/L) (010182)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (010180)	DIS- SOLVED VANA- DIUM (V) (UG/L) (010185)	TOTAL ZINC (ZN) (UG/L) (010192)	DIS- SOLVED ZINC (ZN) (UG/L) (010190)
NOV 16...	40	.0	.0	--	--	1	1	--	--	--	10	10
MAR 08...	70	.0	.0	--	--	1	1	--	--	--	60	20
APR 27...	--	.0	.0	0	2	1	1	1200	1500	1.3	60	10

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
APR 27...	1600	3.2

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)
NOV 16...	1635	279	4.0	43	32	40	40	53	--	--
DEC 31...	1500	336	2.0	848	769	10	12	16	49	66
APR 27...	1600	93	21.0	88	22	--	--	--	--	--
MAY 08...	1100	345	14.0	1440	1340	15	19	29	68	81
10...	1420	573	18.5	1800	2780	9	10	15	36	50
11...	1050	530	--	2030	2900	10	10	18	43	63
13...	1425	323	15.0	1440	1260	9	10	13	29	45
JUN 26...	1500	136	26.0	1220	448	68	89	97	--	--
JUL 14...	1215	20	25.5	524	28	40	52	82	--	--
15...	0615	16	18.5	35	1.5	--	--	--	--	--
20...	1345	106	25.0	11700	3350	35	47	60	--	--
27...	1030	658	20.0	3860	6860	26	33	52	74	83
AUG 17...	1545	1250	22.5	16700	56400	32	51	69	90	94
SEP 13...	1645	266	20.5	4320	3100	20	26	38	50	52
30...	0820	160	14.0	1720	743	54	65	81	--	--

SAN JUAN RIVER BASIN

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09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. FALL DIAM. % FINER THAN (70346)	SUS. SED. FALL DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70332)	SUS. SED. FALL DIAM. % FINER THAN (70333)	SUS. SED. FALL DIAM. % FINER THAN (70334)	SUS. SED. FALL DIAM. % FINER THAN (70335)	SUS. SED. FALL DIAM. % FINER THAN (70336)
NOV									
16...	--	--	--	68	86	89	98	100	--
DEC									
31...	99	100	--	--	--	--	--	--	--
APR									
27...	--	--	--	87	--	--	--	--	--
MAY									
08...	99	100	--	--	--	--	--	--	--
10...	60	89	100	--	--	--	--	--	--
11...	89	100	--	--	--	--	--	--	--
13...	82	100	--	--	--	--	--	--	--
JUN									
26...	--	--	--	98	99	100	--	--	--
JUL									
14...	--	--	--	93	98	100	--	--	--
15...	--	--	--	89	96	98	100	--	--
20...	--	--	--	62	62	65	90	98	100
27...	96	100	--	--	--	--	--	--	--
AUG									
17...	97	100	--	--	--	--	--	--	--
SEP									
13...	60	96	100	--	--	--	--	--	--
30...	--	--	--	92	93	95	100	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	784	822	795	925	870	447	830	618	704
2	---	---	---	774	839	775	---	799	450	---	640	716
3	---	---	---	803	743	797	---	805	425	1020	763	696
4	---	---	---	851	750	834	816	742	386	1020	845	814
5	---	---	---	859	729	811	891	733	485	1050	976	728
6	---	---	---	888	747	801	902	750	492	998	1010	688
7	---	---	---	889	788	826	955	709	470	927	1030	672
8	---	---	772	835	753	790	916	685	408	936	1060	721
9	---	---	---	885	771	797	1080	592	430	1010	982	738
10	---	---	802	860	730	835	1070	555	407	905	1090	739
11	---	---	822	885	778	878	1170	502	469	913	1120	798
12	---	---	781	900	790	818	984	566	473	905	1140	780
13	---	---	812	874	783	842	909	600	519	947	1130	824
14	---	---	802	878	763	832	968	699	558	1080	1090	750
15	---	---	788	894	782	829	1170	698	557	1040	944	721
16	---	---	860	875	745	852	1250	718	521	1140	970	725
17	---	---	835	932	765	834	1220	713	624	1430	846	718
18	---	---	809	910	762	881	1300	785	633	1010	465	683
19	---	---	799	895	776	828	1040	804	651	996	533	700
20	---	---	869	890	786	850	696	764	675	931	544	728
21	---	---	873	884	807	857	850	830	746	905	578	758
22	---	---	862	824	774	836	1040	825	748	720	596	779
23	---	---	911	811	813	895	1230	864	805	777	622	798
24	---	---	889	831	812	893	1280	895	850	740	637	792
25	---	---	890	810	787	843	1310	880	771	660	632	786
26	627	---	835	815	774	893	852	788	888	612	581	816
27	---	---	931	876	828	915	808	816	798	577	554	790
28	---	---	931	870	784	898	733	800	802	493	598	820
29	---	---	932	883	---	892	743	843	858	518	630	838
30	---	---	875	870	---	876	766	819	790	528	674	859
31	---	---	839	848	---	909	---	679	---	597	712	---
MEAN	627	---	849	861	778	846	996	746	605	874	794	756
WTR YR 1977	MEAN	808	---	MAX	1430	---	MIN	386	---	---	---	---

SAN JUAN RIVER BASIN

09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---		---	2.5	4.0	3.0	5.5	15.0	---	25.5	27.0	26.0
2	---		---	3.5	.5	6.0	---	19.0	---	---	22.0	25.5
3	---		---	.5	.0	8.5	---	17.0	22.0	22.0	27.0	23.0
4	---		---	.0	.5	4.0	13.0	19.5	24.0	25.0	23.0	18.5
5	---		---	.5	4.5	8.5	19.0	20.0	18.0	25.5	26.5	19.0
6	---		---	.0	2.0	5.0	18.0	20.5	18.0	26.0	21.5	26.0
7	---		---	.0	.0	11.5	12.5	15.0	17.5	19.0	20.5	19.0
8	---		1.5	.0	6.0	11.0	13.0	14.0	21.5	19.5	28.0	25.0
9	---		---	.0	.5	14.5	23.0	20.5	21.5	28.5	28.5	24.0
10	---		4.5	.0	6.5	9.0	17.0	19.0	19.0	25.5	26.0	23.0
11	---		.0	.0	.5	2.0	10.0	---	21.0	22.0	18.5	18.0
12	---		.0	.0	2.5	9.5	15.5	14.0	17.5	27.5	27.0	20.0
13	---		3.0	.0	4.0	6.5	15.0	15.0	19.0	24.0	27.5	20.5
14	---		.0	.0	2.5	9.0	18.0	14.0	22.5	25.5	26.0	14.5
15	---		1.5	.0	7.0	12.0	15.5	15.5	20.5	25.0	24.0	19.5
16	---		.0	.5	---	10.0	20.0	17.5	18.0	32.0	26.0	15.0
17	---		1.0	.5	8.5	10.5	9.0	18.5	23.5	27.0	22.5	19.0
18	---		1.5	.0	8.0	11.0	25.5	19.5	23.0	28.0	21.0	16.0
19	---		.0	.5	8.5	11.0	14.5	17.5	21.0	22.0	25.0	12.5
20	---		.0	.0	9.5	13.0	16.5	20.0	24.5	25.0	25.0	17.0
21	---		.0	.5	9.5	13.0	17.5	19.0	24.5	22.0	26.0	14.0
22	---		.0	1.0	5.5	15.5	16.0	15.5	26.0	24.0	24.0	12.5
23	---		.0	3.5	7.0	16.0	17.0	24.5	23.5	25.5	25.0	20.0
24	---		.0	3.0	5.5	15.0	16.5	17.0	25.0	21.5	19.5	14.5
25	---		.0	3.0	6.5	12.5	---	17.5	25.5	19.5	25.5	20.0
26	10.5		.0	---	7.0	9.5	18.0	21.5	26.0	22.0	25.0	20.5
27	---		.0	3.5	6.0	12.0	21.0	22.5	28.0	20.0	22.5	18.0
28	---		.0	1.5	8.0	9.0	18.0	23.5	25.0	23.5	23.0	17.0
29	---		.0	.0	---	5.5	21.0	26.0	23.0	26.0	24.5	17.5
30	---		.5	.0	---	17.5	21.5	24.5	25.0	25.5	23.0	14.0
31	---		2.0	.0	---	---	---	23.5	---	19.0	25.5	---
MEAN	10.5		.5	1.0	5.0	10.0	16.5	19.0	22.5	24.0	24.5	19.0
WTR YR 1977	MEAN	14.5		MAX	32.0		MIN	.0				

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

SUSPENDED--SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977												
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	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1	80	125	40	32	110	68	292	192	111	59	102	37
2	80	115	35	25	115	68	619	389	264	150	100	41
3	78	107	42	32	140	91	332	183	279	154	82	35
4	79	105	45	32	110	70	215	104	141	80	129	52
5	75	102	48	40	105	59	488	254	90	50	66	23
6	75	99	46	36	98	58	313	133	107	60	75	26
7	70	87	45	34	102	59	76	33	132	76	45	15
8	68	77	45	34	148	92	216	117	117	69	42	13
9	65	67	40	28	130	79	405	180	162	108	45	14
10	65	63	38	26	91	60	176	95	143	94	57	20
11	60	57	41	29	103	51	209	117	156	89	54	19
12	60	54	41	29	102	64	150	77	114	61	46	16
13	55	44	40	29	185	107	244	146	122	67	47	16
14	54	40	40	28	107	59	243	149	109	57	38	12
15	50	35	39	28	95	53	124	73	96	51	28	8.5
16	51	34	43	31	146	82	326	197	77	40	25	7.6
17	55	37	41	28	512	290	433	278	86	44	30	10
18	54	36	40	27	135	74	460	303	105	54	36	12
19	50	32	42	26	131	77	682	444	115	56	32	10
20	50	33	44	31	130	68	1200	852	118	57	28	9.0
21	60	42	45	31	90	48	732	516	122	61	35	9.5
22	58	42	45	31	268	155	702	472	172	73	27	7.4
23	58	44	42	27	147	81	460	299	134	55	32	7.6
24	60	51	40	26	259	155	528	336	120	51	32	8.6
25	50	37	40	24	307	177	337	182	136	52	85	20
26	43	28	38	22	200	111	366	208	95	36	39	12
27	52	37	40	25	219	128	310	174	91	39	24	5.6
28	63	50	95	58	196	126	183	98	144	52	30	7.0
29	60	51	90	51	67	45	221	127	---	---	29	7.9
30	50	42	86	45	237	152	347	198	---	---	50	15
31	45	39	---	---	632	415	86	46	---	---	35	7.6
TOTAL	---	1812	---	945	---	3222	---	6972	---	1895	---	504.3
1	207	41	95	24	2390	4570	108	21	873	674	355	185
2	166	42	389	104	3610	8290	78	6.5	304	161	248	107
3	120	36	301	102	2140	4740	59	3.3	173	35	262	113
4	98	29	600	238	1870	4070	43	2.3	130	16	395	190
5	32	5.6	272	108	1940	4190	158	12	101	6.8	410	217
6	39	5.7	252	98	2800	6420	627	56	77	3.5	274	141

SAN JUAN RIVER BASIN

09365000 SAN JUAN RIVER AT FARMINGTON, NM

LOCATION.--Lat 36°43'22", long 108°13'30", in SE¼ sec.17, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080105, on left bank 360 ft (110 m) downstream from highway bridge, 4,000 ft (1,200 m) downstream from Animas River, 1 mi (2 km) west of Farmington, and at mile 251.4 (404.5 km).

DRAINAGE AREA.--7,240 mi² (18,750 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June to December 1904, January 1905 to September 1906 (gage heights and discharge measurements only), September 1912 to current year. Monthly discharge only for some periods, published in WSP 1313. Discharge records for January to December 1905, published in WSP 175, are unreliable and should not be used.

REVISED RECORDS.--WSP 1119: Drainage area. WSP 1243: 1938. WSP 1313: 1905, 1914. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 5,230.37 ft (1,594.217 m) above mean sea level. See WSP 1313 or 1733 for history of changes prior to Nov. 19, 1933.

REMARKS.--Water-discharge records good. Since June 1962 flow is partly controlled by operation of Navajo Reservoir (station 09355100) 50 mi (80 km) upstream. Diversions above station for irrigation of about 86,000 acres (350 km²), 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.--65 years (water years 1913-77), 2,370 ft³/s (67.12 m³/s), 1,717,000 acre-ft/yr (2.12 km³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 68,000 ft³/s (1,930 m³/s) June 29, 1927, gage height, 10.2 ft (3.109 m), site and datum then in use, from rating curve extended above 37,000 ft³/s (1,050 m³/s); minimum, 14 ft³/s (0.40 m³/s) Aug. 22, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood occurred Oct. 6, 1911. Flood of Sept. 6, 1909, reached a stage of about 12.3 ft (3.8 m), site and datum in use May to September 1906.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,730 ft³/s (134 m³/s) at 1030 hours Aug. 18, gage height, 3.72 ft (1.134 m), no other peak above base of 5,000 ft³/s (140 m³/s); minimum, 268 ft³/s (7.59 m³/s) July 14-16.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1060	618	691	1620	1510	749	520	490	1020	345	842	489
2	973	594	686	1600	1120	706	516	510	1260	341	784	439
3	937	608	1240	1600	1110	704	550	610	1600	338	665	430
4	925	598	1400	1550	1130	699	548	676	1700	359	617	435
5	917	604	1480	1580	1120	683	490	681	1670	370	578	466
6	898	598	1470	1550	1080	681	461	704	1690	380	556	510
7	860	590	1490	1510	1070	676	477	617	1890	385	550	499
8	827	580	1540	1590	1000	630	469	703	2040	350	534	474
9	793	575	1570	1560	988	604	453	857	1630	326	540	476
10	764	563	1620	1590	1000	609	424	936	1530	341	545	476
11	737	588	1600	1550	1010	604	403	1070	1310	326	825	470
12	765	595	1600	1510	1010	603	364	759	1140	342	1970	485
13	706	599	1570	1520	1000	596	376	729	1000	321	1390	719
14	646	593	1590	1490	1000	571	408	712	944	286	938	654
15	656	598	1570	1470	1000	535	398	749	898	286	1330	608
16	623	600	1580	1480	913	506	336	651	828	470	1870	635
17	635	585	1580	1480	866	526	333	550	772	744	2740	655
18	626	583	1570	1500	847	540	304	493	727	541	3180	732
19	611	588	1600	1510	834	542	304	479	675	868	1800	695
20	630	598	1580	1520	828	549	352	468	603	936	1280	642
21	631	590	1570	1530	824	513	400	441	538	1120	1120	622
22	621	590	1580	1580	825	505	342	393	489	2040	887	606
23	662	580	1570	1600	814	507	324	381	490	1830	863	643
24	673	577	1580	1540	819	511	314	357	466	1120	870	645
25	666	573	1580	1540	802	501	362	379	445	1170	860	587
26	634	582	1550	1550	796	540	410	411	460	1900	981	594
27	605	586	1540	1530	788	560	440	372	481	1360	885	746
28	626	655	1560	1530	780	530	500	357	443	1370	806	801
29	627	703	1570	1540	---	520	450	352	389	1290	733	666
30	616	676	1550	1540	---	540	500	385	365	1060	658	537
31	624	---	1590	1520	---	520	---	574	---	914	567	---
TOTAL	22574	17967	46267	47780	26884	18060	12528	17846	29493	23829	32764	17436
MEAN	728	599	1492	1541	960	583	418	576	983	769	1057	581
MAX	1060	703	1620	1620	1510	749	550	1070	2040	2040	3180	801
MIN	605	563	686	1470	780	501	304	352	365	286	534	430
AC-FT	44780	35640	91770	94770	53320	35820	24850	35400	58500	47260	64990	34580
CAL YR 1976 TOTAL	508626			1390	MAX 4400	MIN 223	AC-FT 1009000					
WTR YR 1977 TOTAL	313428			MEAN 859	MAX 3180	MIN 286	AC-FT 621700					

09365000 SAN JUAN RIVER AT FARMINGTON, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1962 to current year.

WATER TEMPERATURES: June 1962 to current year.

HARDNESS: May 1962 to current year.

DISSOLVED SOLIDS: 1962 to current year.

REMARKS.--Daily chemical samples are collected by transversing the stream cross section.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,290 micromhos Aug. 8, 1970; minimum daily, 154 micromhos May 13, 1962.

WATER TEMPERATURES: Maximum, 33.0°C July 6, 1967; minimum, 0.0°C on several days during December and January of most years.

HARDNESS: Maximum, 820 mg/L Aug. 6, 1968; minimum, 65 mg/L May 11-15, 1962.

DISSOLVED SOLIDS: Maximum, 1,720 mg/L Aug. 8, 1970; minimum, 103 mg/L May 11-15, 1962.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,120 micromhos July 22; minimum daily, 307 micromhos June 8.

WATER TEMPERATURES: Maximum, 26.0°C July 16, Sept. 1; minimum, 0.0°C Dec. 29, Jan. 9, 10, 12, Mar. 3.

HARDNESS: Maximum, 420 mg/L Aug. 18; minimum, 130 mg/L June 1-12.

DISSOLVED SOLIDS: Maximum, 1,190 mg/L Aug. 18; minimum, 239 mg/L June 1-12.

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)
DEC												
09-31	1580	424	7.7	150	51	48	8.2	25	.9	2.2	125	0
JAN												
01-17	1540	400	8.1	140	50	45	7.7	25	.9	2.0	115	0
18-19	1500	873	7.8	150	54	48	7.6	120	4.2	2.1	118	0
20...	1520	463	7.8	170	65	52	8.8	32	1.1	2.2	123	0
21...	1530	911	7.7	160	61	51	8.3	120	4.1	2.3	123	0
22-31	1550	440	8.3	160	63	51	8.3	30	1.0	2.2	120	0
FEB												
01-06	1180	499	7.9	180	76	57	8.9	36	1.2	2.5	125	0
07-28	901	575	7.7	210	98	65	11	44	1.3	2.7	134	0
MAR												
01-13	657	550	7.6	190	81	60	9.3	42	1.3	2.5	130	0
14-31	529	508	8.4	170	71	54	8.4	43	1.4	2.4	110	5
APR												
01-17	443	478	8.7	140	66	43	8.2	43	1.6	2.2	79	6
18-30	385	578	8.6	190	96	59	10	53	1.7	2.5	98	7
MAY												
01-13	719	579	8.2	210	99	66	10	39	1.2	2.6	130	0
14-15	730	716	7.5	240	110	77	11	64	1.8	3.2	150	0
16-31	440	614	8.3	210	95	66	11	50	1.5	2.6	140	0
JUN												
01-12	1540	369	8.7	130	78	41	6.0	26	1.0	2.2	58	1
13-30	612	498	8.6	160	80	47	9.8	39	1.4	2.4	85	5
JUL												
01-18	381	590	7.7	210	83	67	9.5	46	1.4	2.9	150	0
19-25	1300	1070	7.4	320	130	110	11	110	2.7	4.4	230	0
26-31	1320	659	7.4	230	62	76	8.9	68	2.0	3.8	200	0
AUG												
01-11	640	462	7.7	170	60	52	9.0	35	1.2	2.4	130	0
12-17	1710	844	7.4	250	56	82	9.8	93	2.6	3.8	230	0
18...	3180	1630	7.1	420	170	140	17	240	5.1	4.3	310	0
19-31	947	561	7.6	220	110	72	9.8	55	1.6	3.1	140	0
SEP												
01-12	471	583	8.1	200	89	65	10	45	1.4	2.7	140	0
13-30	655	525	8.3	200	84	64	9.5	43	1.3	2.6	140	0
WTD. AVG.	--	549	8.0	185	76	59	9.0	46	1.4	2.6	131	1
TIME WTD.												
AVG.	889	548	8.1	186	80	59	9.3	45	1.4	2.6	127	1
TOT. LOAD (TONS)	--	--	--	--	--	42000	6420	32600	--	1840	93100	544

SAN JUAN RIVER BASIN

09365000 SAN JUAN RIVER AT FARMINGTON, NM -- Continued

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SYLICA (SIO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
DEC												
09-31	97	7.8	.3	9.9	--	263	.36	1120	.52	.06	40	10
JAN												
01-17	97	6.6	.2	9.2	--	251	.34	1040	.27	.04	30	20
18-19	98	160	.2	8.7	--	504	.69	2040	.27	.03	30	10
20...	100	18	.2	8.4	--	284	.39	1170	.31	.02	40	10
21...	100	160	.2	9.3	--	514	.70	2120	.40	.02	30	20
22-31	120	8.4	.2	8.0	--	288	.39	1210	.21	.04	40	20
FEB												
01-06	140	8.5	.3	10	--	327	.44	1040	.42	.07	40	10
07-28	150	18	.3	9.4	--	369	.50	898	.54	.10	50	0
MAR												
01-13	150	9.8	.3	9.9	--	350	.48	621	.50	.11	50	10
14-31	150	7.4	.3	7.1	--	333	.45	476	.14	.05	40	10
APR												
01-17	150	6.6	.2	4.3	--	303	.41	362	.04	.01	40	20
18-30	180	10	.2	4.4	--	375	.51	390	.06	.02	60	30
MAY												
01-13	170	11	.3	7.7	--	373	.51	724	.36	.05	50	10
14-15	220	17	.4	10	--	481	.65	948	.85	.10	70	20
16-31	200	10	.3	7.5	--	418	.57	497	.28	.07	60	40
JUN												
01-12	120	9.3	.4	4.4	--	239	.33	994	--	--	40	50
13-30	160	8.7	.3	2.6	--	317	.43	524	--	--	50	20
JUL												
01-18	180	8.0	.3	12	--	400	.54	411	--	--	60	10
19-25	350	12	.5	15	--	726	.99	2550	--	--	90	20
26-31	200	13	.5	14	--	483	.66	1720	--	--	90	20
AUG												
01-11	110	8.0	.3	11	--	292	.40	505	--	--	40	10
12-17	240	16	.5	13	--	572	.78	2640	--	--	80	10
18...	610	14	.5	16	--	1190	1.62	10200	--	--	130	10
19-31	190	15	.4	11	--	425	.58	1090	--	--	60	20
SEP												
01-12	150	15	.3	9.9	--	367	.50	467	--	--	50	10
13-30	150	9.2	.3	9.6	--	357	.49	631	--	--	50	10
WTD. AVG.	155	13	.3	9.1	--	360	.49	--	--	--	50	17
TIME WTD. AVG.	157	12	.3	8.6	--	358	.49	--	--	--	50	16
TOT. LOAD (TONS)	110000	9140	222	6440	--	256000	--	--	--	--	35	12

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA, MG) (MG/L) (00900)
OCT										
26...	1715	634	540	7.8	13.5	9.0	--	--	--	180
NOV										
16...	1515	660	600	7.6	14.0	3.0	--	11.2	--	210
DEC										
07...	1400	1490	420	7.7	7.0	3.5	85	10.4	16	140
JAN										
04...	1151	1550	440	7.5	1.5	4.0	--	11.4	--	150
FEB										
03...	0910	1080	460	8.1	.0	2.5	--	11.0	--	140
MAR										
10...	0830	623	480	7.8	2.0	4.5	15	11.2	15	160
APR										
14...	0950	370	505	8.3	17.5	12.5	--	10.4	--	160
27...	1645	458	675	8.4	--	19.0	--	--	8	220
MAY										
12...	0950	670	462	7.8	16.0	12.0	--	9.2	--	210
JUN										
15...	0820	967	510	8.1	23.0	16.0	--	--	--	180
JUL										
14...	1000	286	525	8.4	28.0	22.0	--	8.8	--	170
SEP										
01...	0900	500	524	8.2	23.0	16.5	--	8.2	--	170
28...	0830	790	480	8.0	18.0	11.5	270	12.4	30	160

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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976, TO SEPTEMBER 1977

DATE	NON-CAR-BONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNE-SIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD-SORPTION RATIO (00931)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L) (00935)	BICAR-BONATE (HCO3) (MG/L) (00440)	CAR-BONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)
OCT 26...	82	57	8.4	46	1.5	2.3	116	0	180
NOV 16...	110	68	10	46	1.4	2.4	129	0	190
DEC 07...	52	45	7.7	25	.9	2.2	112	0	96
JAN 04...	50	47	7.8	25	.9	2.1	121	0	100
FEB 03...	47	44	7.2	37	1.4	1.9	113	0	120
MAR 10...	69	52	8.2	42	1.4	1.9	115	0	150
APR 14...	64	52	8.0	44	1.5	2.2	120	0	160
27...	110	70	11	51	1.5	2.8	140	0	210
MAY 12...	99	67	9.3	44	1.3	2.4	130	0	170
JUN 15...	78	59	9.0	38	1.2	2.3	130	0	140
JUL 14...	67	55	8.8	44	1.5	2.1	130	0	160
SEP 01...	63	55	7.9	41	1.4	2.2	130	0	150
28...	58	50	7.6	34	1.2	2.1	120	0	120

DATE	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SI02) (MG/L) (00955)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITROGEN (N) (MG/L) (00610)	TOTAL ORGANIC NITROGEN (N) (MG/L) (00605)
OCT 26...	5.0	.2	9.4	--	366	--	.18	--	--
NOV 16...	10	.3	8.2	--	400	--	.23	--	--
DEC 07...	5.6	.2	10	261	248	.23	.23	.07	.62
JAN 04...	6.9	.3	10	--	260	--	.33	--	--
FEB 03...	4.4	.2	9.4	--	281	--	.25	--	--
MAR 10...	6.3	.2	8.7	332	327	.11	.10	.00	.32
APR 14...	4.6	.1	9.5	--	340	--	.12	--	--
27...	12	.4	9.3	--	437	.29	.01	.22	.05
MAY 12...	10	.3	8.7	--	379	--	.79	--	--
JUN 15...	9.1	.3	8.7	--	331	--	.09	--	--
JUL 14...	5.4	.2	8.9	--	349	--	.06	--	--
SEP 01...	5.0	.3	11	--	338	--	.24	--	--
28...	5.6	.2	11	293	290	.14	.14	.10	.48

SAN JUAN RIVER BASIN

09365000 SAN JUAN RIVER AT FARMINGTON, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDE ORGANIC CARBON (C) (MG/L) (00689)
OCT 26...	--	--	--	40	--	--	--	--	--
NOV 16...	--	--	--	50	--	--	--	--	--
DEC 07...	.92	.09	.04	30	10	20	3.7	--	--
JAN 04...	--	--	--	40	--	--	--	--	--
FEB 03...	--	--	--	--	--	--	--	--	--
MAR 10...	.43	.03	.01	40	30	20	3.7	3.9	3.3
APR 14...	--	--	--	40	--	--	--	--	--
27...	.56	.09	.07	60	50	--	3.9	--	--
MAY 12...	--	--	--	50	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--
JUL 14...	--	--	--	50	--	--	--	--	--
SEP 01...	--	--	--	40	--	--	--	--	--
28...	.72	.30	.00	50	30	10	9.0	5.2	6.3

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ALUM- INUM (AL) (UG/L) (01105)	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)
DEC 07...	1400	--	--	5	2	--	--	--	30	<10	1	10
MAR 10...	0830	--	--	0	0	--	--	--	40	<10	0	10
APR 27...	1645	570	0	1	1	0	100	90	60	<10	0	10
SEP 28...	0830	--	--	8	1	--	--	--	90	10	1	6

DATE	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MAN- GANESE (MN) (UG/L) (01055)
DEC 07...	0	<50	0	20	2	9200	10	<100	2	--	--	290
MAR 10...	0	<50	0	<10	2	1100	30	<100	0	--	--	50
APR 27...	10	<50	0	<10	2	760	50	<100	0	30	30	60
SEP 28...	0	<50	1	20	1	20000	30	<100	4	--	--	550

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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (71900)	DIS- SOLVED MERCURY (HG) (71890)	TOTAL MOLYB- DENUM (MO) (UG/L) (01062)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL STRON- TIUM (SH) (UG/L) (01082)	DIS- SOLVED STRON- TIUM (SH) (UG/L) (01080)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
DEC 07...	20	.2	.2	--	--	1	1	--	--	--	30	30
MAR 10...	20	.0	.0	--	--	1	1	--	--	--	20	20
APR 27...	--	.0	.0	0	2	1	1	750	920	1.6	30	10
SEP 28...	10	.0	.0	--	--	1	0	--	--	--	80	0

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
APR 27...	1645	2.1

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 27...	1645	458	19.0	1000	1240	

SAN JUAN RIVER BASIN

09365000 SAN JUAN RIVER AT FARMINGTON, NM -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	432	426	545	441	503	441	545	488	557
2			---	389	533	555	---	615	390	---	469	552
3			---	411	532	555	---	577	388	556	451	575
4			---	395	544	552	480	584	317	537	471	572
5			---	397	474	499	442	557	357	560	466	589
6			---	391	505	529	429	526	353	580	451	526
7			---	405	527	498	426	605	335	629	444	529
8			---	403	536	545	422	620	307	603	482	562
9			423	392	536	552	422	582	383	574	453	545
10			435	376	538	584	499	576	366	573	438	531
11			432	417	559	591	484	554	405	596	455	524
12			434	397	540	569	483	597	376	604	787	928
13			435	410	556	580	465	630	465	565	871	661
14			437	378	545	509	484	703	494	587	769	669
15			419	388	551	510	465	728	419	580	551	557
16			417	412	589	542	452	655	---	528	1090	541
17			426	412	645	547	516	608	460	744	885	568
18			428	858	624	479	577	612	557	537	1630	472
19			451	888	604	526	517	602	475	718	648	477
20			425	463	613	507	585	540	553	900	555	520
21			403	911	593	514	563	541	481	916	565	495
22			422	448	594	534	598	608	489	2120	542	501
23			423	458	620	509	558	613	481	1070	531	561
24			418	473	594	503	582	639	527	642	573	490
25			430	435	610	503	591	626	---	675	569	514
26			402	446	569	526	563	626	542	1070	535	517
27			414	431	567	505	626	662	534	692	528	465
28			404	418	594	490	562	632	497	661	536	455
29			424	429	---	489	516	614	484	493	570	471
30			407	437	---	474	554	638	503	503	552	523
31			436	412	---	472	---	617	---	501	569	---
MEAN			424	462	561	526	511	606	442	695	610	548
WTR YR 1977	MEAN	542		MAX	2120		MIN	307				

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	5.5	2.5	2.5	4.5	15.0	23.5	24.0	22.5	26.0
2			---	5.0	2.5	5.0	---	18.5	20.0	---	18.0	23.0
3			---	3.5	2.0	.0	---	15.5	20.0	22.0	21.0	21.0
4			---	2.5	3.0	2.0	10.5	17.0	21.0	22.0	18.0	17.0
5			---	3.5	5.5	7.0	13.5	18.0	17.0	21.5	21.0	18.0
6			---	2.5	4.5	3.0	18.5	18.5	17.5	22.5	18.0	23.0
7			---	2.0	2.0	12.0	10.0	15.0	17.5	20.0	18.0	17.5
8			---	1.0	2.0	11.0	10.0	15.0	20.5	19.0	20.5	22.0
9			4.5	.0	1.5	12.0	11.0	20.5	21.0	25.0	23.0	21.5
10			5.5	.0	2.0	2.5	13.0	19.0	19.0	23.0	20.5	20.5
11			3.5	.5	1.5	1.5	10.0	13.0	23.5	20.0	15.5	16.0
12			2.0	.0	4.0	7.0	14.0	14.0	17.0	25.0	20.0	17.0
13			4.5	1.0	4.5	4.0	13.5	14.5	20.0	22.0	---	19.0
14			3.5	.5	6.5	7.0	14.0	12.5	23.0	23.0	---	14.0
15			4.0	.5	6.5	10.5	13.0	14.0	21.5	22.0	20.5	17.0
16			2.0	1.0	7.5	---	14.5	18.0	---	26.0	24.0	13.0
17			3.5	2.0	8.0	4.0	10.0	17.5	22.5	21.0	21.5	17.5
18			3.5	3.0	8.0	7.5	20.0	17.0	23.0	24.0	20.5	13.5
19			2.0	3.5	8.0	9.0	13.0	15.0	20.5	19.0	23.0	11.0
20			1.0	4.0	8.5	9.5	13.5	17.0	23.0	21.0	23.5	15.0
21			1.0	4.0	8.0	9.5	13.5	16.0	22.0	19.5	25.0	13.0
22			.5	4.5	5.5	12.0	15.0	13.0	22.0	23.0	23.0	10.5
23			.5	5.5	5.5	12.0	16.0	20.0	19.5	22.0	24.0	17.0
24			3.5	5.0	4.5	7.0	15.5	14.0	21.0	19.5	17.0	12.0
25			2.0	3.5	5.0	11.0	18.0	15.0	23.0	17.0	24.5	---
26			1.0	4.5	5.0	9.0	16.5	18.0	23.0	19.0	24.5	16.5
27			3.0	4.5	4.5	8.5	19.0	20.0	25.0	19.5	22.5	16.0
28			1.0	4.0	6.5	8.0	17.5	20.0	24.0	22.5	22.0	13.5
29			.0	2.0	---	4.0	20.0	22.0	21.0	23.0	23.0	13.0
30			4.0	3.0	---	9.0	20.0	22.5	22.5	24.0	22.5	11.5
31			5.0	1.5	---	7.5	---	23.5	---	17.0	24.0	---
MEAN			2.5	2.5	5.0	7.0	14.0	17.0	21.0	21.5	21.5	16.5
WTR YR 1977	MEAN	13.0		MAX	26.0		MIN	.0				

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

LOCATION.--Lat 36°59'51", long 108°11'17", in N44SE1 sec.10, T.32 N., R.13 W., La Plata County, Colorado, Hydrologic Unit 14080105, on right bank at Colorado-New Mexico State Line, 0.2 mi (0.3 km) downstream from Ponds Arroyo, and 4.8 mi (7.7 km) north of La Plata, NM.

REVISED RECORDS.--WSP 1313: 1934(M), 1936(M).

REMARKS.--Records good except those for winter period, which are fair. Diversions above station for irrigation of about 15,000 acres (61 km²), mostly above station.

AVERAGE DISCHARGE.--57 years, 33.1 ft³/s (0.937 m³/s), 23,980 acre-ft/yr (29.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft³/s (135 m³/s) Aug. 24, 1927, gage height, 11.36 ft (3.463 m), present datum, from rating curve extended above 750 ft³/s (21 m³/s) on basis of slope-area measurement of peak flow; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,400 ft³/s (96.3 m³/s) July 25, gage height, 9.45 ft (2.880 m) from floodmarks; no flow Aug. 7-11, 13, Sept. 2-6, 22-30.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.0	3.5	3.0	3.5	1.5	.30	4.0	6.5	.80	.80	.02
2	2.9	2.0	3.5	3.0	3.5	1.2	.35	2.8	7.9	.80	.60	.00
3	2.7	1.6	4.0	3.0	3.0	1.2	.45	3.5	9.6	.80	.45	.00
4	2.2	1.5	4.0	3.0	3.0	1.4	.84	3.0	13	1.0	.06	.00
5	2.2	1.5	4.0	2.5	3.5	1.6	1.4	2.8	13	1.4	.47	.00
6	2.0	1.8	3.5	2.5	3.5	2.2	2.0	3.0	14	1.5	.02	.00
7	2.0	3.2	3.5	2.5	3.5	1.6	2.8	3.0	14	1.2	.00	.05
8	2.0	3.5	4.0	2.5	3.5	.60	2.8	3.0	14	.80	.00	.60
9	2.0	4.0	4.0	2.0	3.5	.45	2.8	2.8	14	.45	.00	.45
10	2.4	2.8	4.0	2.0	3.5	.70	2.8	2.8	14	.50	.00	.30
11	2.6	3.2	3.5	2.5	3.5	.50	3.0	3.0	10	.50	.00	.45
12	1.6	4.3	3.5	3.0	3.5	.50	3.0	3.2	7.9	.90	.01	1.4
13	1.8	4.6	3.5	3.0	4.0	.60	2.6	6.2	6.5	.70	.00	1.0
14	1.8	4.9	3.5	3.0	4.0	.80	2.4	16	5.5	7.2	1.2	.80
15	1.8	5.2	3.5	3.0	4.0	.45	2.8	16	4.3	23	4.1	.80
16	1.6	5.2	3.5	3.0	4.0	.25	3.2	9.6	3.2	16	13	.80
17	2.4	4.3	3.5	3.0	3.5	.25	4.0	6.8	3.0	1.4	61	.60
18	2.6	3.5	3.5	3.5	3.0	.25	4.0	5.5	2.8	1.5	43	.10
19	2.4	4.0	3.5	3.5	2.6	.15	4.3	5.8	2.6	1.8	4.1	.10
20	1.5	4.3	3.0	3.5	2.4	.15	4.3	6.8	2.4	7.6	3.2	.10
21	1.5	4.3	3.0	4.0	2.0	.15	4.3	5.8	2.4	2.6	3.5	.05
22	1.5	4.0	3.0	4.0	2.6	.15	4.0	5.8	2.4	5.4	3.8	.00
23	1.6	4.3	3.0	3.5	1.8	.15	4.0	4.6	2.2	2.0	1.6	.00
24	2.2	4.0	3.5	3.0	1.8	.20	4.0	4.9	2.4	1.4	1.8	.00
25	2.2	3.8	3.0	2.5	1.8	.31	4.0	7.2	2.8	103	4.9	.00
26	2.4	4.6	3.0	2.5	1.6	.35	4.9	5.5	14	291	2.6	.00
27	2.0	4.3	3.5	3.0	1.2	.35	4.3	4.6	1.8	8.2	1.6	.00
28	1.4	3.0	3.5	3.0	1.6	.45	4.0	3.2	1.4	4.0	1.0	.00
29	1.5	3.0	3.5	3.0	---	.30	4.0	4.9	.90	2.4	.60	.00
30	1.6	3.5	3.5	3.0	---	.35	4.3	4.9	.87	2.4	.45	.00
31	1.8	---	3.5	3.0	---	.40	---	3.8	---	1.6	.15	---
TOTAL	62.4	106.2	108.5	91.5	82.9	19.51	91.94	164.8	199.37	493.85	190.91	7.62
MEAN	2.01	3.54	3.50	2.95	2.66	.63	3.06	5.32	6.65	15.9	6.16	.25
MAX	2.9	5.2	4.0	4.0	4.0	2.2	4.9	16	14	291	61	1.4
MIN	1.4	1.5	3.0	2.0	1.2	.15	.30	2.8	.87	.45	.00	.00
AC=FT	124	211	215	181	164	39	182	327	395	980	379	15
CAL YR 1976	TOTAL	5243.00	MEAN	14.3	MAX	100	MIN	1.4	AC=FT	10400		
WTR YR 1977	TOTAL	1619.50	MEAN	4.44	MAX	291	MIN	.00	AC=FT	3210		

SAN JUAN RIVER BASIN

09367500 LA PLATA RIVER NEAR FARMINGTON, NM

LOCATION.--Lat 36°44'23", long 108°14'51", in SW¼ sec.7, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080105, on right bank 1,300 ft (400 m) upstream from bridge on U.S. Highway 550, 1,800 ft (550 m) upstream from mouth, and 2.5 mi (4.0 km) northwest of Farmington.

DRAINAGE AREA.--583 mi² (1,510 km²).

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 5,215 ft (1,589.5 m), from river-profile map.

REMARKS.--Records poor. Diversions for irrigation of about 24,000 acres (97 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--39 years, 24.0 ft³/s (0.680 m³/s), 17,390 acre-ft/yr (21.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 6.03 ft (1.838 m) Sept. 10, 1939, (discharge not determined); 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, 930 ft³/s (26.3 m³/s) July 26, gage height, 4.00 ft (1.219 m), from rating curve extended above 450 ft³/s (12.7 m³/s) on basis of slope-area measurement at gage height 5.93 ft (1.807 m); no flow for many days.

DISCHARGE: IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.38	.56	7.1	5.6	.00	.26	.90	.00	.00	.11	.00
2	4.6	.44	.62	7.4	5.8	.14	.50	1.0	.00	.00	.11	.00
3	4.4	.50	.56	7.7	5.8	.74	.56	.90	.00	.00	.04	.00
4	1.1	.56	1.0	5.2	5.1	.68	.38	.90	.00	.00	.02	.00
5	.26	.68	2.0	6.6	5.2	.50	.44	.38	.00	.00	.00	.00
6	.10	.68	3.0	5.2	5.3	.50	.50	.62	.00	.00	.00	.00
7	.06	.68	4.5	7.0	5.4	.44	.62	.56	.00	.00	.00	.00
8	.04	.62	5.0	7.6	4.8	.56	.56	.38	.00	.00	.00	.00
9	.04	.68	5.0	6.6	4.5	.56	.56	.26	.00	.00	.00	.00
10	.02	.68	5.0	7.6	4.3	.68	.50	.26	.00	.00	.00	.00
11	.02	.62	5.0	5.4	4.2	.74	.50	.44	.00	.00	17	.40
12	.02	.68	5.0	5.6	4.1	.62	.38	.56	.00	.00	62	1.0
13	.18	.74	5.0	5.4	4.0	.62	.38	.56	.00	.00	17	.80
14	.32	.90	4.5	6.0	3.7	.44	.62	1.1	.00	.00	1.1	.70
15	.44	.90	5.0	6.3	3.6	.56	.44	1.1	.00	45	10	.80
16	.56	.90	5.0	6.2	3.6	.44	.38	.80	.00	98	152	.50
17	.56	.80	5.0	6.0	1.6	.44	.38	.74	.00	5.6	26	.34
18	.44	.80	4.0	6.2	.56	.44	.38	.80	.00	4.0	205	.20
19	.20	.80	4.5	6.7	.02	.44	.56	.50	.00	24	70	.15
20	.26	.80	3.5	7.0	.00	.44	.74	.38	.00	78	50	.07
21	.38	.80	4.5	7.2	.02	.44	.80	.26	.00	1.3	25	.04
22	.38	.80	4.5	6.0	.02	.44	.50	.38	.00	1.6	10	.02
23	.32	.90	3.5	7.7	.00	.44	.50	.20	.00	1.6	5.0	.01
24	.38	.80	5.5	7.2	.00	.44	.38	.12	.00	1.8	2.0	.01
25	.50	.50	6.5	6.8	.00	.44	.50	.12	.00	1.8	.50	.01
26	.38	.40	5.0	5.8	.00	.38	.74	.38	.00	149	.00	.01
27	.44	.50	6.5	5.7	.00	.18	.68	.26	.00	10	.00	.01
28	.38	.62	6.5	5.0	.00	.18	.90	.26	.00	2.0	.00	.01
29	.38	.44	6.0	5.7	---	.18	.90	.16	.00	.11	.00	.01
30	.38	.50	6.5	5.4	---	.18	.90	.16	.00	.04	.00	.01
31	.44	---	7.0	5.6	---	.20	---	.02	---	.02	.00	---
TOTAL	19.08	20.10	135.74	196.9	77.22	13.48	16.44	15.46	.00	423.87	652.88	5.10
MEAN	.62	.67	4.38	6.35	2.76	.43	.55	.50	.000	13.7	21.1	.17
MAX	4.6	.90	7.0	7.7	5.8	.74	.90	1.1	.00	149	205	1.0
MIN	.02	.38	.56	5.0	.00	.00	.26	.02	.00	.00	.00	.00
AC-FT	.38	.40	269	391	153	27	33	31	.00	841	1290	10

CAL YR 1976 TOTAL 2378.00 MEAN 6.50 MAX 415 MIN .00 AC-FT 4720
WTR YR 1977 TOTAL 1576.27 MEAN 4.32 MAX 205 MIN .00 AC-FT 3130

SAN JUAN RIVER BASIN

421

09367555 SHUMWAY ARROYO NEAR FRUITLAND, NM

LOCATION.--Lat 36°48'23", long 108°23'42", in NE¼NE¼ sec. 22, T.30 N., R.15 W., San Juan County, Hydrologic Unit 14080102, on right bank 1.7 mi (2.7 km) downstream from Narrows Wash, 2.0 mi (3.2 km) northeast of San Juan Power Plant, 4.6 mi (7.4 km) north of Fruitland, and at mile 8.5 (13.7 km).

DRAINAGE AREA.--62.8 mi² (163 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 5,240 ft (1,597 m), from topographic map.

REMARKS.--Water-discharge records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,070 ft³/s (58.6 m³/s) July 26, 1976, gage height, 9.98 ft (3.042 m), from rating curve extended above 4.0 ft³/s (0.11 m³/s) on basis of slope-area measurement at gage height, 9.98 ft (3.042 m); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 82 ft³/s (2.32 m³/s) at 2300 hours July 26, gage height, 3.05 ft (0.930 m), no other peak above base of 30 ft³/s (0.85 m³/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
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	.45	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.58	.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	.96	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.47	.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	.52	.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	.02	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.46	1.1	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.1	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.41	.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	3.99	4.11	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.13	.13	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.1	1.1	.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	7.9	8.2	.00

CAL YR 1976 TOTAL 175.40 MEAN .48 MAX 99 MIN .00 AC-FT 348
WTR YR 1977 TOTAL 8.10 MEAN .022 MAX 3.1 MIN .00 AC-FT 16

SAN JUAN RIVER BASIN

09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM

LOCATION.--Lat 36°46'24", long 108°26'26", in SE¼NW¼ sec.32, T.30 N., R.15. W, San Juan County, Hydrologic Unit 14080105, on right bank 0.6 mi (1.0 km) downstream from Westwater Arroyo, 0.7 mi (1.1 km) upstream from highway to San Juan Power Plant, 14 mi (22 km) west of Farmington, and at mile 4.5 (7.2 km).

DRAINAGE AREA.--73.8 mi² (191 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,140 ft (1,567 m), from topographic map.

REMARKS.--Water-discharge records fair except those for March and May, which are poor. Base flow is mostly waste from power plant.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,160 ft³/s (32.9 m³/s) July 26, 1976, gage height, 6.00 ft (1.829 m), from rating curve extended above 3.0 ft³/s (0.085 m³/s) on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30 ft³/s (0.85 m³/s) and maximum(*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 26	2330	*121 3.43	2.07 0.631	Aug. 24	2145	38 1.08	1.55 0.472

Minimum daily, 0.01 ft³/s (0.0003 m³/s) Oct. 13.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	3.0	.50	.74	.25	2.4	1.9	.89	.88	3.6	.67	.81
2	1.0	2.7	1.0	.96	.20	1.6	1.7	.73	1.4	1.3	1.7	.74
3	.96	2.0	.81	1.1	.10	1.2	1.9	.81	1.7	.25	.50	.29
4	1.0	2.4	.55	1.4	.15	1.8	2.2	1.2	1.6	.41	.50	.33
5	1.0	2.2	.37	1.8	.40	1.1	2.0	1.8	1.4	.33	.29	.29
6	.61	2.4	.16	1.7	1.1	.81	2.2	1.2	1.6	.51	.19	.37
7	.41	1.6	.12	1.6	1.0	1.8	1.2	.97	2.0	.67	.55	.25
8	.22	2.0	.16	1.7	.96	1.6	2.0	1.0	3.0	.50	1.4	.19
9	.08	2.0	.22	1.3	1.0	1.6	1.0	.89	2.0	.45	2.4	.12
10	.10	1.9	.12	1.0	.88	1.1	.96	1.1	1.7	.61	1.9	.14
11	.18	1.2	.12	.88	.90	1.0	1.0	.81	2.0	.67	2.4	1.8
12	.10	1.2	.10	.74	.74	.96	1.4	.60	1.3	.81	5.5	1.1
13	.01	1.0	.08	.61	.81	.88	2.4	.97	2.2	.67	.81	1.0
14	.20	.81	.10	.73	.96	1.1	2.7	1.2	1.4	.41	.88	.81
15	.05	.81	.30	.55	1.0	1.1	1.1	.97	.88	.22	.45	.74
16	.19	1.2	.10	.61	.90	1.2	1.2	.76	2.0	.67	1.9	.74
17	.19	.81	.14	.55	.88	1.1	.81	.45	1.7	.81	.81	1.7
18	.19	.88	.19	.62	.81	1.0	.74	.76	1.6	.61	.52	.88
19	.19	1.4	.14	.55	.74	.96	1.7	.65	1.7	1.0	1.8	1.7
20	.19	1.2	.10	.40	.96	.88	1.2	.59	1.2	.55	.88	.74
21	.90	1.2	.06	.30	1.0	.67	.88	.39	1.4	1.0	.29	1.7
22	2.0	1.0	.03	.30	.96	.88	.74	.60	2.2	1.3	.55	.81
23	1.6	.50	.08	.19	1.0	.96	.29	.76	3.0	4.6	.88	.74
24	1.3	.55	.16	.14	1.0	1.0	.33	.53	2.0	6.3	3.2	.67
25	1.0	.81	.14	.45	.96	1.1	.45	.30	2.0	1.3	1.1	.50
26	1.0	1.4	.08	.40	.96	1.2	1.1	.41	3.6	3.9	1.2	.61
27	1.0	1.0	.19	.20	.96	1.3	1.3	.37	2.0	8.5	.96	.74
28	1.0	1.2	.10	.20	1.1	1.1	1.4	.55	2.0	13	1.1	1.2
29	1.3	.50	.19	.14	---	1.0	1.6	.67	2.0	4.6	1.1	1.8
30	1.0	.10	.30	.25	---	1.1	1.0	.96	1.3	1.2	.81	1.7
31	1.0	---	.40	.25	---	.96	---	1.6	---	2.4	1.1	---
TOTAL	21.87	40.97	7.11	22.36	22.68	36.46	40.40	25.49	54.76	63.15	38.34	25.21
MEAN	.71	1.37	.23	.72	.81	1.18	1.35	.82	1.83	2.04	1.24	.84
MAX	2.0	3.0	1.0	1.8	1.1	2.4	2.7	1.8	3.6	13	5.5	1.8
MIN	.01	.10	.03	.14	.10	.67	.29	.30	.88	.22	.19	.12
AC-FT	43	81	14	44	45	72	80	51	109	125	76	50

CAL YR 1976 TOTAL 452.17 MEAN 1.24 MAX 60 MIN .00 AC-FT 897
WTR YR 1977 TOTAL 398.80 MEAN 1.09 MAX 13 MIN .01 AC-FT 791

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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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA+MG) (MG/L) (00900)
OCT										
27...	1400	1.0	6000	8.0	15.0	14.0	30	--	60	1500
NOV										
17...	1510	.81	3500	8.7	12.0	6.5	10	11.0	26	840
18...	1630	.94	4650	7.6	--	--	--	--	--	--
19...	1630	1.2	4580	7.6	--	--	--	--	--	--
20...	1615	1.2	4810	7.6	--	--	--	--	--	--
21...	1700	1.2	4820	7.6	--	--	--	--	--	--
22...	1630	1.1	4730	7.7	--	--	--	--	--	--
23...	1630	.45	4860	7.7	--	--	--	--	--	--
24...	1500	1.2	4970	7.6	--	--	--	--	--	--
25...	1700	.96	5580	7.4	--	--	--	--	--	--
26...	1300	.96	6050	7.5	--	--	--	--	--	--
DEC										
04...	1600	.55	5290	7.4	--	--	--	--	--	--
05...	1530	.37	5240	7.4	--	--	--	--	--	--
06...	1430	.16	5000	7.1	5.5	6.0	25	9.8	34	1100
18...	1600	.19	5770	7.0	--	--	--	--	--	--
19...	1600	.14	5690	7.0	--	--	--	--	--	--
20...	1630	.10	5340	7.1	--	--	--	--	--	--
21...	1530	.06	5340	7.0	--	--	--	--	--	--
22...	1530	.03	5160	7.1	--	--	--	--	--	--
JAN										
01...	1200	E.74	5150	7.1	--	--	--	--	--	--
05...	0950	1.8	4800	8.6	3.0	8.0	40	9.7	47	1500
FEB										
03...	1145	.37	9830	8.1	3.5	.0	30	10.4	31	2800
MAR										
10...	1130	1.1	6800	7.8	5.0	8.0	20	9.9	40	2100
APR										
14...	1200	3.0	6000	8.7	22.0	19.0	45	8.3	130	1700
29...	1030	2.0	2500	7.7	--	14.0	--	--	--	--
MAY										
12...	1200	.60	11000	8.1	23.0	11.0	35	9.2	40	2400
JUN										
15...	0918	1.0	8350	8.4	25.0	18.0	5	--	18	3200
28...	1825	2.4	8000	--	--	24.5	--	--	--	--
JUL										
14...	1130	.19	8400	8.3	30.0	31.0	5	7.9	30	3200
23...	1400	E135	3000	6.9	--	--	--	--	--	--
25...	1155	.96	15000	7.4	--	--	--	--	--	--
26...	2330	E135	2100	7.7	--	--	--	--	--	--
28...	1500	E135	1725	7.4	--	--	--	--	--	--
28...	1900	E340	1300	7.3	--	--	--	--	--	--
AUG										
12...	0840	3.4	1900	7.2	--	21.0	--	--	--	500
12...	1000	3.4	2390	7.1	--	22.0	--	--	--	590
18...	0045	64	1495	7.2	--	--	--	--	--	--
SEP										
01...	1030	1.0	5480	8.6	23.0	20.5	55	8.8	59	2000
29...	0730	1.2	5000	8.8	13.5	13.0	420	9.0	170	1400

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09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	NON-CAR-BONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNE-SIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD-SORPTION RATIO (00931)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L) (00935)	BICAR-BONATE (HCO3) (MG/L) (00440)	CAR-BONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLO-RIDE (CL) (MG/L) (00940)
OCT 27...	1500	420	120	890	9.9	21	111	0	3000	270
NOV 17...	710	200	82	520	7.8	7.0	132	11	1400	200
18...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
DEC 04...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
06...	1000	280	90	580	7.7	12	32	0	1900	210
18...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
JAN 01...	--	--	--	--	--	--	--	--	--	--
05...	1300	400	110	540	6.2	12	143	0	2300	140
FEB 03...	2600	410	440	1700	14	11	333	0	5100	550
MAR 10...	1900	400	270	1100	10	18	207	0	3800	340
APR 14...	1600	430	150	760	8.0	19	93	4	2900	230
29...	--	--	--	--	--	--	--	--	--	--
MAY 12...	2100	450	300	1700	15	14	270	0	4700	690
JUN 15...	3000	470	490	1300	10	13	270	5	5000	240
28...	--	--	--	--	--	--	--	--	--	--
JUL 14...	3000	460	510	1300	9.9	11	260	0	5200	230
23...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
AUG 12...	360	150	31	290	5.6	11	170	0	870	54
12...	480	180	35	330	5.9	12	140	0	1000	60
18...	--	--	--	--	--	--	--	--	--	--
SEP 01...	1800	480	200	800	7.7	21	280	20	3000	200
29...	1300	410	94	530	6.1	20	140	0	2100	170

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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)
OCT									
27...	.9	13	5010	4810	3.9	3.9	.01	2.1	6.0
NOV									
17...	.7	5.8	2670	2510	4.0	4.0	.09	.88	5.0
18...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
DEC									
04...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
06...	.8	12	3300	3110	2.6	2.6	.31	.56	3.5
18...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
JAN									
01...	--	--	--	--	--	--	--	--	--
05...	1.0	21	3810	3610	3.0	3.0	.21	1.2	4.4
FEB									
03...	.4	5.6	9220	8470	20	20	.25	.44	21
MAR									
10...	1.2	25	6300	6100	11	10	.60	4.3	16
APR									
14...	1.3	26	4720	4580	2.5	2.5	.17	2.6	5.3
29...	--	--	--	--	--	--	--	--	--
MAY									
12...	1.3	12	8370	8050	18	12	.02	1.8	20
JUN									
15...	.6	4.1	8550	7710	13	12	.05	.92	14
28...	--	--	--	--	--	--	--	--	--
JUL									
14...	.5	6.4	8740	7900	14	13	.01	1.4	15
23...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
AUG									
12...	.8	18	--	1510	--	1.1	--	--	--
12...	.9	20	--	1720	--	1.9	--	--	--
18...	--	--	--	--	--	--	--	--	--
SEP									
01...	1.8	47	5040	4930	4.0	4.0	.14	1.6	5.7
29...	1.9	35	3580	3440	1.9	1.9	1.4	2.5	5.8

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09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOLVED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDE D ORGANIC CARBON (C) (MG/L) (00689)	SAMPLE SOURCE (72005)
OCT 27...	.85	.34	920	20	--	--	10	1.1	29
NOV 17...	.40	.14	500	50	40	7.4	7.0	1.3	29
18...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
DEC 04...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
06...	.29	.03	650	30	--	--	4.5	2.1	29
18...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
JAN 01...	--	--	--	--	--	--	--	--	--
05...	.99	.35	570	70	--	--	12	1.1	29
FEB 03...	.16	.04	490	10	260	7.5	--	1.8	29
MAR 10...	1.1	.56	570	0	--	--	14	.8	29
APR 14...	1.0	.22	640	30	--	--	13	4.5	29
29...	--	--	260	10	0	--	6.0	.5	29
MAY 12...	.26	.05	730	30	160	10	9.8	1.3	29
JUN 15...	.35	.14	540	20	--	--	7.6	.9	29
28...	--	--	600	190	30	15	--	--	29
JUL 14...	.23	.12	490	30	--	--	6.6	.7	29
23...	--	--	--	--	--	849	--	--	40
25...	--	--	--	--	--	230	19	--	29
26...	--	--	--	--	--	730	--	--	40
28...	--	--	--	--	--	455	--	--	40
28...	--	--	200	--	--	--	46	--	40
AUG 12...	--	.04	190	30	--	--	--	--	29
12...	--	.04	240	30	--	--	--	--	29
18...	--	--	--	--	--	--	10	--	29
SEP 01...	1.5	.33	720	20	--	--	15	1.6	29
29...	4.5	.44	940	30	50	22	15	<8.0	29

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
OCT 27...	1400	8	--	--	--	990	920	--	--	--	--
NOV 17...	1510	6	5	--	--	--	500	<10	0	0	0
FEB 03...	1145	3	1	--	--	--	490	10	1	0	0
APR 29...	1030	--	--	--	--	340	260	--	--	--	--
MAY 12...	1200	1	2	--	--	--	730	20	2	0	0
JUN 28...	1825	--	--	800	400	720	600	--	--	--	--
JUL 23...	1400	120	--	--	--	--	--	--	--	--	--
25...	1155	10	8	--	--	--	--	--	--	--	--
26...	2330	65	--	--	--	--	--	--	--	--	--
28...	1500	--	--	16000	--	500	--	0	--	280	--
28...	1900	--	--	--	100	--	200	--	1	--	10
SEP 29...	0730	53	24	--	--	--	940	10	0	8	0

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MAN- GANESE (MN) (UG/L) (01055)
OCT 27...	--	--	--	--	--	20	100	--	260	--	--
NOV 17...	<50	1	10	10	460	50	<100	3	--	--	40
FEB 03...	50	1	30	5	5500	10	200	1	--	--	360
APR 29...	--	--	--	--	1200	10	--	--	90	90	190
MAY 12...	<50	2	50	8	2300	30	100	18	--	--	160
JUN 28...	--	--	--	--	1200	190	--	--	>240	240	50
JUL 23...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	710	--	1600
28...	--	--	--	--	--	--	--	--	--	20	--
SEP 29...	50	1	170	2	11000	30	100	1	--	--	400

DATE	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	SAMPLE SOURCE (72005)
OCT 27...	--	.0	--	8	--	--	--	--	--	29
NOV 17...	40	.0	.0	6	6	--	--	20	20	29
FEB 03...	260	.2	.0	11	5	--	--	100	50	29
APR 29...	0	--	--	--	--	2600	2600	--	--	29
MAY 12...	160	.0	.0	17	16	--	--	60	30	29
JUN 28...	30	--	--	--	--	>6300	6300	--	--	29
JUL 23...	--	--	--	7	--	--	--	--	--	40
25...	--	--	--	7	8	--	--	--	--	29
26...	--	--	--	2	--	--	--	--	--	40
28...	--	--	--	--	--	4500	--	--	--	40
28...	--	--	--	--	--	--	790	--	--	40
SEP 29...	50	.1	.0	8	5	--	--	270	10	29

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)	SAMPLE SOURCE (72005)
OCT 27...	1400	700	520	--	29
NOV 17...	1510	8	200	--	29
DEC 06...	1430	27	500	--	29
JAN 05...	0950	110	350	--	29
FEB 03...	1145	0	30	--	29
MAR 10...	1130	0	--	--	29
APR 14...	1200	47	--	240	29
MAY 12...	1200	16	--	480	29
JUN 15...	0918	3	--	82	29
JUL 14...	1130	43	--	64	29
SEP 01...	1030	160	--	5900	29
29...	0730	2200	--	12000	29

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 QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	OCT 27,76 1400	DEC 6,76 1430	FEB 3,77 1145	MAR 10,77 1130	APR 14,77 1130	
TOTAL CELLS/ML	31000	4100	1100	1300	65000	
DIVERSITY: DIVISION	1.2	0.3	1.0	0.7	0.9	
..CLASS	1.2	0.3	1.0	0.7	0.9	
...ORDER	1.4	0.5	1.1	0.7	1.1	
....FAMILY	2.0	1.4	2.0	2.4	1.3	
.....GENUS	2.0	1.4	2.1	2.6	0.0	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....CHARACIACEAE						
....SCHROEDERIA	--	--	--	--	--	--
...COELASTRACEAE						
....COELASTRUM	--	--	--	--	--	--
...HYDRODICTYACEAE						
....PEDIASTRUM	--	--	--	--	--	--
...OOCYSTACEAE						
....ANKISTRODESMUS	--	78 2	--	--	*	0
....DICTYOSPHAERIUM	--	--	--	--	--	--
....KIRCHNERIELLA	--	39 1	--	--	--	--
...OOCYSTIS	1600	5	--	--	--	--
....TETRAEDRON	--	--	--	--	--	--
...SCENEDESMACEAE						
....SCENEDESMUS	--	--	--	--	4700	7
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CARTERIA	--	--	--	--	--	--
...CHLAMYDOMONAS	13000#	41	78 2	210#	16	2700 4
...PHACOTACEAE						
....PTEROMONAS	--	--	--	--	--	--
...ZYGNEATALES						
...DESMIDIACEAE						
...STAUSTRUM	--	--	--	--	--	--
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...PENNALES						
...NAVICULACEAE						
....ENTOMONEIS	--	--	12 1	25 2	*	0
...CENTRALES						
....CHAETOCERACEAE						
....CHAETOCEROS	--	--	--	--	570	1
...COSCINODISCACEAE						
....CYCLOTELLA	--	78 2	--	--	*	0
...PENNALES						
....ACHNANTHACEAE						
....ACHNANTHES	--	--	6 1	12 1	--	--
...CYMBELLACEAE						
....AMPHORA	--	39 1	--	12 1	--	--
....CYMBELLA	--	--	6 1	25 2	1300	2
...DIATOMACEAE						
....DIATOMA	--	--	--	100 8	--	--
...EUNOTIACEAE						
....EUNOTIA	--	--	--	12 1	--	--
...FRAGILARIACEAE						
....FRAGILARIA	--	--	--	--	--	--
....SYNEORA	680	2	12 1	12 1	430	1
...GOMPHONEMACEAE						
....GOMPHONEMA	--	--	12 1	--	--	--
...NAVICULACEAE						
....GYROSIGMA	--	--	--	12 1	--	--
....NAVICULA	5900#	19	1200#	28	390#	36
...NITZSCHACEAE						
....NITZSCHIA	9100#	30	2600#	63	310#	24
...SURIRELLACEAE						
....SURIRELLA	--	--	39 1	12 1	87 7	--
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROCOCCOCCALES						
....CHROCOCCOCCAEAE						
....AGMENELLUM	--	--	36 3	--	51000#	79
....ANACYSTIS	--	--	--	--	570	1
...HORMOGONALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	--	--	390#	34	--	--
...RIVULARIACEAE						
....RAPHIDIOPSIS	--	--	--	--	--	--

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	OCT 27,76 1400	DEC 6,76 1430	FEB 3,77 1145	MAR 10,77 1130	APR 14,77 1130
TOTAL CELLS/ML	31000	4100	1100	1300	65000
DIVERSITY: DIVISION	1.2	0.3	1.0	0.7	0.9
..CLASS	1.2	0.3	1.0	0.7	0.9
..ORDER	1.4	0.5	1.1	0.7	1.1
...FAMILY	2.0	1.4	2.0	2.4	1.3
....GENUS	2.0	1.4	2.1	2.6	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
....CRYPTOMONADACEAE										
.....CRYPTOMONAS	460	1	--	-	--	-	--	-	--	-
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENAEAE										
.....EUGLENA	460	1	--	-	--	-	--	-	*	0
....LEPOCINCLIS	--	-	--	-	--	-	--	-	--	-
.....TRACHELONAS	--	-	--	-	--	-	12	1	--	-

DATE TIME	APR 14,77 1200	MAY 12,77 1200	JUN 15,77 0918	SEP 1,77 1030	SEP 29,77 0730
TOTAL CELLS/ML	6400	21000	4900	3200	64000
DIVERSITY: DIVISION	0.0	1.4	1.5	1.4	1.5
..CLASS	0.0	1.4	1.5	1.4	1.5
..ORDER	0.1	1.5	2.1	1.7	2.2
...FAMILY	2.0	2.1	2.7	2.8	2.9
....GENUS	2.3	2.2	2.8	2.8	2.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE										
.....SCHROEDERIA	--	-	--	-	--	-	--	-	330	1
...COELASTRACEAE										
....COELASTRUM	--	-	--	-	--	-	300	9	--	-
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	--	-	--	-	5200	8
...OOCYSTACEAE										
....ANKISTRODESMUS	*	0	140	1	35	1	23	1	--	-
....DICTYOSPHAERIUM	--	-	4100#	19	*	0	--	-	--	-
....KIRCHNERIELLA	--	-	140	1	--	-	--	-	--	-
...OOCYSTIS	--	-	--	-	--	-	--	-	1600	3
....TETRAEDRON	--	-	--	-	--	-	--	-	2300	4
...SCENEDESMACEAE										
....SCENEDESMUS	--	-	1700	8	490	10	280	9	9100	14
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CARTERIA	--	-	*	0	--	-	--	-	--	-
....CHLAMYDOMONAS	--	-	140	1	1800#	38	300	9	12000#	18
...PHACOTACEAE										
....PTEROMONAS	--	-	--	-	--	-	46	1	--	-
...ZYGNEMATALES										
....DESMIDIACEAE										
.....STAUSTRUM	--	-	--	-	--	-	23	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SAN JUAN RIVER BASIN

09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	APR 14,77 1200	MAY 12,77 1200	JUN 15,77 0918	SEP 1,77 1030	SEP 29,77 0730	
TOTAL CELLS/ML	6400	21000	4900	3200	64000	
DIVERSITY: DIVISION	0.0	1.4	1.5	1.4	1.5	
..CLASS	0.0	1.4	1.5	1.4	1.5	
..ORDER	0.1	1.5	2.1	1.7	2.2	
...FAMILY	2.0	2.1	2.7	2.8	2.9	
....GENUS	2.3	2.2	2.8	2.8	2.9	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...PENNALES						
....NAVICULACEAE						
....ENTOMONEIS	370	6	* 0	250	5	-- --
..CENTRALES						
....CHAETOCERACEAE						
....CHAETOCEROS	--	-	--	-	--	- 330 1
....COSCINODISCACEAE						
....CYCLOTELLA	62	1	* 0	35	1	-- -- 4200 7
...PENNALES						
....ACHNANTHACEAE						
....ACHNANTHES	62	1	--	-	--	- -- --
....CYMBELLACEAE						
....AMPHORA	--	-	140	1	140	3 230 7 1600 3
....CYMBELLA	--	-	--	-	35	1 -- -- -- --
..DIATOMACEAE						
....DIATOMA	440	7	* 0	--	-	-- -- -- --
....EUNOTIACEAE						
....EUNOTIA	--	-	--	-	--	- -- --
..FRAGILARIACEAE						
....FRAGILARIA	--	-	--	-	--	- 330 1
....SYNEDRA	190	3	--	-	--	- 740# 23 330 1
..GOMPHONEMACEAE						
....GOMPHONEMA	--	-	--	-	--	- -- --
..NAVICULACEAE						
....GYROSIGMA	--	-	--	-	--	- -- --
....NAVICULA	2600#	40	620	3	420	9 780# 24 6800 11
..NITZSCHIACEAE						
....NITZSCHIA	1600#	24	1700	8	770#	16 -- -- 650 1
..SURIRELLACEAE						
....SURIRELLA	1200#	18	140	1	70	1 -- -- -- --
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
..CHROCOCCOCEAE						
....CHROCOCCOCEAE						
....AGMENELLUM	--	-	--	-	280	6 510# 16 -- --
....ANACYSTIS	--	-	--	-	--	- -- --
..HORMOGONALES						
....OSCILLATORIACEAE	--	-	--	-	--	- -- --
....OSCILLATORIA	--	-	11000#	53	460	9 -- -- 19000# 30
..RIVULARIACEAE						
....RAPHIDIOPSIS	--	-	690	3	--	- -- --
EUGLENOPHYTA (EUGLENOIDS)						
..CRYPTOPHYCEAE						
..CRYPTOMONIDALES						
....CRYPTOMONODACEAE						
....CRYPTOMONAS	--	-	--	-	--	- -- --
..EUGLENOPHYCEAE						
..EUGLENALES						
....EUGLENAEAE						
....EUGLENA	* 0		140	1	35	1 -- -- -- --
....LEPOCINCLIS	--	-	--	-	* 0	-- -- -- --
....TRACHELOMONAS	--	-	--	-	--	- -- --

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SAN JUAN RIVER BASIN

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09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
OCT							
27...	1445	1.0	14.0	344	.93	50	--
NOV							
17...	1510	.81	6.5	479	1.0	9	29
18...	1630	.94	--	141	.36	53	--
19...	1630	1.2	--	143	.46	55	--
20...	1615	1.2	--	168	.54	48	--
21...	1700	1.2	--	165	.53	44	--
22...	1630	1.1	--	1950	5.8	97	--
23...	1630	.45	--	1890	2.3	98	--
24...	1500	1.2	--	1980	6.4	97	--
25...	1700	.96	--	311	.81	65	--
26...	1300	.96	--	220	.57	60	--
DEC							
04...	1600	.55	--	1600	2.4	18	--
05...	1530	.37	--	490	.49	41	--
06...	1430	.16	6.0	346	.15	30	29
18...	1600	.19	--	1260	.65	35	--
19...	1600	.14	--	1160	.44	38	--
20...	1630	.10	--	319	.09	70	--
21...	1530	.06	--	269	.04	71	--
22...	1530	.03	--	1870	.15	58	--
JAN							
01...	1200	E.74	--	451	.90	59	--
04...	1600	1.3	--	518	1.8	--	--
05...	0950	1.8	8.0	579	2.8	27	29
05...	1615	1.8	--	548	2.7	--	--
06...	1400	1.7	--	887	4.1	--	--
07...	1515	1.6	--	474	2.0	--	--
08...	1545	1.7	--	518	2.4	--	--
09...	1745	1.3	--	362	1.3	--	--
10...	1630	1.0	--	1360	3.7	--	--
11...	0830	.88	--	276	.66	--	--
12...	1700	.74	--	615	1.2	--	--
13...	1630	.61	--	285	.47	--	--
14...	0830	.73	--	992	2.0	--	--
15...	1700	.55	--	987	1.5	--	--
16...	1100	.61	--	651	1.1	--	--
17...	1725	.55	--	1050	1.6	--	--
18...	1715	.62	--	1520	2.5	--	--
19...	1630	.55	1.0	524	.78	--	--
20...	1700	.29	.5	372	.29	--	--
26...	1630	.29	--	612	.48	--	--

SAN JUAN RIVER BASIN

09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JAN							
27...	1600	.14	--	711	.27	--	--
28...	1630	.14	5.0	556	.21	--	--
29...	1630	.33	--	482	.43	--	--
31...	1630	.41	8.5	805	.89	--	--
FEB							
02...	1600	.25	--	278	.19	--	--
03...	1145	.37	.0	254	.25	52	29
03...	1700	.16	10.5	288	.12	--	--
22...	1645	.96	9.5	159	.41	--	--
23...	1600	1.0	10.5	189	.51	--	--
25...	1645	1.2	10.5	174	.56	--	--
26...	1415	.96	8.5	861	2.2	--	--
27...	1330	.96	11.5	336	.87	--	--
MAR							
01...	--	2.4	4.0	522	3.4	38	--
01...	1630	2.4	12.0	283	1.8	--	--
02...	1600	.88	12.5	625	1.5	--	--
03...	1630	.67	12.5	538	.97	--	--
04...	1700	1.1	14.0	174	.52	--	--
05...	1630	.96	14.0	566	1.5	--	--
07...	1430	.96	13.5	604	1.6	--	--
08...	1615	1.2	14.5	418	1.4	--	--
09...	1630	1.6	14.5	330	1.4	--	--
10...	1130	1.1	8.0	241	.72	30	29
11...	1630	1.0	5.0	154	.42	--	--
12...	1600	.96	5.0	177	.46	--	--
13...	1600	.88	5.5	342	.81	--	--
15...	1600	1.1	5.0	116	.34	--	--
16...	1600	1.2	6.0	420	1.4	--	--
17...	1615	1.1	6.5	881	2.6	--	--
18...	1600	1.0	7.5	212	.57	--	--
19...	1750	.96	7.0	153	.40	--	--
20...	1615	.88	8.0	117	.28	--	--
23...	1800	.96	8.5	395	1.0	--	--
24...	1600	1.0	8.5	467	1.3	--	--
25...	1730	1.1	9.5	925	2.7	--	--
APR							
08...	1600	5.2	--	445	6.2	--	--
10...	1600	.88	9.0	1700	4.0	34	--
11...	1630	1.0	9.5	212	.57	--	--
12...	1545	.67	14.5	1420	2.6	--	--
12...	1615	.67	--	124	.22	--	--

SAN JUAN RIVER BASIN

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09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PEN- DED SEDI- MENT (MG/L) (80154)	SUS- PEN- DED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
APR							
13...	1630	2.0	10.5	425	2.3	--	--
14...	1200	3.0	19.0	563	4.6	19	29
15...	1645	.74	--	624	1.2	--	--
16...	1600	1.1	--	255	.76	--	--
17...	1600	.81	--	2450	5.4	--	--
18...	1615	.81	15.0	2080	4.5	--	--
20...	1600	1.3	--	15600	55	--	--
21...	1630	.88	--	826	2.0	--	--
22...	1615	.96	--	738	1.9	--	--
29...	1030	2.0	14.0	63	.34	76	29
29...	1600	2.0	--	548	3.0	--	--
MAY							
01...	1600	.89	--	2470	5.9	--	--
02...	1600	.73	--	433	.85	--	--
03...	1615	.81	14.5	572	1.3	--	--
04...	1630	1.2	--	371	1.2	--	--
05...	1600	1.8	--	634	3.1	--	--
06...	1600	1.2	--	7540	24	--	--
07...	1600	.97	14.5	13200	35	38	--
08...	1600	1.0	--	274	.74	--	--
09...	1600	.89	--	4080	9.8	--	--
10...	1600	1.1	--	553	1.6	--	--
11...	1600	.81	15.0	304	.66	--	--
12...	1200	.60	11.0	271	.44	48	29
JUN							
01...	1430	1.2	13.0	155	.50	--	--
02...	1400	1.4	13.0	6510	25	--	--
04...	1600	1.6	13.5	988	4.3	--	--
05...	1600	1.2	13.5	669	2.2	--	--
06...	1330	2.0	13.0	273	1.5	--	--
09...	1600	2.2	13.5	414	2.5	--	--
13...	1400	3.0	13.5	101	.82	--	--
14...	1600	1.4	13.5	5910	22	--	--
15...	0918	1.0	18.0	273	.74	19	29
28...	1825	2.4	24.5	131	.85	41	29
JUL							
02...	1600	2.0	30.5	15	.08	--	--
03...	1615	.10	31.5	2980	.80	--	--
04...	1600	.41	30.5	761	.84	--	--
05...	1415	.33	29.5	81	.07	--	--
06...	1610	.51	31.5	193	.27	--	--
07...	1600	.67	30.0	89	.16	--	--
08...	1600	.50	30.0	137	.13	--	--
09...	1400	.45	29.5	3110	3.8	--	--
10...	1430	.61	30.5	1100	1.8	--	--
11...	1515	.67	29.5	243	.44	--	--
12...	1600	.81	30.5	4160	9.1	--	--
13...	1545	.67	30.5	30	.05	--	--
14...	1130	.19	31.0	16	.01	63	29
23...	1400	E135	--	105000	340	61	40
23...	1800	1.2	--	105000	340	61	--
25...	1155	.96	--	4380	11	50	29
26...	2330	E135	--	118000	38600	56	40
28...	1500	E135	--	89800	29300	61	40
28...	1900	E340	--	129000	118000	34	40
AUG							
12...	0840	3.4	21.0	37300	342	93	29
12...	1000	3.4	22.0	36900	339	81	29
18...	1100	.76	--	448	.92	91	--
25...	1100	.76	19.5	2280	4.7	75	--
SEP							
01...	1030	1.0	20.5	123	.33	76	29
29...	0730	1.2	13.0	789	2.6	75	29

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 down stream side of center bridge pier, 800 ft (240 m) downstream from Fajada Wash, and 0.5 mi (0.8 km) southwest of Chaco Canyon National Monument Visitors Center.

DRAINAGE AREA.--578 mi² (1,497 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,140 ft (1,871 m), from topographic map.

REMARKS.--Water-discharge records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 898 ft³/s (25.4 m³/s) July 24, 1977, gage height, 5.35 ft (1.631 m), from rating curve extended above 4.0 ft³/s (0.113 m³/s) on basis of slope-area measurements at gage heights, 3.44 ft (1.049 m) and 3.68 ft (1.122 m); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 m³/s) and maximum(*).

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 17	0845	228 6.46	2.89 0.881	July 24	2230	*898 25.4	5.35 1.631
July 19	0445	270 7.65	3.06 0.933	Aug. 12	1300	526 14.9	4.02 1.225
July 21	0215	643 18.2	4.44 1.353	Aug. 16	0145	365 10.3	3.44 1.049
July 22	0015	278 7.87	3.09 0.942	Aug. 17	0345	716 20.3	4.70 1.433

No flow most of time.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.03	.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	3.8
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.30
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	1.2	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.65	.04	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.21	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.46	.00	.00	.00	.00	.00	201	.00
13	.00	.00	.00	.00	.53	.00	.00	.00	.00	.00	51	.00
14	.00	.00	.00	.00	.40	.00	.00	.00	.00	.00	68	.00
15	.00	.00	.00	.00	.39	.00	.00	.00	.00	.00	98	.00
16	.00	.00	.00	.00	.27	.00	.00	.00	.00	.01	160	.00
17	.00	.00	.00	.00	.16	.00	.00	.00	.00	29	260	.00
18	.00	.00	.00	.00	.08	.00	.00	.00	.00	1.0	63	.00
19	.00	.00	.00	.00	.22	.00	.00	.00	.00	38	11	.00
20	.00	.00	.00	.00	1.9	.00	.00	.00	.00	63	1.8	.00
21	.00	.00	.00	.00	.26	.00	.00	.00	.00	165	.12	.00
22	.00	.00	.00	.00	.06	.00	.00	.00	.00	97	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.3	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	112	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	148	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.9	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.7	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.48	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.15	.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	5.59	1.27	.00	.00	.00	664.54	913.92	4.10
MEAN	.000	.000	.000	.000	.20	.041	.000	.000	.000	21.4	29.5	.14
MAX	.00	.00	.00	.00	1.9	1.2	.00	.00	.00	165	260	3.8
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	11	2.5	.00	.00	.00	1320	1810	8.1

WTR YR 1977 TOTAL 1589.42 MEAN 4.35 MAX 260 MIN .00 AC-FT 3150

09367680 CHACO WASH AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Under the heading SAMPLE SOURCE numerical values are used to indicate method of sampling; 29 indicates dip or grab sample and 40 indicates single-stage sample.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)
FEB												
12-14	--	*.52	270	7.8	3.5	2200	71	30	0	9.8	1.4	47
14...	1300	1.3	265	7.8	6.0	--	--	--	--	--	--	--
15-16	--	--	500	7.9	5.0	--	--	--	--	--	--	--
17...	1230	.01	690	8.0	2.5	--	--	58	0	19	2.6	130
MAR												
09...	1130	*.58	440	7.9	6.0	10000	220	49	0	17	1.6	77
10...	--	*.04	430	7.8	4.5	--	--	--	--	--	--	--
JUL												
16...	--	*.80	720	7.4	--	36000	930	51	0	18	1.4	150
17...	--	*34	710	7.4	--	--	--	--	--	--	--	--
17...	0830	E100	700	7.8	--	--	--	--	--	--	--	--
18...	--	*3.5	400	7.6	--	--	--	--	--	--	--	--
19...	--	*43	405	7.5	--	--	--	--	--	--	--	--
20...	--	*65	465	7.8	--	--	--	--	--	--	--	--
20...	1400	E107	520	7.7	--	--	--	--	--	--	--	--
21...	1730	E107	350	7.7	--	--	--	--	--	--	--	--
24...	2100	E584	450	7.2	--	--	--	--	--	--	--	--
26...	1030	2.0	400	7.8	14.5	--	--	--	--	--	--	--
AUG												
12...	--	*203	615	7.5	--	--	--	60	0	16	4.8	130
12...	0130	187	495	7.4	--	--	--	--	--	--	--	--
14...	--	*68	490	7.5	--	--	--	60	0	21	1.8	86
16...	0945	128	410	7.6	--	--	--	--	--	--	--	--
17...	--	*260	460	7.4	--	--	--	130	0	42	5.2	50
19...	1400	12	380	7.5	28.0	--	--	--	--	--	--	--
19...	1410	12	390	7.5	28.0	--	--	--	--	--	--	--
SEP												
04...	--	--	420	7.4	--	--	--	100	0	35	3.5	62

* mean discharge (00060)

DATE	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRATE PLUS NITRATE (N) (MG/L) (00631)
FEB												
12-14	3.7	2.3	110	0	30	2.9	.5	5.4	169	162	1.8	1.8
14...	--	5.1	--	--	--	--	--	--	--	--	--	--
15-16	--	--	--	--	--	--	--	--	--	--	--	--
17...	7.4	4.6	190	0	140	19	.8	4.1	--	422	1.8	1.8
MAR												
09...	4.8	2.8	180	0	72	3.1	.7	13	292	281	1.2	1.1
10...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
16...	9.2	3.6	340	0	74	4.7	1.0	16	443	469	.70	.42
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
12...	7.3	3.1	330	0	57	3.7	1.1	12	--	394	--	.65
12...	--	--	--	--	--	--	--	--	--	--	--	--
14...	4.8	3.0	230	0	57	3.2	1.0	12	--	301	--	.49
16...	--	--	--	--	--	--	--	--	--	--	--	--
17...	1.9	5.0	220	0	57	5.3	.8	10	--	286	--	.43
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
04...	2.7	3.8	210	0	52	7.0	1.0	8.9	--	279	--	.35

09367680 CHACO WASH AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOLVED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDED ORGANIC CARBON (C) (MG/L) (00689)	SAMPLE SOURCE (72005)
FEB												
12-14	.06	.12	2.0	.83	.05	40	60	10	22	--	--	29
14...	--	--	--	--	--	--	--	--	--	--	--	29
15-16	--	--	--	--	--	--	80	0	--	--	--	29
17...	--	--	2.5	.09	.14	80	50	--	9.7	--	--	29
MAR												
09...	.01	7.4	8.6	.62	.04	60	50	0	59	--	--	29
10...	--	--	--	--	--	--	510	10	77	--	--	29
JUL												
16...	.07	45	46	5.2	.06	110	21000	8800	274	9.1	>132	29
17...	--	--	--	--	--	120	220	20	123	9.7	--	29
17...	--	--	--	--	--	--	--	--	488	--	--	40
18...	--	--	--	--	--	80	110	8	124	5.9	--	29
19...	--	--	--	--	--	80	70	4	95	5.8	--	29
20...	--	--	--	--	--	80	40	4	88	7.4	--	29
20...	--	--	--	--	--	--	--	--	294	--	--	40
21...	--	--	--	--	--	--	--	--	166	--	--	40
24...	--	--	--	--	--	--	--	--	221	--	--	40
26...	--	--	--	--	--	--	--	--	59	--	--	29
AUG												
12...	--	--	--	--	.05	70	130	--	194	--	--	29
12...	--	--	--	--	--	--	--	--	288	--	--	40
14...	--	--	--	--	.06	60	60	--	109	--	--	29
16...	--	--	--	--	--	--	--	--	190	--	--	40
17...	--	--	--	--	.02	70	90	--	127	--	--	29
19...	--	--	--	--	--	--	--	--	183	--	--	40
19...	--	--	--	--	--	--	--	--	57	--	--	29
SEP												
04...	--	--	--	--	.06	60	60	--	117	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)
FEB												
12-14	--	34	1	500	0	250	40	<10	0	30	0	<50
15-16	--	12	2	200	100	90	--	<10	1	10	0	<50
17...	1230	3	--	0	--	70	80	<10	--	0	--	<50
MAR												
09...	1130	90	3	2000	0	100	60	10	0	50	0	100
10...	--	75	1	2300	0	150	--	10	0	100	0	150
JUL												
16...	--	150	5	12000	0	120	110	20	1	190	0	400
17...	--	--	--	6600	100	320	120	--	--	--	--	--
17...	0830	1200	--	20000	--	--	--	1	--	300	--	--
18...	--	--	--	2800	300	180	80	--	--	--	--	--
19...	--	--	--	3100	100	170	80	--	--	--	--	--
20...	--	--	--	3500	100	160	80	--	--	--	--	--
20...	1400	460	--	--	--	270	--	20	--	310	--	--
21...	1730	240	--	--	--	240	--	20	--	240	--	--
24...	2100	360	--	4000	--	220	--	--	--	170	--	--
26...	1030	150	--	3000	--	190	--	0	--	100	--	--
AUG												
12...	--	740	5	10000	600	160	70	15	1	200	0	--
12...	0130	320	--	7000	--	280	--	0	--	260	--	--
16...	0945	250	--	6000	--	200	--	0	--	160	--	--
17...	--	150	--	4000	--	220	70	15	--	170	--	--
19...	1400	300	--	5000	--	260	--	0	--	180	--	--
19...	1410	78	--	2000	--	170	--	0	--	90	--	--

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09367680 CHACO WASH AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MANGANESE (MANG) (UG/L) (01055)	DIS- SOLVED MANGANESE (MANG) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)
FEB												
12-14	1	70	6	72000	60	100	2	70	0	730	10	.2
15-16	0	20	8	23000	80	<100	0	30	--	300	0	.0
17...	--	<10	--	3200	50	<100	--	10	10	60	--	.3
MAR												
09...	0	210	5	120000	50	250	0	100	10	2300	0	.3
10...	0	340	6	200000	510	350	0	140	10	3500	10	4.0
JUL												
16...	1	880	4	330000	21000	800	16	330	20	16000	8800	2.2
17...	--	--	--	110000	220	300	2	340	20	12000	20	--
17...	--	--	--	--	--	950	--	--	--	--	--	--
18...	--	--	--	57000	110	200	19	200	4	5100	8	--
19...	--	--	--	290000	70	400	7	280	2	6600	4	--
20...	--	--	--	220000	40	300	21	180	6	4700	4	--
20...	--	--	--	--	--	630	--	--	--	--	--	--
21...	--	--	--	--	--	520	--	--	--	--	--	--
24...	--	--	--	--	--	310	--	--	--	--	--	--
26...	--	--	--	--	--	200	--	--	--	--	--	--
AUG												
12...	--	--	--	--	130	440	6	--	--	--	--	1.2
12...	--	--	--	--	--	560	--	--	--	--	--	--
16...	--	--	--	--	--	340	--	--	--	--	--	--
17...	--	--	--	--	90	330	--	--	--	--	--	--
19...	--	--	--	--	--	320	--	--	--	--	--	--
19...	--	--	--	--	--	150	--	--	--	--	--	--

DATE	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELENIUM (SE) (UG/L) (01147)	DIS- SOLVED SELENIUM (SE) (UG/L) (01145)	TOTAL SILVER (AG) (UG/L) (01077)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	TOTAL STRONTIUM (SR) (UG/L) (01082)	DIS- SOLVED STRONTIUM (SR) (UG/L) (01080)	DIS- SOLVED VANADIUM (V) (UG/L) (01085)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	SAMPLE SOURCE (72005)
FEB											
12-14	.0	2	1	--	--	530	130	8.0	300	0	29
15-16	.0	2	1	--	--	300	210	.7	100	20	29
17...	--	2	--	--	--	230	--	--	--	--	29
MAR											
09...	.0	2	1	10	--	--	--	--	480	20	29
10...	.0	3	1	10	0	--	--	--	730	10	29
JUL											
16...	.0	0	0	--	--	7600	260	--	1400	10	29
17...	--	--	--	--	--	7900	240	--	--	--	29
17...	--	--	--	--	--	--	--	--	--	--	40
18...	--	--	--	--	--	1900	280	--	--	--	29
19...	--	--	--	--	--	2000	290	--	--	--	29
20...	--	--	--	--	--	2700	130	--	--	--	29
20...	--	--	--	--	--	--	--	--	--	--	40
21...	--	--	--	--	--	--	--	--	--	--	40
24...	--	--	--	--	--	--	--	--	--	--	40
26...	--	--	--	--	--	--	--	--	--	--	29
AUG											
12...	.0	2	1	--	--	--	--	--	--	--	29
12...	--	--	--	--	--	--	--	--	--	--	40
16...	--	--	--	--	--	--	--	--	--	--	40
17...	--	--	--	--	--	--	--	--	--	--	29
19...	--	--	--	--	--	--	--	--	--	--	40
19...	--	--	--	--	--	--	--	--	--	--	29

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NON- FILTRABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS (UG/L) (80030)	SUS- PENDEO GROSS ALPHA AS (UG/L) (80040)	DIS- SOLVED GROSS BETA AS (PC/L) (03515)	SUS- PENDEO GROSS BETA AS (PC/L) (03516)	DIS- SOLVED GROSS BETA AS SR90 (PC/L) (80050)	SUS- PENDEO GROSS BETA AS SR90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)	DIS- SOLVED URANIUM (DIRECT FLUORO- METRIC) (PC/L) (80010)	SAMPLE SOURCE (72005)
FEB												
14...	1300	3600	4.4	350	3.8	130	3.1	100	.02	1.2	--	29
17...	1230	140	7.4	19	3.4	8.4	2.7	6.7	.05	2.2	--	29
MAR												
09...	1130	5100	8.0	120	4.9	130	4.4	110	.13	--	2.9	29
JUL												
16...	--	120000	17	12000	13	3100	10	2500	.31	7.8	--	29

SAN JUAN RIVER BASIN

09367680 CHACO WASH AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PEN- DED SEDI- MENT (MG/L) (80154)	SUS- PEN- DED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
FEB							
12...	1130	2.0	3.0	4050	22	100	--
12...	1140	1.7	3.0	4130	19	100	--
12...	1150	1.6	4.0	4290	19	100	--
12...	1200	1.6	4.0	4320	19	100	--
12...	1300	3.0	4.0	4420	36	100	--
13...	1015	2.5	3.0	3740	25	100	--
13...	1030	2.0	3.0	4030	22	100	--
13...	1040	1.7	4.0	3980	18	100	--
13...	1100	1.6	4.0	4380	19	100	--
13...	1130	1.6	4.0	4480	19	100	--
14...	1130	1.7	3.0	3550	16	100	--
14...	1145	1.7	3.0	3420	16	100	--
14...	1200	2.5	4.0	3220	22	100	--
14...	1215	2.5	4.0	3250	22	100	--
14...	1230	2.0	5.0	3270	18	100	--
14...	1245	1.7	5.0	3440	16	100	--
14...	1300	1.3	6.0	3630	13	100	29
14...	1315	1.2	6.0	3840	12	100	--
14...	1430	.78	7.0	5140	11	100	--
15...	1215	.12	4.0	7270	2.4	100	--
15...	1230	1.3	4.0	4540	16	100	--
15...	1245	1.3	5.0	832	2.9	100	--
15...	1300	1.3	6.0	2860	10	100	--
15...	1400	1.0	6.0	3960	11	100	--
16...	1300	1.0	5.0	5430	15	100	--
16...	1315	.91	4.0	4230	10	100	--
16...	1330	.91	5.0	3420	8.4	100	--
16...	1345	.78	5.0	2380	5.0	100	--
16...	1400	.65	7.0	3460	6.1	100	--
17...	1230	.01	2.5	395	.01	99	29
17...	1430	.44	7.5	3300	3.9	98	--
MAR							
09...	1115	.58	5.5	23400	37	100	--
09...	1130	.58	6.0	20900	33	100	29
09...	1145	.51	5.5	45300	62	100	--
09...	1200	4.5	5.5	75200	914	100	--
09...	1215	7.0	6.0	26900	508	100	--
09...	1245	5.0	6.0	21200	286	100	--
09...	1345	4.5	6.0	19200	233	100	--

SAN JUAN RIVER BASIN

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09357680 CHACO WASH AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
MAR											
09...	1500	3.7	6.5	15500	155	--	--	--	--	100	--
09...	1610	3.7	7.0	23500	235	--	--	--	--	100	--
09...	1715	2.0	6.0	17000	92	--	--	--	--	100	--
09...	1810	1.7	5.0	17200	79	--	--	--	--	100	--
09...	2005	.91	5.0	17100	42	--	--	--	--	100	--
09...	2110	.65	4.0	11000	19	--	--	--	--	100	--
10...	--	*.04	4.5	E12000	1.3	--	--	--	--	100	29
10...	1015	.30	5.0	11200	9.1	--	--	--	--	100	--
10...	1035	.30	3.0	11500	9.3	--	--	--	--	100	--
10...	1105	.44	3.5	11700	14	--	--	--	--	100	--
10...	1115	.44	4.0	11500	14	--	--	--	--	100	--
10...	1145	.44	4.0	11200	13	--	--	--	--	100	--
10...	1400	.37	5.0	11600	12	--	--	--	--	100	--
10...	1500	.31	5.0	11000	9.2	--	--	--	--	100	--
10...	1615	.31	6.0	11000	9.2	--	--	--	--	100	--
JUL											
16...	--	*.80	--	E71100	154	--	--	--	--	E100	29
16...	1130	1.2	25.0	63600	206	--	--	--	--	--	--
16...	1140	1.2	25.0	64300	208	94	98	100	--	--	--
16...	1150	1.2	25.5	63800	207	--	--	--	--	--	--
16...	1200	1.0	25.5	74100	200	--	--	--	--	--	--
16...	1210	1.0	25.5	94000	254	--	--	--	--	--	--
16...	1300	1.0	25.5	94300	255	--	--	--	--	--	--
16...	1400	.91	25.5	72900	179	--	--	--	--	--	--
16...	1500	.91	25.5	63700	157	--	--	--	--	--	--
16...	1600	.78	26.0	63900	135	--	--	--	--	--	--
16...	1700	.78	26.0	64100	135	--	--	--	--	--	--
16...	1800	.65	26.0	60000	105	--	--	--	--	--	--
16...	1900	.65	25.8	59700	105	--	--	--	--	100	--
16...	2000	.78	26.0	97300	205	--	--	--	--	--	--
16...	2100	.78	26.0	60000	126	--	--	--	--	--	--
17...	--	*34	--	E83800	7690	--	--	--	--	--	29
17...	0830	E100	--	101000	27300	--	--	--	--	--	40
17...	1150	127	25.0	93700	32100	74	82	96	100	--	--
17...	1200	98	25.0	93400	24700	--	--	--	--	--	--
17...	1210	95	25.0	93100	23900	--	--	--	--	--	--
17...	1300	67	25.0	93900	17000	--	--	--	--	100	--
17...	1400	30	25.0	63900	5180	--	--	--	--	--	--
17...	1500	25	25.0	64500	4350	--	--	--	--	--	--
18...	--	*3.5	--	E19700	186	--	--	--	--	--	29

* mean discharge (00060)

SAN JUAN RIVER BASIN

09367680 CHACO WASH AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (000061)	TEMPER- ATURE (DEG C) (00010)	SUS- PEN- DED SEDI- MENT (MG/L) (80154)	SUS- PEN- DED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL							
18...	2100	1.4	23.5	19300	73	100	--
18...	2110	1.4	23.5	19900	75	--	--
18...	2120	1.4	23.5	19900	75	--	--
18...	2140	1.3	23.5	20000	70	--	--
18...	2150	1.3	23.5	19700	69	--	--
18...	2400	16	23.5	19100	825	100	--
19...	--	*43	--	E19100	2220	--	29
19...	0400	5.0	23.0	19700	266	--	--
19...	0410	89	23.0	18900	4540	100	--
19...	0420	182	23.0	19900	9780	--	--
19...	0430	242	23.0	20100	13100	--	--
19...	0440	267	23.0	18600	13400	100	--
19...	0500	250	23.0	18500	12500	--	--
19...	0600	182	24.0	18700	9190	--	--
19...	0700	117	24.0	18400	5810	--	--
19...	0800	78	24.0	18600	3920	--	--
19...	0900	52	24.5	18500	2600	--	--
19...	1000	39	24.5	18500	1950	--	--
19...	1100	29	25.0	18500	1450	--	--
19...	1200	22	25.0	18300	1090	--	--
19...	1300	16	25.0	18100	782	--	--
20...	--	*65	--	21000	3690	E100	29
20...	0945	3.0	25.0	21000	170	--	--
20...	1045	2.5	25.0	21400	144	--	--
20...	1145	2.2	25.0	21400	127	--	--
20...	1245	2.0	25.0	21200	114	--	--
20...	1330	2.0	25.0	21400	116	--	--
20...	1400	E107	--	48400	14000	--	40
20...	1430	2.0	24.5	21200	114	--	--
20...	1530	2.0	24.5	21300	115	--	--
20...	1630	2.0	24.5	21400	116	--	--
20...	1730	2.2	24.5	21300	127	--	--
20...	1830	2.0	24.5	21400	116	--	--
20...	1930	7.0	24.5	21000	397	100	--
21...	--	*173	--	E23100	10800	E99	29
21...	1000	64	19.0	39100	6760	--	--
21...	1010	61	19.0	25700	4230	--	--
21...	1020	59	19.0	24600	3920	--	--
21...	1030	56	19.0	23100	3490	--	--

SAN JUAN RIVER BASIN

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09367680 CHACO WASH AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS- SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL							
21...	1040	55	19.0	23400	3470	--	--
21...	1050	52	19.0	23600	3310	99	--
21...	1100	49	19.0	22600	2990	--	--
21...	1110	46	19.5	20500	2550	--	--
21...	1120	45	19.5	19800	2410	--	--
21...	1520	27	24.0	48400	3530	--	--
21...	1730	E107	--	44800	12900	70	40
22...	--	*103	--	17200	4780	--	29
22...	0900	87	18.0	17000	3990	--	--
22...	0910	89	18.0	17200	4130	99	--
22...	0922	93	18.0	18000	4520	--	--
22...	0935	89	18.0	17400	4180	--	--
22...	0946	87	18.0	16800	3950	--	--
22...	0959	81	18.0	17100	3740	--	--
22...	1010	69	18.0	18100	3370	--	--
22...	1330	55	18.0	27600	4100	--	--
22...	1435	55	18.0	17700	2630	--	--
22...	1540	55	18.0	17500	2600	--	--
24...	2100	E584	--	26700	42100	95	40
26...	1030	2.0	14.5	15500	84	100	29
AUG							
12...	--	*203	--	E90900	49800	E85	29
12...	0120	E12	28.0	35300	1140	95	40
12...	0130	187	--	44700	22600	95	40
12...	0930	280	18.5	109000	82400	--	--
12...	0940	305	18.5	92700	76300	--	--
12...	1000	347	18.5	55700	52200	--	--
12...	1020	380	18.5	102000	105000	--	--
12...	1035	396	18.5	74100	79200	--	--
12...	1050	419	18.5	102000	115000	--	--
12...	1110	425	18.5	116000	133000	--	--
12...	1200	1500	19.0	25700	104000	99	--
12...	1230	2000	--	77300	417000	86	--
12...	1300	520	19.0	99900	140000	87	--
12...	1400	330	19.5	74000	65900	--	--
12...	1500	230	20.0	100000	62100	--	--
14...	--	*68	--	E34800	6390	E95	29
14...	0500	55	22.0	31700	4710	--	--
14...	0520	55	22.0	38700	5750	--	--
14...	0530	55	22.0	35800	5320	--	--
14...	0550	55	22.0	30400	4510	--	--
14...	0600	57	22.0	32100	4940	94	--
14...	0620	57	22.0	36500	5620	--	--
14...	0640	57	22.0	32600	5020	--	--
14...	0700	57	22.0	37800	5820	--	--
14...	0730	57	22.0	33800	5200	--	--
14...	0800	57	22.0	38100	5860	--	--
16...	0930	128	18.5	37500	13000	82	--
16...	0945	128	--	30700	10600	94	40
17...	--	*260	--	E72200	50700	--	29
17...	0215	632	18.0	55300	94400	--	--
17...	0230	713	18.0	51700	99500	59	--
17...	0245	688	18.0	58500	109000	--	--
17...	0255	685	18.0	68000	126000	--	--
17...	0320	660	18.0	96500	172000	--	--
17...	0340	604	18.0	55200	90000	--	--
17...	0400	536	19.0	50700	73400	--	--
17...	0420	480	19.0	44500	57700	--	--
17...	0440	452	19.0	111000	135000	--	--
17...	0540	367	19.0	131000	130000	--	--
19...	1400	12	28.0	35300	1140	95	40
19...	1410	12	28.0	11500	373	98	29
SEP							
04...	0715	23	18.5	21700	1350	100	--
04...	0725	22	18.5	23000	1370	--	--
04...	0735	20	18.5	21400	1160	--	--
04...	0750	18	18.5	21300	1040	--	--
04...	0810	16	18.5	21500	929	--	--
04...	0830	14	18.5	21100	798	--	--
04...	0930	11	18.5	21000	624	--	--
04...	1030	8.4	18.5	21000	476	--	--
04...	1130	7.4	18.5	21200	424	--	--
04...	1230	6.0	18.5	20500	332	--	--

* Mean discharge (00060)

SAN JUAN RIVER BASIN

09367710 DE-NA-ZIN WASH NEAR BISTI TRADING POST, NM

LOCATION.--Lat 36°13'51", long 108°11'57", in NE¼NW¼ Sec. 14, T.23 N., R.13 W., San Juan County, Hydrologic Unit 14080106, on right bank 400 ft (122 m) upstream from county road, 0.8 mi (1.3 km) downstream from Alamo Wash, 4.5 mi (7.2 km) southeast of Bisti Trading Post, and at mile 7.3 (11.7 km).

DRAINAGE AREA.--184 mi² (477 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 5,840 ft (1,780 m), from topographic map.

REMARKS.--Water-discharge records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,700 ft³/s (48.1 m³/s) July 20, 1977, gage height, 8.60 ft (2.621 m) from rating curve extended above 2.0 ft³/s (0.057 m³/s) on basis of slope-area measurement at gage height, 4.30 ft (1.311 m); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base at 100 ft³/s (2.8 m³/s) and maximum (*).

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 20	2100	*1,700 48.1	8.60 2.621	Aug. 12	0045	200 5.66	3.78 1.152
July 26	1945	327 9.26	3.95 1.204	Aug. 13	2345	362 10.3	2.62 0.799
Aug. 10	2315	200 5.66	3.01 0.917				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.22	1.7	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.18	.73	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.90	.31	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	2.5	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	1.8	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	1.8	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	1.8	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	1.6	.00	.00	16	.00	.00	5.3	.00
11	.00	.00	.00	.00	1.2	.00	.00	1.7	.00	.00	46	.00
12	.00	.00	.00	.00	.49	.00	.00	.72	.00	.00	79	23
13	.00	.00	.00	.00	.18	.00	.00	.10	.00	.00	6.3	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	35	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	13	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	26	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.8	3.0	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.18	13	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.22	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	140	.10	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	70	.00	.00
22	.00	.00	.00	.03	.00	.00	.00	.00	.00	13	.00	.00
23	.00	.00	.00	1.1	.00	.00	.00	.00	.00	.42	.00	.00
24	.00	.00	.00	1.4	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.49	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.22	.00	.00	.00	.00	.00	40	.00	.00
27	.00	.00	.00	.90	.00	.00	.00	.00	.00	15	.00	.00
28	.00	.00	.00	.49	.34	.00	.00	.00	.00	.90	.00	.00
29	.00	.00	.00	.10	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.40	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.40	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	5.53	15.81	2.74	.00	18.52	.00	284.30	226.92	23.00
MEAN	.000	.000	.000	.18	.56	.088	.000	.60	.000	9.17	7.32	.77
MAX	.00	.00	.00	1.4	2.5	1.7	.00	16	.00	140	79	23
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC=FT	.00	.00	.00	11	31	5.4	.00	37	.00	564	450	46

CAL YR 1976 TOTAL 515.76 MEAN 1.41 MAX 98 MIN .00 AC=FT 1020
WTR YR 1977 TOTAL 576.82 MEAN 1.58 MAX 140 MIN .00 AC=FT 1140

SAN JUAN RIVER BASIN

09367710 DE-NA-ZIN WASH NEAR BISTI TRADING POST, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS-SOLVED ORTHO-PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS-SOLVED ORGANIC CARBON (C) (MG/L) (00681)	SUSPENDED ORGANIC CARBON (C) (MG/L) (00689)	SAMPLE SOURCE (72005)
JAN 23...	--	--	--	--	--	36	--	--	40
FEB 08...	--	--	--	--	--	--	--	--	29
17...	1.3	.06	130	280	10	23	--	--	29
MAR 02...	--	--	250	50	0	39	--	--	29
JUL 20...	--	--	--	--	--	341	--	--	40
26...	--	--	--	--	--	431	--	--	40
AUG 16...	--	--	110	100	10	35	3.8	40	29
17...	--	--	--	--	--	29	8.6	22	29

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS-SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS-SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS-SOLVED BORON (B) (UG/L) (01020)	TOTAL CADMIUM (CD) (UG/L) (01027)	DIS-SOLVED CADMIUM (CD) (UG/L) (01025)	TOTAL CHROMIUM (CR) (UG/L) (01034)	DIS-SOLVED CHROMIUM (CR) (UG/L) (01030)
JAN 23...	0100	--	--	2200	--	170	--	--	--	50	--
FEB 17...	1600	--	4	--	0	--	130	--	0	--	--
MAR 02...	1755	--	--	--	--	>250	250	10	0	100	10
JUL 20...	0345	640	--	--	--	--	--	--	--	--	--
26...	1945	220	--	--	--	--	--	--	--	--	--
AUG 16...	1710	--	--	1500	0	160	110	10	2	900	10
17...	1710	35	1	--	--	--	--	--	--	--	--

DATE	HEXA-VALENT CHROMIUM (CR6) (UG/L) (01032)	TOTAL COPPER (CU) (UG/L) (01042)	DIS-SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS-SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS-SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS-SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MANGANESE (MN) (UG/L) (01055)
JAN 23...	--	--	--	90000	--	--	--	100	--	1900
FEB 17...	0	--	13	--	280	400	2	--	--	--
MAR 02...	--	--	--	190000	50	400	1	120	8	2600
JUL 20...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
AUG 16...	--	560	--	310000	100	400	23	190	20	5800
17...	--	--	--	--	--	--	--	--	--	--

DATE	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS-SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELENIUM (SE) (UG/L) (01147)	DIS-SOLVED SELENIUM (SE) (UG/L) (01145)	DIS-SOLVED SILVER (AG) (UG/L) (01075)	TOTAL STRONTIUM (SR) (UG/L) (01082)	DIS-SOLVED STRONTIUM (SR) (UG/L) (01080)	DIS-SOLVED ZINC (ZN) (UG/L) (01090)	SAMPLE SOURCE (72005)
JAN 23...	--	--	--	--	--	--	2000	--	--	40
FEB 17...	10	.7	--	--	3	0	--	--	10	29
MAR 02...	0	--	--	--	--	--	2700	60	--	29
JUL 20...	--	3.3	--	0	--	--	--	--	--	40
26...	--	2.8	--	0	--	--	--	--	--	40
AUG 16...	10	--	--	--	--	--	3700	160	--	29
17...	--	.4	.0	7	1	--	--	--	--	29

SAN JUAN RIVER BASIN

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09367710 DE-NA-ZIN WASH NEAR BISTI TRADING POST, NM -- Continued

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED URANIUM (U) (UG/L) (80020)	SAMPLE SOURCE (72005)
FEB				
08...	1630	--	1.8	29
17...	1600	.18	--	29

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
FEB							
08...	1630	6.0	2.0	16300	264	100	29
08...	1631	411	2.0	15700	17400	100	--
17...	1600	E.01	--	13100	.35	100	29
MAR							
02...	1755	93	3.0	19800	4970	100	29
JUL							
20...	0345	E350	--	118000	112000	78	40
26...	1945	E350	--	101000	95400	82	40
AUG							
16...	1710	2.1	--	24700	140	100	29
17...	1710	.50	--	7270	9.8	100	29

SAN JUAN RIVER BASIN

09367930 HUNTER WASH AT BISTI TRADING POST, NM

LOCATION.--Lat 36°16'37", long 108°15'12", in NW¼ sec. 32, T. 24 N., R. 13 W., San Juan County, Hydrologic Unit 14080106, on right bank 150 ft (46 m) upstream from road crossing at Bisti Trading Post, and 35 mi (56 km) south of Farmington.

DRAINAGE AREA.--45.6 mi² (118 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 5,770 ft (1,759 m), from topographic map.

REMARKS.--Water-discharge records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,570 ft³/s (44.5 m³/s) Sept. 19, 1976, gage height, 6.22 ft (1.896 m), from rating curve extended above 10 ft³/s (0.28 m³/s) on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20 ft³/s (0.57 m³/s) and maximum (*).

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 16	2200	115 3.26	2.57 0.783	Aug. 12	0045	340 9.63	3.30 1.006
July 21	0030	430 12.2	3.55 1.082	Aug. 13	2215	*1,500 42.5	6.12 1.865
July 26	1945	169 4.79	2.73 0.832	Sept. 12	0215	220 6.23	2.90 0.884
Aug. 10	2130	163 4.62	2.71 0.826	Sept. 22	2100	45 1.27	2.30 0.701

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.19	.18	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	1.1	.04	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.10	.53	.04	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.15	.41	.09	.20	.00	.00	.00	.00	.48
5	.00	.00	.00	.01	.48	.06	.34	.00	.00	.00	.00	.00
6	.00	.00	.00	.06	.29	.04	.42	.00	.00	.00	.00	.00
7	.00	.00	.00	.10	.20	.06	.20	.00	.00	.00	.00	.00
8	.00	.00	.00	.15	.06	.04	.15	.00	.00	.00	.25	.00
9	.00	.00	.00	.06	.00	.02	.10	.00	.00	.00	.00	.00
10	.00	.00	.00	.10	.00	.00	.06	.00	.00	.00	7.0	.00
11	.00	.00	.00	.06	.00	.00	.03	.00	.00	.00	14	.00
12	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	24	12
13	.00	.00	.00	.00	.00	.00	.00	1.1	.00	.00	74	.00
14	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	10	.00
15	.00	.00	.00	1.7	.00	.00	.00	.06	.00	.00	.00	.00
16	.00	.00	.00	.52	.00	.00	.00	.10	.00	3.2	.00	.00
17	.00	.00	.00	.42	.00	.00	.00	.03	.00	1.7	.00	.00
18	.00	.00	.00	.34	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.42	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.52	.00	.00	.00	.00	.00	20	.00	.00
21	.00	.00	.00	.34	.00	.00	.00	.00	.00	29	.00	.00
22	.00	.00	.00	.42	.00	.00	.00	.00	.00	.00	.00	1.7
23	.00	.00	.00	.74	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.62	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.42	.59	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.34	.39	.00	.00	.00	.00	5.1	.00	.00
27	.00	.00	.00	.26	.01	.00	.00	.00	.00	2.9	.00	.00
28	.00	.00	.00	.15	.06	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.10	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.15	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.10	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	8.36	4.31	.57	1.50	1.34	.00	61.90	129.25	14.18
MEAN	.000	.000	.000	.27	.15	.018	.050	.043	.000	2.00	4.17	.47
MAX	.00	.00	.00	1.7	1.1	.18	.42	1.1	.00	29	74	12
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	17	8.5	1.1	3.0	2.7	.00	123	256	28

CAL YR 1976 TOTAL 256.80 MEAN .70 MAX 110 MIN .00 AC-FT 509
WTR YR 1977 TOTAL 221.41 MEAN .61 MAX 74 MIN .00 AC-FT 439

SAN JUAN RIVER BASIN

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09367930 HUNTER WASH AT BISTI TRADING POST, NM -- Continued
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955 to current year.

REMARKS.--Under the heading SAMPLE SOURCE numerical values are used to indicate sampling method; 29 indicates dip or grab sample and 40 indicates single-stage sample.

CHEMICAL ANALYSES, WATER YEAR 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TUR- BID- ITY (JTU) (00070)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)
MAR 01-10	--	1.9	1000	7.7	--	--	--	--	--	--	--	--
MAY 13...	--	*1.1	810	7.6	--	--	--	--	--	--	--	--
14...	--	*.88	800	7.6	--	--	--	--	--	--	--	--
16...	--	*.42	1250	7.6	--	--	--	--	--	--	--	--
JUL 17...	--	--	1220	7.6	--	--	--	--	--	--	--	--
20...	2400	E155	1250	7.6	--	--	--	--	--	--	--	--
21...	0030	E155	780	8.0	--	--	--	--	--	--	--	--
AUG 01...	1200	--	975	7.7	12000	180	24	0	8.1	.8	190	17
13...	2200	E600	1900	6.9	--	--	--	--	--	--	--	--
SEP 12...	0230	E155	2100	7.0	--	--	--	--	--	--	--	--
12...	0245	E285	2200	6.9	--	--	--	--	--	--	--	--

DATE	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	RICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
MAR 01-10	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
AUG 01...	3.6	190	0	270	1.0	1.2	25	637	612	7.6	4.2
13...	--	--	--	--	--	--	--	--	--	--	--
SEP 12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SAMPLE SOURCE (72005)
MAR 01-10	--	--	--	--	--	300	60	10	87	--	29
MAY 13...	--	--	--	--	--	120	40	0	56	--	29
14...	--	--	--	--	--	110	40	0	50	--	29
16...	--	--	--	--	--	140	100	0	75	--	29
JUL 17...	--	--	--	--	--	150	50	0	94	--	29
20...	--	--	--	--	--	--	--	--	432	--	40
21...	--	--	--	--	--	--	--	--	495	--	40
AUG 01...	.75	7.4	16	.17	.07	270	570	--	--	--	29
13...	--	--	--	--	--	--	--	--	497	--	40
SEP 12...	--	--	--	--	--	--	--	--	504	--	40
12...	--	--	--	--	--	130	20	20	--	8.1	40

* Mean discharge (00060)

SAN JUAN RIVER BASIN

09367930 HUNTER WASH AT BISTI TRADING POST, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)
MAR 01-10	--	5	2	1700	100	570	300	10	1	60	0	150
MAY 13...	--	--	--	2600	0	230	120	--	--	--	--	--
14...	--	--	--	2800	0	190	110	--	--	--	--	--
16...	--	--	--	3000	0	230	140	--	--	--	--	--
JUL 17...	--	--	--	4400	0	280	150	--	--	--	--	--
20...	2400	680	--	--	--	--	--	--	--	--	--	--
21...	0030	--	--	6500	--	150	--	30	--	1700	--	--
AUG 13...	2200	950	--	--	--	--	--	--	--	--	--	--
SEP 12...	0230	--	--	20000	--	400	--	0	--	310	--	--
12...	0245	--	--	--	0	--	130	--	--	--	40	--

DATE	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)
MAR 01-10	0	370	14	240000	60	400	9	160	20	3600	10
MAY 13...	--	--	--	220000	40	--	--	150	20	910	0
14...	--	--	--	190000	40	--	--	150	20	3500	0
16...	--	--	--	240000	100	--	--	170	20	4100	0
JUL 17...	--	--	--	300000	50	--	--	230	20	6100	0
20...	--	--	--	--	--	--	--	--	--	--	--
21...	--	1100	--	580000	--	1200	--	490	--	18000	--
AUG 13...	--	--	--	--	--	--	--	--	--	--	--
SEP 12...	--	--	--	750000	--	1100	--	1100	--	70000	--
12...	--	--	--	--	20	--	--	--	50	--	20

DATE	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL SILVER (AG) (UG/L) (01077)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	SAMPLE SOURCE (72005)
MAR 01-10	1.0	.0	5	5	20	0	--	--	1000	20	29
MAY 13...	--	--	--	--	--	--	1800	340	--	--	29
14...	--	--	--	--	--	--	1800	380	--	--	29
16...	--	--	--	--	--	--	2000	370	--	--	29
JUL 17...	--	--	--	--	--	--	2600	380	--	--	29
20...	4.4	--	0	--	--	--	--	--	--	--	40
21...	--	--	--	--	--	--	7200	--	--	--	40
AUG 13...	3.3	--	0	--	--	--	--	--	--	--	40
SEP 12...	--	--	--	--	--	--	10000	--	--	--	40
12...	--	--	--	--	--	--	--	1600	--	--	40

SAN JUAN RIVER BASIN

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09367930 HUNTER WASH AT BISTI TRADING POST, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE D SEDI- MENT (MG/L) (80154)	SUS- PENDE D SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JAN							
03...	0800	5.2	--	3410	48	67	29
03...	1230	5.3	--	10100	145	82	29
03...	1630	4.2	--	2630	30	97	29
06...	0900	2.5	--	2690	18	98	--
06...	1030	3.6	--	4240	41	99	--
06...	1100	2.1	--	2610	15	98	--
07...	1430	1.7	--	3470	16	99	--
09...	0945	1.3	--	2500	8.8	98	--
12...	0845	.74	--	2860	5.7	93	--
12...	1500	.74	--	2420	4.8	96	--
14...	1015	.34	--	2970	2.7	95	--
14...	1600	.20	--	3100	1.7	98	--
24...	1200	1.0	--	28900	78	100	--
24...	1505	1.0	--	17100	46	98	--
25...	0930	1.5	--	21200	86	93	--
25...	1300	1.9	--	16600	85	99	--
25...	1730	1.5	--	5940	24	99	29
26...	0845	.34	--	13200	12	100	29
26...	1445	.20	--	13200	7.1	100	--
27...	1030	.26	--	13200	9.3	100	--
FEB							
28...	1420	.10	8.5	11200	3.0	98	29
MAR							
01...	0800	4.2	--	24900	282	100	29
01...	1200	.18	--	24800	12	100	--
01...	1730	.18	--	32200	16	100	--
02...	1030	.04	--	32400	3.5	100	--
02...	1330	.04	--	27500	3.0	100	--
03...	0915	.04	--	23600	2.5	100	--
03...	1530	.04	--	24300	2.6	100	--
04...	1100	.09	--	28800	7.0	100	--
04...	1400	.09	--	28900	7.0	100	--
05...	1045	.06	--	28800	4.7	100	--
05...	1600	.06	--	28800	4.7	100	--
07...	0930	.06	--	27100	4.4	99	--
07...	1545	.06	--	25400	4.1	100	--
08...	1000	.04	--	33500	3.6	98	--
08...	1700	.04	--	31600	3.4	100	--
10...	0830	.01	--	38900	1.0	98	--
10...	1600	.01	--	37000	1.0	100	--
11...	0815	.01	--	38400	1.0	98	--
11...	1330	.01	--	35200	.95	100	--
11...	1630	.01	--	36200	.98	99	--
MAY							
13...	--	*1.1	--	15000	45	98	29
13...	1630	13	20.0	13500	474	99	--
13...	1830	1.9	25.0	16500	85	97	--
14...	--	*.88	--	12900	31	99	29
14...	0930	1.5	16.0	12400	50	99	--
14...	1630	.62	18.0	13400	22	99	--
16...	--	*.42	--	18800	21	98	29
16...	0800	.01	15.0	18500	.50	98	--
16...	1230	.01	15.0	18400	.50	99	--
16...	1700	.01	24.0	19500	.53	98	--
17...	1030	.01	27.0	18800	.51	95	--
JUL							
20...	2400	E155	--	136000	56900	84	40
21...	0030	E155	--	102000	42700	84	40
AUG							
13...	2200	E600	--	171000	277000	61	40
SEP							
12...	0230	--	--	263000	--	59	40
12...	0245	--	--	273000	--	58	40

* mean discharge (00060)

SAN JUAN RIVER BASIN

09367950 CHACO RIVER NEAR WATERFLOW, NM

LOCATION.--Lat 36°43'28", long 108°35'27", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T.29 N., R.17 W., San Juan County, Hydrologic Unit 14080106, on downstream end of right bridge pier, 4.2 mi (6.8 km) upstream from Dead Mans Wash, 5.3 mi (8.5 km) downstream from the Hogback, 6.6 mi (10.6 km) southwest of Waterflow, 7.2 mi (11.6 km) southeast of Shiprock and at mile 4.5 (7.2 km).

DRAINAGE AREA.--4,350 mi² (11,300 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Water years 1959-69 (annual maximum only), November 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,980 ft (1,518 m), from topographic map. Prior to 1975 at site 1.8 mi (2.9 km) upstream.

REMARKS.--Water-discharge records good, except those above 100 ft³/s (2.8 m³/s), which are fair. Base flow is mostly waste water from Four Corners Power Plant.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft³/s (207 m³/s), Sept. 20, 1969, gage height, 7.88 ft (2.402 m) site and datum then in use; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 290 ft³/s (8.2 m³/s) and maximum (*).

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 21	1515	2,780 78.7	6.64 2.024	Aug. 13	0900	685 19.4	3.73 1.137
July 25	0945	495 14.0	3.36 1.024	Aug. 14	1500	824 23.3	4.06 1.237
July 26	2115	1,180 33.4	4.61 1.405	Aug. 16	0700	a*3,420 96.9	7.53 2.295
July 27	1945	500 14.2	3.38 1.030	Aug. 17	1615	1,570 44.5	5.21 1.588
Aug. 11	2015	1,910 54.1	5.50 1.676	Aug. 24	0045	625 17.7	3.64 1.109
Aug. 12	0700	2,290 64.9	6.03 1.838				

Minimum discharge, 6.2 ft³/s (0.18 m³/s) July 14.

a From rating curve extended above 70 ft³/s (2.0 m³/s) on basis of slope-area measurement of peak discharge.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	24	32	16	13	11	9.0	11	12	7.9	13	7.4
2	20	24	25	18	10	10	9.5	9.9	12	8.1	9.0	8.5
3	20	23	28	20	10	17	13	10	9.8	8.6	11	12
4	23	23	26	18	10	16	11	11	9.7	10	10	16
5	24	24	26	16	9.8	17	9.8	11	9.5	47	11	11
6	23	21	24	16	9.8	16	7.2	11	9.5	17	14	8.9
7	24	21	27	18	9.5	18	6.6	10	9.3	11	15	8.8
8	22	22	26	14	9.5	15	7.6	11	9.6	15	15	7.6
9	22	24	24	18	9.0	15	7.0	9.9	9.3	16	14	7.7
10	22	25	23	24	8.8	11	7.3	9.4	8.0	17	11	8.3
11	22	24	26	20	8.9	11	7.7	8.9	7.1	20	194	16
12	23	24	23	22	9.1	12	8.0	9.8	9.3	23	746	50
13	24	29	20	23	9.1	11	10	12	8.2	22	389	64
14	25	30	19	22	9.0	11	11	15	8.1	19	298	29
15	24	32	18	21	9.0	9.2	10	12	8.4	15	162	14
16	22	32	18	23	9.0	8.4	9.5	12	9.4	15	1380	11
17	22	26	19	22	8.9	7.9	9.5	12	11	15	902	9.7
18	22	23	20	20	8.7	7.9	11	12	11	17	642	9.8
19	24	24	20	14	8.7	8.2	10	11	11	36	232	9.8
20	24	28	19	14	8.8	8.0	11	10	11	101	60	9.3
21	20	28	19	14	10	8.2	10	11	9.1	1070	40	9.8
22	20	25	19	13	17	8.3	10	10	8.4	524	46	9.8
23	20	25	20	13	14	7.4	10	9.6	7.8	195	195	10
24	23	27	19	13	16	7.4	11	9.5	7.1	93	269	9.8
25	24	26	19	13	14	7.6	11	12	7.2	155	40	11
26	22	28	19	13	14	7.6	11	14	8.3	316	23	11
27	20	27	19	14	13	7.4	12	13	9.8	271	14	11
28	20	29	18	14	12	7.3	11	12	8.6	118	11	10
29	21	31	19	13	---	9.3	11	12	8.8	25	9.5	10
30	21	28	18	13	---	9.7	10	11	8.7	18	8.4	9.9
31	21	---	18	11	---	9.2	---	11	---	16	7.8	---
TOTAL	689	777	670	523	298.6	330.0	292.7	344.0	277.0	3241.6	5791.7	421.1
MEAN	22.2	25.9	21.6	16.9	10.7	10.6	9.76	11.1	9.23	105	187	14.0
MAX	25	32	32	24	17	18	13	15	12	1070	1380	64
MIN	20	21	18	11	8.7	7.3	6.6	8.9	7.1	7.9	7.8	7.4
AC-FT	1370	1540	1330	1040	592	655	581	682	549	6430	11490	835
CAL YR 1976	TOTAL	7318.1	MEAN	20.0	MAX	544	MIN	5.6	AC-FT	14520		
WTR YR 1977	TOTAL	13655.7	MEAN	37.4	MAX	1380	MIN	6.6	AC-FT	27090		

09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: October 1976 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler.

REMARKS.--Under the heading of SAMPLE SOURCE numerical values are used to indicate sampling method; 26 indicates by automatic pump, 29 indicates dip or grab sample, and 40 indicates single-stage sample.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 108,000 mg/L July 21, 1977; minimum daily, 700 mg/L May 11, 1977.

SEDIMENT LOADS: Maximum daily, 389,000 tons (353,000 tonnes) July 21, 1977; minimum daily, 14 tons (13 tonnes) Apr. 7, 1977.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily, 108,000 mg/L July 21; minimum daily, 700 mg/L May 11.

SEDIMENT LOADS: Maximum daily, 389,000 tons (353,000 tonnes) July 21; minimum daily, 14 tons (13 tonnes) Apr. 7.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	AIR TEMPERATURE (DEG C) (00020)	TEMPERATURE (DEG C) (00010)	TURBIDITY (JTU) (00070)	DISSOLVED OXYGEN (MG/L) (00300)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARDNESS (CA+MG) (MG/L) (00900)
OCT										
27...	0810	21	2280	8.3	.0	8.0	--	--	--	750
NOV										
17...	0845	32	2500	7.9	3.0	2.0	--	11.9	--	900
DEC										
07...	0930	30	2300	7.9	2.5	2.5	--	11.8	--	680
JAN										
06...	0945	10	2200	8.2	-2.5	4.0	--	11.0	--	660
FEB										
02...	0910	17	2700	8.1	1.0	2.0	--	11.8	--	1100
MAR										
09...	0830	22	2700	8.3	6.0	3.0	290	14.2	29	1000
APR										
13...	0900	20	3250	8.2	14.0	12.5	290	8.9	79	1200
28...	1010	14	2700	8.3	--	18.5	--	--	31	940
29...	1115	12	2700	--	--	19.0	--	--	--	--
MAY										
11...	0915	17	1890	8.0	14.5	10.5	230	9.2	26	730
JUN										
14...	1256	7.1	2175	8.2	32.0	28.0	230	--	25	860
29...	0855	10	3000	--	--	13.5	--	--	--	--
JUL										
13...	1010	28	1995	8.2	26.5	23.0	1100	8.5	150	620
20...	--	*164	1600	8.2	--	--	--	--	--	--
20...	1730	E185	1450	6.9	--	--	--	--	--	--
21...	0800	E530	1500	7.1	--	--	--	--	--	--
21...	1345	E1310	1875	6.8	--	--	--	--	--	--
21...	1445	E1970	1600	6.9	--	--	--	--	--	--
25...	--	155	2200	7.6	--	--	--	--	--	--
26...	--	316	1450	8.3	--	--	--	--	--	--
27...	1200	314	1190	7.3	--	21.0	--	--	--	--
27...	1230	392	1400	7.0	--	--	--	--	--	--
27...	1430	303	1100	7.3	--	--	--	--	--	--
27...	1610	239	1075	7.5	--	25.5	--	--	--	--
27...	1830	183	1500	6.9	--	--	--	--	--	--
27...	2230	333	1100	7.2	--	--	--	--	--	--
28...	0030	276	1025	7.1	--	--	--	--	--	--
28...	0830	147	1200	7.2	--	--	--	--	--	--
28...	1030	129	1225	7.2	--	--	--	--	--	--
29...	0030	72	1300	7.3	--	--	--	--	--	--
29...	0230	63	1400	7.3	--	--	--	--	--	--
30...	0030	49	1625	7.4	--	--	--	--	--	--
30...	0230	49	1650	7.4	--	--	--	--	--	--
AUG										
11...	1900	138	1000	7.2	--	--	--	--	--	--
11...	1945	E530	1490	7.0	--	--	--	--	--	--
11...	2100	1120	1000	7.2	--	--	--	--	--	--
12...	0100	216	805	7.4	--	--	--	--	--	--
12...	0300	156	825	7.3	--	--	--	--	--	--
12...	1700	517	960	7.3	--	--	--	--	--	--

* mean discharge (00060)

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

[illegible]

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

[illegible]

SAN JUAN RIVER BASIN

09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SiO2) (MG/L) (00955)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITROGEN (N) (MG/L) (00610)	TOTAL ORGANIC NITROGEN (N) (MG/L) (00605)	TOTAL NITROGEN (N) (MG/L) (00600)
AUG									
12...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
31...	3.2	6.4	1980	1940	3.8	3.6	.05	.83	4.7
SEP									
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
28...	3.2	6.5	1830	1730	3.2	3.2	.06	.69	4.0
DATE	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS-SOLVED ORTHOPHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS-SOLVED ORGANIC CARBON (C) (MG/L) (00681)	SUSPENDED ORGANIC CARBON (C) (MG/L) (00689)	SAMPLE SOURCE (72005)
OCT									
27...	--	.02	3100	40	--	--	--	--	29
NOV									
17...	--	.00	9300	10	--	--	--	--	29
DEC									
07...	--	.01	3800	20	--	--	--	--	29
JAN									
06...	--	.01	2600	10	--	--	--	--	29
FEB									
02...	--	.00	7400	0	--	--	--	--	29
MAR									
09...	.43	.02	7600	230	20	6.4	5.8	.7	29
APR									
13...	.37	.01	5900	30	--	--	4.6	1.5	29
28...	--	.03	6100	20	--	5.9	--	--	--
29...	--	--	--	--	--	--	--	--	29
MAY									
11...	.27	.00	3500	20	--	--	4.4	1.6	29
JUN									
14...	1.6	.01	6400	340	30	5.2	4.5	2.6	29
29...	--	--	7900	20	10	5.0	--	--	29
JUL									
13...	1.4	.02	2900	10	--	--	4.5	5.7	29
20...	--	--	--	--	--	420	--	--	26
20...	--	--	--	--	--	499	--	--	40
21...	--	--	--	--	--	305	--	--	40
21...	--	--	--	--	--	458	--	--	40
21...	--	--	--	--	--	520	--	--	40
25...	--	--	--	--	--	725	--	--	26
26...	--	--	--	--	--	548	--	--	26
27...	--	--	--	--	--	458	--	--	29
27...	--	--	--	--	--	412	--	--	26
27...	--	--	--	--	--	384	--	--	26
27...	--	--	--	--	--	--	--	--	29
27...	--	--	--	--	--	693	--	--	26
27...	--	--	--	--	--	336	--	--	26
28...	--	--	--	--	--	80	--	--	26
28...	--	--	--	--	--	226	--	--	26
28...	--	--	--	--	--	195	--	--	26
29...	--	--	--	--	--	197	--	--	26
29...	--	--	--	--	--	172	--	--	26
30...	--	--	--	--	--	290	--	--	26
30...	--	--	--	--	--	--	--	--	26
AUG									
11...	--	--	--	--	--	201	--	--	26
11...	--	--	--	--	--	244	--	--	40
11...	--	--	--	--	--	252	--	--	26
12...	--	--	--	--	--	242	--	--	26
12...	--	--	--	--	--	269	--	--	26
12...	--	--	--	--	--	297	--	--	26

SAN JUAN RIVER BASIN

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09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOLVED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDED ORGANIC CARBON (C) (MG/L) (00689)	SAMPLE SOURCE (72005)
AUG									
12...	--	--	--	--	--	284	--	--	26
13...	--	--	--	--	--	199	--	--	26
13...	--	--	--	--	--	267	--	--	26
16...	--	--	--	--	--	206	--	--	40
16...	--	--	--	--	--	364	--	--	40
19...	--	--	--	--	--	195	--	--	26
19...	--	--	--	--	--	213	--	--	40
19...	--	--	--	--	--	221	--	--	26
20...	--	--	--	--	--	152	--	--	26
23...	--	--	--	--	--	172	--	--	26
23...	--	--	--	--	--	76	--	--	26
23...	--	--	--	--	--	626	--	--	26
23...	--	--	--	--	--	--	--	--	26
31...	.44	.02	3300	10	--	484	--	--	26
SEP									
12...	--	--	--	--	--	847	--	--	26
12...	--	--	--	--	--	897	--	--	26
12...	--	--	--	--	--	363	--	--	26
13...	--	--	--	--	--	318	--	--	26
28...	.44	.00	3000	30	10	11	4.0	1.3	29

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ALUM- INUM (AL) (UG/L) (01105)	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)
OCT										
27...	0810	--	--	16	--	--	--	3200	3100	--
NOV										
17...	0845	--	--	20	--	--	--	9300	9300	--
DEC										
07...	0930	--	--	20	--	--	--	3800	3800	--
JAN										
06...	0945	--	--	55	--	--	--	2600	2600	--
FEB										
02...	0910	--	--	2	--	--	--	7400	7400	--
MAR										
09...	0830	--	--	9	3	--	--	--	7600	10
APR										
28...	1010	11000	0	3	1	100	0	6000	6100	<10
29...	1115	--	--	--	--	--	--	--	--	--
JUN										
14...	1256	--	--	4	4	--	--	--	6400	0
29...	0855	--	--	--	--	700	300	8200	7900	--
JUL										
20...	--	--	--	120	--	--	--	650	--	--
20...	1730	--	--	160	--	--	--	450	--	--
21...	0800	--	--	100	--	--	--	580	--	--
21...	1345	--	--	170	--	--	--	550	--	--
21...	1445	--	--	160	--	--	--	350	--	--
25...	--	--	--	180	--	--	--	900	--	--
26...	--	--	--	120	--	--	--	930	--	--
27...	1200	--	--	110	--	--	--	--	--	--
27...	1230	--	--	100	--	--	--	360	--	--
27...	1430	--	--	--	--	--	--	340	--	--
27...	1610	--	--	--	--	30000	--	410	--	0
27...	1830	--	--	--	--	--	--	370	--	--
27...	2230	--	--	65	--	--	--	420	--	--
28...	0030	--	--	--	--	--	--	330	--	--
28...	0830	--	--	73	--	--	--	460	--	--
28...	1030	--	--	--	--	--	--	440	--	--
29...	0030	--	--	63	--	--	--	600	--	--
29...	0230	--	--	--	--	--	--	610	--	--
30...	0030	--	--	40	--	--	--	1000	--	--
30...	0230	--	--	--	--	--	--	1100	--	--
AUG										
11...	1900	--	--	73	--	--	--	390	--	--
11...	1945	--	--	80	--	--	--	810	--	--
11...	2100	--	--	--	--	--	--	350	--	--
12...	0100	--	--	38	--	--	--	340	--	--
12...	0300	--	--	--	--	--	--	340	--	--
12...	1700	--	--	60	--	--	--	340	--	--
12...	1900	--	--	--	--	--	--	320	--	--
13...	0400	--	--	75	--	--	--	360	--	--
13...	0600	--	--	--	--	--	--	470	--	--

SAN JUAN RIVER BASIN

09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued.

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

		TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	
AUG										
16...	0230	60	--	550	--	--	--	--	--	
16...	0400	100	--	280	--	--	--	--	--	
19...	0931	74	--	370	--	--	--	--	--	
19...	0935	63	--	390	--	--	--	--	--	
19...	1130	--	--	530	--	--	--	260	--	
19...	2330	60	--	700	--	--	--	--	--	
20...	0230	--	--	900	--	--	--	220	--	
23...	0750	38	--	3800	--	--	--	--	--	
23...	0950	--	--	630	--	--	--	330	--	
23...	1600	100	--	870	--	--	--	--	--	
23...	1800	--	--	640	--	--	--	370	--	
SEP										
12...	1540	120	--	2500	--	--	--	--	--	
12...	1710	--	--	890	--	--	--	330	--	
12...	2350	95	--	470	--	--	--	--	--	
13...	0320	--	--	890	--	--	--	300	--	
28...	1045	12	0	--	3000	10	3	8	0	
DATE	TIME	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT										
27...	--	--	--	--	--	--	--	--	--	40
NOV										
17...	--	--	--	--	--	--	--	--	--	10
DEC										
07...	--	--	--	--	--	--	--	--	--	20
JAN										
06...	--	--	--	--	--	--	--	--	--	10
FEB										
02...	--	--	--	--	--	--	--	--	--	0
MAR										
09...	0	20	0	<50	0	30	2	21000	230	
APR										
28...	1	20	10	50	0	30	4	19000	20	
29...	--	--	--	--	--	--	--	--	--	--
JUN										
14...	2	30	0	10	0	20	3	560	340	
29...	--	--	--	--	--	--	--	11000	20	
JUL										
20...	--	320	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
25...	--	440	--	--	--	--	--	--	--	--
26...	--	280	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
27...	--	330	--	--	--	--	--	--	--	--
27...	--	280	--	12	--	75	--	--	--	--
27...	--	290	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
28...	--	260	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
28...	--	270	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
29...	--	220	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
30...	--	190	--	--	--	--	--	--	--	--
AUG										
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	240	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
12...	--	240	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
12...	--	240	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	200	--	--	--	--	--	--	--	--

SAN JUAN RIVER BASIN

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09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)
AUG									
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	440
19...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	420
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	670
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	720
SEP									
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	930
12...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	700
28...	<50	1	30	2	25000	30	<100	9	--
DATE	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL MOLYB- DENUM (MO) (UG/L) (01062)
OCT									
27...	200	--	220	--	--	--	.1	--	--
NOV									
17...	100	--	190	--	--	--	.1	--	--
DEC									
07...	100	--	1	--	--	--	.6	--	--
JAN									
06...	200	--	170	--	--	--	.2	--	--
FEB									
02...	100	--	160	--	--	--	.6	--	--
MAR									
09...	<100	2	--	--	260	20	.2	.0	--
APR									
28...	100	2	140	120	240	--	.1	.0	78
29...	--	--	--	--	--	--	--	--	--
JUN									
14...	9	8	--	--	400	30	.0	.0	--
29...	--	--	>140	140	180	10	--	--	--
JUL									
20...	--	--	710	--	--	--	3.1	--	--
20...	--	--	--	--	--	--	3.8	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
25...	--	--	860	--	--	--	2.2	--	--
26...	--	--	640	--	--	--	3.0	--	--
27...	--	--	--	--	--	--	2.8	--	--
27...	--	--	--	--	--	--	3.1	--	--
27...	--	--	680	--	--	--	--	--	--
27...	84	--	630	--	--	--	--	--	--
27...	--	--	660	--	--	--	--	--	--
27...	--	--	--	--	--	--	2.6	--	--
28...	--	--	530	--	--	--	--	--	--
28...	--	--	--	--	--	--	2.0	--	--
28...	--	--	510	--	--	--	--	--	--
29...	--	--	--	--	--	--	2.0	--	--
29...	--	--	430	--	--	--	--	--	--
30...	--	--	--	--	--	--	1.3	--	--
30...	--	--	350	--	--	--	--	--	--
AUG									
11...	--	--	--	--	--	--	1.9	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	410	--	--	--	--	--	--
12...	--	--	--	--	--	--	1.5	--	--
12...	--	--	420	--	--	--	--	--	--
12...	--	--	--	--	--	--	1.7	--	--
12...	--	--	420	--	--	--	--	--	--
13...	--	--	--	--	--	--	1.7	--	--
13...	--	--	380	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

	TOTAL MAN- GANESE (MN) {UG/L} (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	SAMPLE SOURCE
AUG									
16....	--	--	--	--	12	--	--	--	40
16....	--	--	--	--	0	--	--	--	40
19....	--	--	--	--	2	--	--	--	26
19....	--	--	2.0	--	2	--	--	--	40
19....	--	--	--	--	--	--	--	--	26
19....	--	--	--	--	3	--	--	--	26
20....	--	--	--	--	--	--	--	--	26
23....	--	--	--	--	15	--	--	--	26
23....	--	--	--	--	--	--	--	--	26
23....	--	--	--	--	2	--	--	--	26
23....	--	--	--	--	--	--	--	--	26
SEP									
12....	--	--	2.9	--	3	--	--	--	26
12....	--	--	--	--	--	--	--	--	26
12....	--	--	3.5	--	3	--	--	--	26
13....	--	--	--	--	--	--	--	--	26
28....	320	10	.0	.0	0	4	120	10	29
	DIS-SOLVED MOLDYB-DENUM {MO} (UG/L) (01060)	TOTAL SELE-NIUM {SE} (UG/L) (01147)	DIS-SOLVED SELE-NIUM {SE} (UG/L) (01145)	TOTAL STRON-TIUM {SR} (UG/L) (01082)	DIS-SOLVED STRON-TIUM {SR} (UG/L) (01080)	DIS-SOLVED VANA-OIUM {V} (UG/L) (01085)	TOTAL ZINC {ZN} (UG/L) (01092)	DIS-SOLVED ZINC {ZN} (UG/L) (01090)	SAMPLE SOURCE
OCT									
27....	--	7	--	--	--	--	--	--	29
NOV									
17....	--	24	--	--	--	--	--	--	29
DEC									
07....	--	8	--	--	--	--	--	--	29
JAN									
06....	--	6	--	--	--	--	--	--	29
FEB									
02....	--	19	--	--	--	--	--	--	29
MAR									
09....	--	30	30	--	--	--	80	40	29
APR									
28....	76	12	12	2300	2300	7.0	80	10	--
29....	--	--	--	2400	--	--	--	--	29
JUN									
14....	--	13	7	--	--	--	100	10	29
29....	--	--	--	>2500	2500	--	--	--	29
JUL									
20....	--	1	--	--	--	--	--	--	26
20....	--	0	--	--	--	--	--	--	40
21....	--	1	--	--	--	--	--	--	40
21....	--	0	--	--	--	--	--	--	40
21....	--	0	--	--	--	--	--	--	40
25....	--	1	--	--	--	--	--	--	26
26....	--	1	--	--	--	--	--	--	26
27....	--	2	--	--	--	--	--	--	29
27....	--	0	--	--	--	--	--	--	26
27....	--	--	--	--	--	--	--	--	26
27....	--	--	--	7200	--	--	--	--	29
27....	--	--	--	--	--	--	--	--	26
27....	--	1	--	--	--	--	--	--	26
28....	--	--	--	--	--	--	--	--	26
28....	--	2	--	--	--	--	--	--	26
28....	--	--	--	--	--	--	--	--	26
29....	--	2	--	--	--	--	--	--	26
29....	--	--	--	--	--	--	--	--	26
30....	--	4	--	--	--	--	--	--	26
30....	--	--	--	--	--	--	--	--	26
AUG									
11....	--	2	--	--	--	--	--	--	26
11....	--	25	--	--	--	--	--	--	40

SAN JUAN RIVER BASIN

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09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
APR 28...	1010	8.1

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)	SAMPLE SOURCE (72005)
MAR 09...	0830	0	64	29
APR 13...	0900	3	650	29
MAY 11...	0915	5	90	29
JUN 14...	1256	110	150	29
JUL 13...	1010	90	1800	29
AUG 31...	1030	30	750	29
SEP 28...	1045	220	920	29

SAN JUAN RIVER BASIN

09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C)* (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
OCT							
27...	0845	25	8.0	6020	406	95	--
NOV							
17...	0845	32	2.0	5480	473	89	29
DEC							
07...	0955	26	2.5	2	180	98	--
JAN							
06...	0945	10	4.0	4630	125	85	29
FEB							
02...	0910	17	2.0	742	34	88	29
MAR							
01...	1430	9.3	--	779	20	89	--
09...	0830	22	3.0	2310	137	41	29
APR							
13...	0900	20	12.5	777	42	88	29
28...	1010	14	18.5	816	31	89	--
29...	1115	12	19.0	927	30	85	29
MAY							
11...	0915	17	10.5	700	32	71	29
JUN							
14...	1256	7.1	28.0	1380	26	71	29
29...	0855	10	13.5	848	23	64	29
JUL							
05...	0700	47	--	52000	6600	91	--
05...	0800	99	--	84200	22500	85	--
13...	1010	28	23.0	4140	313	87	29
15...	1220	16	--	4300	186	--	--
20...	--	*164	--	E280000	124000	--	26
20...	1700	77	--	98800	20500	85	--
20...	1730	E185	--	126000	62900	78	40
20...	1900	206	--	101000	56200	86	--
20...	2100	138	--	80600	30000	--	26
21...	0800	E530	--	130000	186000	50	40
21...	1345	E1310	--	139000	492000	70	40
21...	1445	E1970	--	162000	862000	68	40
25...	1000	322	--	103000	89500	--	26
25...	1020	410	--	100000	111000	90	--
25...	1030	292	--	103000	81200	--	26
25...	1130	254	--	104000	71300	--	26
25...	1330	185	--	106000	52900	95	--
25...	1530	139	--	95500	35800	--	26
26...	0900	112	--	82700	25000	97	--
27...	1025	102	--	64900	17900	--	26
27...	1027	102	--	67100	18500	--	26
27...	1029	102	--	82500	22700	--	26
27...	1130	392	--	104000	110000	81	--
27...	1200	314	21.0	96300	81600	92	29
27...	1330	360	--	90800	88300	90	--
27...	1530	242	--	76200	49800	--	26

* mean discharge (00060)

SAN JUAN RIVER BASIN

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09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued
INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDED SEDIM- ENT (MG/L) (80154)	SUS- PENDED SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL							
27...	1610	239	25.5	79600	51400	92	29
27...	1730	200	--	79600	43000	--	26
27...	1930	399	--	90500	97500	88	--
27...	2130	367	--	85900	85100	--	26
27...	2330	306	--	65700	54300	93	--
28...	0130	249	--	64700	43500	--	26
28...	0330	211	--	65400	37300	--	26
28...	0530	183	--	63600	31400	--	26
28...	0730	158	--	60800	25900	--	26
28...	0930	1360	--	58500	215000	98	--
28...	1130	123	--	56300	18700	--	26
28...	1330	111	--	54000	16200	--	26
28...	1530	102	--	52200	14400	--	26
28...	1730	95	--	56200	14400	--	26
28...	1930	88	--	49500	11800	--	26
28...	2130	80	--	50600	10900	--	26
28...	2330	73	--	46100	9090	--	26
29...	0130	68	--	45000	8260	99	--
29...	0330	60	--	42600	6900	--	26
29...	0530	57	--	44000	6770	--	26
29...	0730	53	--	39800	5700	--	26
29...	0930	51	--	38700	5330	--	26
29...	1130	50	--	35100	4740	--	26
29...	1330	49	--	35200	4660	--	26
29...	1530	49	--	38100	5040	--	26
29...	1730	49	--	36900	4880	--	26
29...	1930	49	--	36700	4860	--	26
29...	2130	49	--	34400	4550	--	26
29...	2330	49	--	31700	4190	--	26
30...	0130	49	--	29400	3890	100	--
30...	0330	49	--	27800	3680	--	26
AUG							
10...	1130	16	--	1160	50	--	26
11...	1945	E530	--	77200	365000	70	40
16...	0230	E1310	--	52600	187000	78	40
16...	0400	E1970	--	123000	810000	75	40
17...	1400	725	--	56600	111000	87	26
17...	1900	1280	--	60800	210000	--	26
17...	2015	1160	--	49400	155000	--	26
17...	2115	1000	--	49800	134000	88	26
17...	2315	980	--	52600	139000	--	26
18...	0115	968	--	51200	134000	--	26
18...	0315	890	--	47300	114000	--	26
18...	0410	872	--	46100	109000	--	26
18...	2015	280	--	54200	41000	--	26
18...	2045	273	--	52800	38900	--	26
18...	2115	263	--	52800	37500	95	26
18...	2230	269	--	52500	38100	--	26
19...	0030	269	--	51200	37200	--	26
19...	0230	294	--	51400	40800	--	26
19...	0430	351	--	52700	49900	--	26
19...	0630	319	--	49400	42500	94	26
19...	0830	445	--	49100	59000	--	26
19...	0930	351	--	50600	48000	93	26
19...	0931	351	--	49200	46600	94	26
19...	0935	351	--	49400	46800	94	40
19...	1030	276	--	49200	36700	94	26
19...	1230	238	--	47300	30400	--	26
19...	1430	235	--	45700	29000	--	26
19...	1630	208	--	45100	25300	--	26
19...	1830	180	--	42200	20500	--	26
19...	2030	172	--	40400	18800	--	26
19...	2230	170	--	40000	18400	--	26
20...	0030	86	--	39400	9150	100	26
20...	0630	182	--	38400	18900	--	26
21...	2215	123	--	38400	12800	--	26
23...	0650	88	--	37100	8810	--	26
23...	0850	216	--	44900	26200	92	26
23...	1050	121	--	65700	21500	--	26
23...	1500	80	--	57700	12500	--	26
23...	1700	303	--	49300	40300	93	26
23...	1900	246	--	64500	42800	--	26
25...	1905	34	--	17800	1630	--	40
25...	1910	34	--	16200	1490	--	40
31...	1030	20	19.0	840	45	99	29
SEP							
12...	1530	70	--	85600	16200	--	26
12...	1600	134	--	130000	47000	92	26
12...	1810	92	--	126000	31300	--	26
12...	2300	96	--	101000	26200	--	26

SAN JUAN RIVER BASIN

09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PEN- DED SEDI- MENT (MG/L) (80154)	SUS- PEN- DED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
SEP							
13...	0220	63	--	95000	16200	94	26
13...	0420	88	--	55100	13100	--	26
13...	0620	80	--	87300	18900	--	--
28...	1045	20	18.0	884	48	100	29

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	10400	700	9260	600	16200	1400	3470	150	1280	45	800	24
2	6300	340	9260	600	10400	700	4940	240	800	22	800	22
3	6300	340	8700	540	12700	960	6480	350	800	22	4140	190
4	8700	540	8700	540	11000	770	4730	230	800	22	3470	150
5	9260	600	9260	600	11000	770	3470	150	800	21	4140	190
6	8700	540	7050	400	9260	600	3470	150	800	21	3470	150
7	9260	600	7050	400	11800	860	4730	230	800	21	4940	240
8	7910	470	7910	470	11000	770	1880	71	800	21	2720	110
9	7910	470	9260	600	9260	600	4730	230	800	19	2720	110
10	7910	470	10400	700	8700	540	9260	600	800	19	800	24
11	7910	470	9260	600	11000	770	6480	350	800	19	800	24
12	8700	540	9260	600	8700	540	7580	450	800	20	800	26
13	9260	600	13700	1070	6300	340	8050	500	800	20	800	24
14	10400	700	14600	1180	5650	290	7580	450	800	19	800	24
15	9260	600	16200	1400	4940	240	7050	400	800	19	800	20
16	7910	470	16200	1400	4940	240	8050	500	800	19	800	18
17	7910	470	11000	770	5650	290	7580	450	800	19	800	17
18	7910	470	8700	540	6300	340	6480	350	800	19	800	17
19	9260	600	9260	600	6300	340	1880	71	800	19	800	18
20	9260	600	12700	960	5650	290	1880	71	800	19	800	17
21	6300	340	12700	960	5650	290	1880	71	800	22	800	18
22	6300	340	10400	700	5650	290	1280	45	4140	190	800	18
23	6300	340	10400	700	6300	340	1280	45	1960	74	800	16
24	8700	540	11800	860	5650	290	1280	45	3470	150	800	16
25	9260	600	11000	770	5650	290	1280	45	1960	74	800	16
26	7910	470	12700	960	5650	290	1280	45	1960	74	800	16
27	6300	340	11800	860	5650	290	1880	71	1340	47	800	16
28	6300	340	13700	1070	4940	240	1880	71	800	26	800	16
29	7050	400	15500	1300	5650	290	1280	45	---	---	800	20
30	7050	400	12700	960	4940	240	1280	45	---	---	800	21
31	7050	400	---	---	4940	240	1280	45	---	---	800	20
TOTAL	---	15100	---	23710	---	14740	---	6566	---	1082	---	1608

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

[illegible]

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, NM
(National stream-quality accounting network,
surveillance network, and radiochemical network station)

LOCATION.--Lat 36°47'32", long 108°43'54", in NW¼ sec.27, T.30 N., R.18 W., San Juan County, Hydrologic Unit 14080105, on left bank 3 mi (5 km) west of Shiprock, 6 mi (10 km) downstream from Chaco River, and at mile 215.0 (345.9 km).

DRAINAGE AREA.--12,900 mi² (33,400 km²), 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.

GAGE.--Water-stage recorder. Datum of gage is 4,848.68 ft (1,477.878 m) above mean sea level, from river-profile survey. Prior to Apr. 6, 1922, nonrecording gage and Apr. 7, 1922, to Oct. 25, 1933, water-stage recorder, at site 3 mi (5 km) upstream at different datum. Oct. 26, 1933, to Sept. 30, 1936, water-stage recorder at present site at datum 3.31 ft (1.01 m) higher and Oct. 1, 1936, to Sept. 30, 1952, at datum 1.77 ft (0.54 m) higher. Supplementary water-stage recorders at nearby sites, same datum, used at times.

REMARKS.--Water-Discharge records good. Since 1962 flow partly regulated by Navajo Reservoir (station 09355100). Diversions for irrigation of about 118,000 acres (480 km²) 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.--51 years (water years 1927-77), 2,175 ft³/s (61.60 m³/s), 1,576,000 acre-ft/yr (1.94 km³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD (SINCE 1927).--Maximum discharge, about 80,000 ft³/s (2,270 m³/s) Aug. 11, 1929, gage height, 5.7 ft (1.73 m), site and datum then in use; minimum daily, 8 ft³/s (0.23 m³/s) Aug. 25, 26, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood occurred Oct. 6, 1911, and reached a stage of 22 ft (6.7 m), site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,120 ft³/s (145 m³/s) at 1630 hours Aug. 18, gage height, 5.55 ft (1.692 m), no peak above base of 6,000 ft³/s (170 m³/s); minimum, 72 ft³/s (2.04 m³/s) July 8.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	368	545	751	1720	1420	724	564	173	475	97	550	260
2	358	604	751	1730	1190	732	547	170	958	86	479	239
3	374	611	746	1670	993	734	601	190	1170	78	324	248
4	402	722	764	1570	994	722	633	278	1380	86	249	253
5	375	724	750	1510	994	703	570	289	1350	192	260	311
6	468	752	746	1490	967	659	484	257	1320	112	230	353
7	575	874	710	1420	908	652	439	260	1400	79	230	326
8	595	1020	732	1490	892	645	445	195	1650	83	220	305
9	639	997	746	1450	876	599	410	317	1500	90	230	297
10	681	772	731	1430	916	618	381	480	1200	90	240	282
11	622	663	734	1490	916	655	350	495	1000	90	980	297
12	558	647	734	1480	924	636	320	421	800	83	2300	510
13	542	686	751	1490	916	628	250	435	700	80	1500	564
14	523	700	743	1530	940	598	200	450	600	77	900	580
15	524	637	752	1490	932	582	170	490	500	76	1250	493
16	560	621	799	1520	908	556	140	470	450	231	1800	406
17	535	728	794	1530	812	554	130	338	400	418	3300	468
18	535	695	791	1530	788	567	120	296	350	481	3590	513
19	531	668	809	1500	766	563	120	248	300	434	1580	498
20	550	721	790	1480	752	574	130	200	230	1050	1120	475
21	564	732	752	1510	745	560	150	190	160	2080	932	424
22	597	730	780	1530	773	538	140	183	138	2780	706	411
23	607	750	788	1570	773	544	130	172	104	2890	744	432
24	572	784	844	1520	731	543	120	160	100	1710	716	422
25	541	803	852	1480	731	529	110	132	99	1640	548	412
26	516	801	852	1380	724	537	90	195	96	2180	563	403
27	526	812	890	1400	710	565	96	200	120	1770	539	517
28	513	802	879	1360	731	513	108	140	134	1380	482	619
29	513	798	831	1360	---	525	154	132	119	1140	437	573
30	536	805	833	1390	---	540	128	154	107	905	383	420
31	571	---	805	1430	---	557	---	190	---	688	320	---
TOTAL	16371	22204	24230	46450	24722	18652	8230	8300	18910	23176	27702	12311
MEAN	528	740	782	1498	883	602	274	268	630	748	894	410
MAX	681	1020	890	1730	1420	734	633	495	1650	2890	3590	619
MIN	358	545	710	1360	710	513	90	132	96	76	220	239
AC-FT	32470	44040	48060	92130	49040	37000	16320	16460	37510	45970	54950	24420
CAL YR 1976 TOTAL	469600			MEAN 1283	MAX 4410	MIN 253	AC-FT 931500					
WTR YR 1977 TOTAL	251258			MEAN 688	MAX 3590	MIN 76	AC-FT 498400					

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.

HARDNESS: February 1941 to September 1945, July 1957 to current year.

DISSOLVED SOLIDS: February 1941 to September 1945, July 1957 to current year.

SUSPENDED SEDIMENT DISCHARGE: December 1950 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (1957-77): Maximum daily, 4,360 micromhos July 31, 1959; minimum daily, 188 micromhos June 6, 1958.

WATER TEMPERATURES: Maximum, 34.0°C July 20, 1968; minimum, 0.0°C on many days during winter months of most years.

HARDNESS (1941-45, 1957-77): Maximum, 1,100 mg/L July 30, 31, 1959; minimum, 70 mg/L June 21-28, 30, 1944.

DISSOLVED SOLIDS (1941-45, 1957-77): Maximum, 2,980 mg/L July 30, 31, 1959; minimum, 115 mg/L June 21-28, 30, 1944.

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, 1,880 micromhos July 4; minimum daily, 500 micromhos June 9.

WATER TEMPERATURES: Maximum, 29.0°C July 7; minimum, 0.0°C on several days during January.

HARDNESS: Maximum, 560 mg/L July 13; minimum, 180 mg/L June 2-13.

DISSOLVED SOLIDS: Maximum, 1,290 mg/L July 13; minimum, 335 mg/L June 2-13.

SEDIMENT CONCENTRATIONS: Maximum daily, 76,600 mg/L Aug. 18; minimum daily, 13 mg/L July 3.

SEDIMENT LOADS: Maximum daily, 831,000 tons (754,000 tonnes) Aug. 18; minimum daily, 1.8 tons (1.6 tonnes) July 3.

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	HARD- NESS (CA/MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)
OCT												
01-03	1150	783	8.0	290	150	88	16	59	1.5	3.1	166	0
04-12	791	708	8.0	270	140	82	15	53	1.4	2.8	160	0
13-16	762	750	8.2	280	140	85	16	58	1.5	2.8	166	0
17-18	650	810	8.0	300	170	90	19	67	1.7	3.0	168	0
19-21	659	826	8.0	300	160	89	18	67	1.7	3.0	169	0
22-31	698	817	8.1	290	150	86	18	62	1.6	3.0	169	0
NOV												
01-30	813	820	8.1	290	150	87	18	64	1.6	2.9	168	0
DEC												
01-05	1330	622	7.2	250	110	80	12	43	1.2	2.7	168	0
06-31	1630	552	7.3	210	93	63	12	38	1.2	2.4	139	0
JAN												
01-31	1500	561	8.2	200	88	59	12	41	1.3	2.4	133	0
FEB												
01-16	980	649	8.0	230	120	70	14	50	1.4	2.7	143	0
17-28	753	724	8.0	250	130	74	15	59	1.6	3.2	145	0
MAR												
01-31	602	713	7.9	240	120	71	15	59	1.7	2.9	140	0
APR												
01-09	521	653	8.4	200	130	56	15	65	2.0	2.9	82	4
13-18	168	886	8.4	270	190	71	22	90	2.4	3.3	94	1
19-30	123	1200	8.5	370	300	95	33	120	2.7	4.1	88	3
JUN												
01-..	475	1000	8.2	340	200	100	23	81	1.9	3.6	180	0
02-13	1200	567	8.5	180	100	53	12	40	1.3	2.5	95	0
14-18	460	797	8.4	260	160	73	18	62	1.7	3.0	120	0
19-30	142	1190	8.1	380	250	100	31	110	2.5	3.9	150	0
JUL												
01-20	201	1090	7.6	300	86	100	12	120	3.0	5.5	260	0
21-31	1740	1040	7.5	530	370	150	37	120	2.3	5.8	190	0
AUG												
01-12	524	915	7.8	310	180	92	19	81	2.0	4.0	160	0
13-..	1500	1600	7.0	320	70	110	12	240	5.8	5.4	310	0
14-15	1080	1050	7.6	220	44	75	9.1	150	4.4	5.1	220	0
16-18	2900	1240	7.3	330	99	110	13	150	3.6	4.8	280	0
19-31	698	790	7.6	270	130	90	12	73	1.9	4.3	180	0
SEP												
01-11	288	922	8.1	320	180	94	20	78	1.9	3.9	170	0
12-26	467	839	7.8	290	150	89	16	70	1.8	4.1	170	0
27-30	532	705	7.9	240	120	74	14	59	1.7	3.3	150	0
), AVG.	--	735	7.9	264	136	79	16	63	1.7	3.2	155	0
ME WTD.												
AVG.	835	797	7.9	273	145	81	17	70	1.8	3.4	155	0
LOAD												
(TONS)	--	--	--	--	--	59000	11800	47300	--	2370	115000	65

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (REST- 180 C) DUE AT (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT												
01-03	240	21	.5	9.5	--	523	.71	1620	.72	.05	310	150
04-12	220	17	.6	9.1	--	481	.65	1030	.56	.04	270	10
13-16	240	20	.5	8.9	--	516	.70	1060	.56	.02	260	10
17-18	260	22	.5	8.7	--	557	.76	978	.83	.04	240	10
19-21	270	21	.5	8.6	--	564	.77	1000	.74	.03	230	10
22-31	240	21	.5	8.2	--	525	.71	989	.60	.02	170	10
NOV												
01-30	260	21	.5	8.7	--	548	.75	1200	.62	.04	270	10
DEC												
01-05	160	18	.4	12	--	413	.56	1480	.53	.02	120	10
06-31	140	12	.3	10	--	348	.47	1530	.43	.02	100	0
JAN												
01-31	150	14	.4	9.5	--	356	.48	1440	.53	.05	90	0
FEB												
01-16	200	17	.4	10	--	437	.59	1160	.57	.05	120	20
17-28	220	20	.4	8.8	--	475	.65	966	.57	.06	130	10
MAR												
01-31	230	17	.4	8.2	--	475	.65	772	.54	.05	140	10
APR												
01-09	240	17	.4	2.2	--	443	.60	623	.01	.00	150	10
13-18	340	25	.6	2.7	--	603	.82	274	.22	.00	320	20
19-30	480	42	.8	1.0	--	824	1.12	274	.30	.00	580	0
JUN												
01...	320	31	.6	13	--	661	.90	848	--	--	430	30
02-13	160	15	.4	5.1	--	335	.46	1090	--	--	120	10
14-18	240	23	.5	4.3	--	483	.66	600	--	--	250	20
19-30	440	37	.9	5.4	--	803	1.09	308	--	--	780	10
JUL												
01-20	330	16	.7	15	--	728	.99	395	--	--	130	10
21-31	540	44	1.0	9.5	--	1000	1.36	4700	--	--	580	20
AUG												
01-12	330	23	.7	12	--	641	.87	907	--	--	310	30
13...	580	15	.7	18	--	1130	1.54	4580	--	--	170	30
14-15	350	16	.8	15	--	730	.99	2130	--	--	170	20
16-18	430	14	.7	14	--	875	1.19	6850	--	--	120	30
19-31	280	18	.6	13	--	580	.79	1090	--	--	180	20
SEP												
01-11	310	29	.6	12	--	632	.86	491	--	--	360	0
12-26	270	22	.6	12	--	568	.77	716	--	--	200	0
27-30	220	18	.4	12	--	475	.65	682	--	--	120	0
WTD. AVG.	240	19	.5	9.5	--	508	.69	--	--	--	190	11
TIME WTD.												
AVG.	263	21	.5	9.2	--	543	.74	--	--	--	227	11
TOT. LOAD												
(TONS)	179000	14100	368	7110	--	379000	--	--	--	--	142	8

SAN JUAN RIVER BASIN

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09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA+MG) (MG/L) (00900)
OCT										
27...	0930	680	980	8.2	7.0	7.0	150	--	22	300
NOV										
17...	1030	888	820	7.1	7.0	1.5	70	13.0	--	320
DEC										
06...	1115	1630	560	7.3	5.0	2.0	130	11.2	--	200
JAN										
06...	1700	1480	625	7.8	-7.5	3.0	60	11.7	27	190
FEB										
02...	1130	1200	655	8.1	4.0	3.5	40	10.8	100	200
MAR										
09...	1215	641	990	8.2	15.0	7.5	20	14.5	17	250
APR										
13...	1130	250	540	8.7	18.0	16.5	20	--	63	260
MAY										
11...	1230	658	804	7.9	24.5	17.0	160	7.8	38	290
JUN										
14...	0830	1150	710	8.4	25.5	18.5	40	--	18	260
JUL										
13...	1300	95	1690	8.0	30.5	24.5	260	7.5	75	560
AUG										
31...	1325	323	890	8.0	32.0	23.0	260	7.8	48	300
SEP										
28...	1400	610	720	8.0	23.5	18.5	420	8.8	54	230

DATE	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
OCT									
27...	160	89	18	71	1.8	3.1	162	0	300
NOV									
17...	180	99	18	64	1.6	3.0	171	0	270
DEC									
06...	93	60	11	39	1.2	2.6	125	0	160
JAN									
06...	83	58	12	40	1.3	2.3	136	0	150
FEB									
02...	93	62	12	41	1.2	2.3	136	0	160
MAR									
09...	130	75	14	58	1.6	2.7	143	0	240
APR									
13...	140	77	17	75	2.0	3.1	140	5	280
MAY									
11...	160	87	17	65	1.7	3.3	150	0	260
JUN									
14...	140	79	15	51	1.4	2.7	140	0	220
JUL									
13...	430	150	46	160	2.9	5.5	170	0	670
AUG									
31...	160	92	17	59	1.5	3.3	170	0	260
SEP									
28...	120	70	14	50	1.4	2.8	140	0	190

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)
OCT 27...	22	.4	8.6	589	595	.71	.66	.01	.57
NOV 17...	20	.5	8.0	570	567	.72	.01	.03	.55
DEC 06...	12	.3	10	369	359	.45	.43	.12	.98
JAN 06...	13	.3	10	362	355	.43	.43	.02	.48
FEB 02...	13	.3	9.5	384	369	.43	.43	.04	.45
MAR 09...	18	.6	6.8	492	487	.31	.31	.01	1.2
APR 13...	19	.6	4.7	548	552	.28	.28	.08	.37
MAY 11...	20	.5	8.1	549	538	.67	.67	.00	1.6
JUN 14...	18	.5	8.7	468	466	.41	.39	.04	.31
JUL 13...	63	1.3	6.5	1290	1200	1.8	1.8	.09	1.1
AUG 31...	22	.5	11	562	552	.72	.69	.02	.96
SEP 28...	15	.4	11	439	425	.60	.60	.08	.82

DATE	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDEO ORGANIC CARBON (C) (MG/L) (00689)
OCT 27...	1.3	.20	.04	220	20	--	--	3.6	.4
NOV 17...	1.3	.18	.08	340	20	10	4.7	3.2	2.1
DEC 06...	1.6	.19	.03	90	10	--	--	3.6	<5.0
JAN 06...	.93	.19	.03	80	50	--	--	3.8	2.3
FEB 02...	.92	.12	.02	130	10	--	--	3.3	1.7
MAR 09...	1.5	.05	.04	210	0	20	2.9	3.2	.4
APR 13...	.73	.02	.01	160	30	--	--	3.6	1.1
MAY 11...	2.3	.30	.02	130	30	--	--	3.8	5.0
JUN 14...	.76	.12	.05	120	10	0	2.4	2.1	1.7
JUL 13...	3.0	.34	.06	880	10	--	--	4.8	3.0
AUG 31...	1.7	.27	.06	180	10	--	--	7.0	1.8
SEP 28...	1.5	.63	.01	100	60	0	9.9	5.5	2.7

SAN JUAN RIVER BASIN

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09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued
TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL	DIS-	DIS-	TOTAL	DIS-	TOTAL	DIS-	TOTAL	DIS-	TOTAL	DIS-	
		ARSENIC (AS) (UG/L) (01002)	SOLVED ARSENIC (AS) (UG/L) (01000)	SOLVED BORON (B) (UG/L) (01020)	CAD- MIUM (CD) (UG/L) (01027)	SOLVED CAD- MIUM (CD) (UG/L) (01025)	CHRO- MIUM (CR) (UG/L) (01034)	SOLVED CHRO- MIUM (CR) (UG/L) (01030)	COBALT (CO) (UG/L) (01037)	SOLVED COBALT (CO) (UG/L) (01035)	CUPPER (CU) (UG/L) (01042)	SOLVED CUPPER (CU) (UG/L) (01040)	
NOV 17...	1030	2	0	340	<10	0	10	0	<50	0	10	5	
MAR 09...	1215	1	1	210	<10	0	0	0	<50	0	10	2	
JUN 14...	0830	2	1	120	<10	1	0	0	<50	0	<10	2	
SEP 28...	1400	13	1	100	10	1	8	0	<50	1	50	2	
DATE	TIME	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
NOV 17...	6000	20	<100	3	140	10	.0	.0	3	3	30	10	
MAR 09...	1500	0	<100	2	80	20	.0	.0	3	3	20	10	
JUN 14...	3200	10	100	4	210	0	.0	.0	2	2	50	10	
SEP 28...	32000	60	<100	2	1100	0	.1	.0	5	1	180	0	

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDE D GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDE D GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS AS SR90 /Y90 (PC/L) (80050)	SUS- PENDE D GROSS BETA AS AS SR90 /Y90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (22703)
OCT 27...	0930	320	15	28	3.4	15	2.7	12	.11	3.1
JUL 13...	1300	620	--	--	--	--	--	--	--	--
AUG 31...	1325	388	--	--	--	--	--	--	--	--
SEP 28...	1400	1240	--	--	--	--	--	--	--	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	FECAL COLI- FORM .7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
OCT 27...	0930	10	160	--
NOV 17...	1030	23	65	--
DEC 06...	1115	930	320	--
JAN 06...	1700	57	0	--
FEB 02...	1130	35	40	--
MAR 09...	1215	14	--	16
APR 13...	1130	10	--	35
JUN 14...	0830	420	--	250
JUL 13...	1300	160	--	350
AUG 31...	1325	730	--	620
SEP 28...	1400	1200	--	1100

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	OCT 27,76 0930	NOV 17,76 1030	DEC 6,76 1115	JAN 6,77 1700	FEB 2,77 1130					
TOTAL CELLS/ML	13000	5300	2800	1200	950					
DIVERSITY: DIVISION	0.4	1.0	0.0	1.3	0.6					
..CLASS	0.4	1.1	0.0	1.3	0.6					
..ORDER	0.4	1.1	0.0	1.8	0.6					
...FAMILY	0.5	2.0	2.1	2.5	2.8					
....GENUS	0.5	2.0	2.2	2.6	3.1					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....COELASTRACEAE										
.....COELASTRUM	--	-	--	-	--	-	--	-	--	-
....OOCYSTACEAE										
.....CHODATELLA	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....CRUCIGENIA	--	-	--	-	--	-	--	-	--	-
...SCENEDESMUS	--	-	--	-	--	-	68	6	47	5
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	--	-	34	3	--	-
..ZYGNEMATALES										
...DESMIDIACEAE										
....COSMARIUM	--	-	37	1	--	-	--	-	--	-
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
..PENNALES										
...NAVICULACEAE										
....ENTOMONEIS	--	-	--	-	--	-	--	-	--	-
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	--	-	43	4	--	-
....MELOSIRA	--	-	--	-	--	-	94	8	--	-
...STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	* 0		67	2	--	-	--	-
....COCCONEIS	--	-	37	1	* 0		34	3	47	5
...RHOICOSPHENIA	--	-	--	-	340	12	17	1	23	2
...CYMBELLACEAE										
....AMPHORA	--	-	--	-	--	-	--	-	--	-
....CYMBELLA	--	-	56	1	* 0		--	-	8	1
...DIATOMACEAE										
....DIATOMA	230	2	240	5	940#	33	150	13	220#	23
...EUNOTIACEAE										
....EUNOTIA	--	-	--	-	* 0		--	-	--	-
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	--	-	--	-	8	1
....FRAGILARIA	--	-	--	-	--	-	9	1	55	6
...SYNEURA	--	-	* 0		* 0		--	-	23	2
...GOMPHONEMACEAE										
....GOMPHONEMA	230	2	190	4	130	5	43	4	62	7
...NAVICULACEAE										
....CALONEIS	--	-	* 0		* 0		--	-	--	-
....GYROSIGMA	--	-	--	-	--	-	--	-	8	1
...NAVICULA	290	2	540	10	1000#	36	86	7	290#	30
...NITZSCHACEAE										
....HANTZSCHIA	120	1	--	-	--	-	--	-	--	-
...NITZSCHIA	--	-	510	10	270	10	26	2	55	6
...SURIPELLACEAE										
....SURIPELLA	--	-	260	5	67	2	--	-	47	5
..CHRYSOPHYCEAE										
...CHRYSOMONADALES										
...OCHROMONADACEAE										
....DINOBYRON	--	-	56	1	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROCOCCOCCALES										
....CHROCOCCOCCAEAE										
.....AGMENELLUM	--	-	3300#	62	--	-	--	-	--	-
...HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	--	-	--	-
....APHANIZOMENON	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE										
....OSCILLATORIA	12000#	93	--	-	--	-	560#	48	62	7
....SPIRULINA	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SAN JUAN RIVER BASIN

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09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	OCT 27,76 0930	NOV 17,76 1030	DEC 6,76 1115	JAN 6,77 1700	FEB 2,77 1130
TOTAL CELLS/ML	13000	5300	2800	1200	950
DIVERSITY: DIVISION	0.4	1.0	0.0	1.3	0.6
..CLASS	0.4	1.1	0.0	1.3	0.6
..ORDER	0.4	1.1	0.0	1.8	0.6
...FAMILY	0.5	2.0	2.1	2.5	2.8
....GENUS	0.5	2.0	2.2	2.6	3.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
.....EUGLENA	--	-	--	-	--	-	--	-	--	-

DATE TIME	MAY 11,77 1230	JUN 14,77 0830	JUL 13,77 1300	AUG 31,77 1325	SEP 28,77 1400
TOTAL CELLS/ML	3500	1800	24000	440	5800
DIVERSITY: DIVISION	0.8	0.1	0.4	0.7	1.3
..CLASS	0.8	0.1	0.4	0.7	1.3
..ORDER	0.8	0.2	0.4	0.7	1.6
...FAMILY	1.1	2.3	0.4	2.3	2.3
....GENUS	1.2	2.4	0.6	2.3	2.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....COELASTRACEAE										
.....COELASTRUM	2800#	79	--	-	760	3	--	-	--	-
...OOCYSTACEAE										
....CHODATELLA	--	-	--	-	*	0	--	-	--	-
...SCENEDESMACEAE										
....CRUCIGENIA	--	-	--	-	--	-	--	-	400	7
...SCENEDESMUS	--	-	--	-	--	-	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	17	1	--	-	--	-	150	3
...ZYGNEATALES										
...DESMIDIACEAE										
....COSMARIUM	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	MAY 11,77 1230	JUN 14,77 0830	JUL 13,77 1300	AUG 31,77 1325	SEP 28,77 1400					
TOTAL CELLS/ML	3500	1800	24000	440	5800					
DIVERSITY: DIVISION	0.8	0.1	0.4	0.7	1.3					
..CLASS	0.8	0.1	0.4	0.7	1.3					
...ORDER	0.8	0.2	0.4	0.7	1.6					
....FAMILY	1.1	2.3	0.4	2.3	2.3					
.....GENUS	1.2	2.4	0.6	2.3	2.3					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
..PENNALES										
...NAVICULACEAE										
....ENTOMONEIS	73	2	--	-	--	-	--	-	--	-
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	--	-	--	-	350	6
....MELOSIRA	--	-	--	-	--	-	--	-	--	-
....STEPHANODISCUS	--	-	17	1	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	73	2	--	-	--	-	--	-	200	3
....COCCONEIS	--	-	--	-	--	-	--	-	150	3
....RHOICOSPHENIA	--	-	160	9	--	-	89#	20	--	-
...CYMBELLACEAE										
....AMPHORA	--	-	120	7	--	-	--	-	--	-
....CYMBELLA	--	-	70	4	--	-	--	-	--	-
...DIATOMACEAE										
....DIATOMA	--	-	87	5	--	-	89#	20	99	2
...EUNOTIACEAE										
....EUNOTIA	--	-	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	--	-	--	-	--	-
....FRAGILARIA	--	-	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	210	12	--	-	89#	20	99	2
...GOMPHONEMACEAE										
....GOMPHONEMA	--	-	70	4	--	-	--	-	99	2
...NAVICULACEAE										
....CALONEIS	--	-	--	-	--	-	--	-	--	-
....GYROSIGMA	--	-	--	-	--	-	--	-	--	-
...NAVICULA	73	2	960#	53	540	2	89#	20	640	11
...NITZSCHIA										
....NITZSCHIA	--	-	--	-	--	-	--	-	--	-
....NITZSCHIA	360	10	35	2	--	-	--	-	250	4
...SURIARELLACEAE										
....SURIARELLA	73	2	52	3	--	-	--	-	99	2
..CHRYSTOPHYCEAE										
...CHRYSONOMADALES										
....OCHROMONADACEAE										
....DINOBRYON	--	-	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROCCOCCALES										
....CHROCCOCCAEAE										
....AGMENELLUM	--	-	--	-	--	-	--	-	--	-
...HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	870	4	--	-	--	-
....APHANIZOMENON	--	-	--	-	22000#	91	--	-	--	-
...OSCILLATORIACEAE										
....OSCILLATORIA	--	-	--	-	--	-	--	-	3300#	57
....SPIRULINA	--	-	--	-	--	-	89#	20	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
.....EUGLENA	73	2	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)
OCT									
27...	1000	670	7.0	1070	1940	21	26	34	46
NOV									
08...	1700	909	15.0	650	1600	38	42	54	--
17...	1030	888	1.5	511	1230	21	25	34	64
29...	1700	954	12.0	914	2350	36	42	54	--
DEC									
04...	1700	1800	12.0	3830	18600	15	19	38	95
FEB									
02...	1130	1200	3.5	691	2240	--	--	--	--
MAR									
09...	1215	641	7.5	355	614	--	--	--	--
APR									
13...	1130	250	16.5	42	28	--	--	--	--
JUN									
09...	1130	1600	24.5	687	2970	--	--	--	--
14...	0830	1150	18.5	396	1230	--	--	--	--
JUL									
06...	1200	95	21.5	5190	1330	79	89	95	100
13...	1300	95	24.5	492	126	--	--	--	--
21...	1630	3550	--	75400	723000	59	73	86	99
26...	1247	3400	--	32500	298000	27	31	39	79
27...	1030	1920	--	42400	220000	51	58	73	94
29...	1630	1130	--	10600	32300	54	64	79	97
AUG									
14...	1500	782	--	38300	80900	63	71	90	97
18...	1911	4650	--	102000	1280000	38	47	62	87
SEP									
05...	1730	321	25.5	1110	962	38	44	54	78
15...	1800	476	20.0	3950	5080	38	48	61	86
28...	1400	610	18.5	4580	7540	8	10	14	44

DATE	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70345)	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM (70346)	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM (70347)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70332)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70333)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70334)
OCT									
27...	47	52	79	100	--	--	--	--	--
NOV									
08...	--	--	--	--	--	92	98	99	100
17...	78	89	100	--	--	--	--	--	--
29...	--	--	--	--	--	95	100	--	--
DEC									
04...	100	--	--	--	--	--	--	--	--
FEB									
02...	--	--	--	--	--	25	--	--	--
MAR									
09...	--	--	--	--	--	18	--	--	--
APR									
13...	--	--	--	--	--	67	--	--	--
JUN									
09...	--	--	--	--	--	82	--	--	--
14...	--	--	--	--	--	38	--	--	--
JUL									
06...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	99	--	--	--
21...	100	--	--	--	--	--	--	--	--
26...	91	97	100	--	--	--	--	--	--
27...	98	99	100	--	--	--	--	--	--
29...	100	--	--	--	--	--	--	--	--
AUG									
14...	99	99	100	--	--	--	--	--	--
18...	96	99	100	--	--	--	--	--	--
SEP									
05...	89	99	100	--	--	--	--	--	--
15...	97	100	--	--	--	--	--	--	--
28...	56	67	92	99	100	--	--	--	--

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	713	800	604	525	547	692	606	1060	1130	1260	666	935
2	819	798	607	520	597	705	627	1200	630	1420	730	965
3	829	805	616	---	667	733	685	1050	670	1380	822	960
4	712	782	627	---	642	734	700	958	680	1880	922	1120
5	745	803	645	542	663	709	689	903	550	1580	944	902
6	698	787	558	576	641	716	648	924	530	1560	1010	854
7	691	858	558	540	660	720	644	887	530	1500	1030	895
8	680	849	568	548	642	730	650	963	520	1590	1010	891
9	686	843	570	527	677	742	616	955	500	1630	1060	909
10	677	795	543	573	684	745	---	954	520	1570	1030	882
11	713	793	543	700	681	740	---	836	540	1360	1040	905
12	772	872	520	569	660	703	---	790	610	1010	1180	1160
13	750	864	523	539	669	736	818	1310	630	1520	1600	968
14	787	792	559	537	669	715	864	991	700	1540	1100	1020
15	806	793	559	601	681	687	818	987	730	1620	989	838
16	656	862	555	553	672	709	986	891	730	1040	1230	809
17	739	860	552	549	743	720	897	1030	800	1440	924	785
18	883	785	538	539	724	713	994	1080	880	973	1500	717
19	789	770	538	527	725	704	1060	1020	980	1620	905	752
20	862	812	554	522	724	705	1220	1080	1000	1410	691	769
21	831	826	569	549	707	750	981	1030	1110	1630	657	793
22	---	821	582	548	791	698	1180	978	1210	791	651	793
23	739	826	580	562	728	729	1220	1160	1390	1170	946	766
24	777	817	572	575	709	709	1130	1040	1270	1040	828	789
25	784	812	567	603	725	703	1410	998	1290	1320	767	791
26	813	819	531	573	710	682	1470	961	1250	813	732	796
27	880	750	532	570	684	730	1320	1160	1190	1030	707	709
28	869	743	555	565	712	699	1330	1160	1190	698	705	669
29	793	897	556	547	---	704	1020	1430	1190	713	763	670
30	882	914	518	539	---	705	1240	1340	1210	636	793	800
31	826	---	525	568	---	695	---	1140	---	659	876	---
MEAN	773	818	562	558	683	715	956	1040	872	1270	929	854
WTR YR 1977	MEAN	838		MAX	1880		MIN	500				

SAN JUAN RIVER BASIN

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09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL *	AUG *	SEP *
1	17.0	15.0	12.0	8.0	6.0	5.0	7.5	15.5	23.5	25.5		---
2	17.0	15.0	12.0	8.0	5.0	4.0	7.5	19.0	24.0	27.0		24.0
3	17.0	15.0	12.0	---	5.5	4.5	8.0	15.5	21.0	23.0		20.0
4	15.0	15.0	12.0	---	5.0	5.0	10.0	17.0	23.0	24.5		23.5
5	15.0	15.0	12.0	3.0	5.5	6.0	9.0	19.0	24.5	26.0		25.5
6	15.0	15.0	10.0	2.5	5.0	5.0	12.0	19.0	24.0	21.5		---
7	15.0	15.0	10.0	1.5	5.0	7.0	15.0	17.0	23.0	29.0		---
8	15.0	15.0	8.0	1.0	5.5	6.0	17.0	19.5	24.5	27.0		---
9	15.0	15.0	8.0	.5	4.5	4.5	17.0	20.5	24.5	20.5		---
10	15.0	15.0	8.0	.0	6.0	6.5	17.0	20.0	24.5	19.0		---
11	16.0	15.0	8.0	.0	4.5	3.0	15.0	17.0	22.0	21.0		---
12	16.0	15.0	8.0	.5	6.0	5.5	17.5	14.5	17.5	22.5		---
13	16.0	15.0	8.0	.0	5.5	7.5	18.0	16.5	23.5	23.5		20.5
14	16.0	15.0	8.0	.0	7.0	4.0	17.5	18.5	22.5	21.5		21.0
15	16.0	15.0	8.0	.5	6.5	6.5	15.0	17.5	22.0	22.0		20.0
16	16.0	15.0	8.0	.0	6.0	7.0	17.0	19.0	23.5	15.0		17.5
17	16.0	15.0	8.0	.0	5.5	4.5	18.5	19.5	24.5	19.0		17.0
18	16.0	15.0	8.0	2.5	7.5	4.0	16.5	18.5	25.0	23.0		19.0
19	16.0	15.0	8.0	2.0	7.0	4.0	13.5	17.0	22.0	22.5		20.0
20	16.0	15.0	8.0	2.5	7.0	4.5	13.5	17.0	25.0	22.0		21.0
21	16.0	15.0	8.0	3.5	7.0	5.0	15.5	19.5	21.5	---		20.0
22	16.0	15.0	8.0	4.5	4.0	6.5	19.0	18.0	23.5	---		18.0
23	16.0	15.0	8.0	5.5	4.5	7.0	19.0	17.5	21.0	---		17.5
24	16.0	15.0	8.0	3.0	5.0	5.0	20.5	19.5	21.5	---		19.0
25	16.0	14.0	8.0	4.5	4.5	8.0	20.0	20.5	23.0	23.0		18.0
26	16.0	14.0	8.0	3.0	4.5	5.0	20.0	20.0	25.0	---		19.0
27	16.0	12.0	8.0	4.0	4.0	3.5	21.0	21.0	25.0	---		17.5
28	16.0	12.0	8.0	4.0	4.5	4.5	20.0	23.0	24.5	---		20.0
29	16.0	12.0	8.0	2.0	---	3.5	22.0	22.5	21.0	---		19.0
30	16.0	12.0	8.0	2.0	---	5.0	22.5	24.0	23.0	---		18.0
31	16.0	---	8.0	4.0	---	5.5	---	20.5	---	---		---
MEAN	16.0	14.5	9.0	2.5	5.5	5.0	16.0	19.0	23.0	23.0		20.0
WTR YR 1977	MEAN	13.5		MAX	29.0		MIN	.0				

*Missing data due to Observer's thermometer being broken

SAN JUAN RIVER BASIN

477

09379500 SAN JUAN RIVER NEAR BLUFF, UT

Location.--Lat 37°08'49", long 109°51'51", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.7, T.42 S., R.19 E., San Juan County, Hydrologic Unit 14080205, on left bank 1,600 ft (490 m) downstream from Gypsum Creek, 1,800 ft (550 m) upstream from highway bridge, 20 mi (32 km) southwest of Bluff, and at mile 113.5 (182.6 km).

DRAINAGE AREA.--23,000 mi² (60,000 km²), approximately.

PERIOD OF RECORD.--October 1914 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1940. WSP 1313: 1917, 1929. WSP 1343: 1945.

GAGE.--Water-stage recorder. Datum of gage is 4,048 ft (1,234 m) from levels of Topographic Division, USGS. Prior to Mar. 16, 1927, chain gages at sites about 1,700 ft (520 m) downstream at different datums.

REMARKS.--Records fair. Diversions for irrigation of approximately 200,000 acres (810 km²) above station. No diversion between station and mouth of river. Flow partly 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.--63 years, 2,543 ft³/s (72.02 m³/s), 1,842,000 acre-ft/yr (2.27 km³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD (1914-17 and SINCE 1927).--Maximum discharge, 70,000 ft³/s (1,980 m³/s) Sept. 10, 1927, gage height, 32.0 ft (9.75 m) from rating curve extended above 31,000 ft³/s (787 m³/s) and slope-area measurement at gage height 26.62 ft (8.114 m); no flow July 3-13, 1934, Aug. 24-27, 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 discharge above base of 8,000 ft³/s (227 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 23	1400	9,400 266	10.24 3.121
Aug. 16	1800	*10,100 286	10.60 3.231

Minimum daily discharge, 70 ft³/s (1.98 m³/s) July 3.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	785	805	1430	1300	793	608	290	195	140	884	416
2	1150	772	738	1460	1300	802	627	230	203	100	699	358
3	1110	835	775	1540	1300	803	633	280	332	70	593	339
4	1050	801	807	1450	1200	805	608	280	710	120	522	497
5	991	806	1340	1350	1100	814	663	280	1020	321	401	469
6	938	801	1560	1350	1050	805	652	320	1110	306	311	413
7	938	804	1490	1350	1000	787	599	290	1150	150	265	385
8	897	814	1490	1350	1000	751	530	270	1040	100	239	396
9	868	812	1410	1350	1000	742	487	260	1350	100	214	352
10	857	839	1420	1350	1000	719	487	250	1400	100	199	319
11	814	831	1410	1370	1000	683	462	300	1070	100	190	329
12	792	814	1450	1360	1000	691	430	428	1020	100	3000	539
13	756	807	1430	1350	1000	715	439	560	914	80	2000	1340
14	790	792	1400	1350	1000	702	404	548	738	80	1700	857
15	794	807	1370	1350	1000	697	371	531	760	80	1400	888
16	724	812	1380	1350	1000	674	324	578	548	80	2500	767
17	713	805	1380	1350	1000	653	354	595	428	80	4000	628
18	680	807	1370	1350	970	628	356	548	423	150	5200	614
19	658	829	1380	1350	909	632	313	462	378	356	4800	665
20	676	795	1370	1350	886	644	277	409	313	532	3010	699
21	730	784	1410	1350	861	636	240	378	277	1510	1040	606
22	698	795	1380	1350	855	629	250	329	223	3800	894	554
23	780	790	1430	1350	844	621	270	291	214	4970	854	519
24	762	797	1380	1350	857	599	250	251	186	4140	858	498
25	780	780	1390	1350	846	599	240	241	140	1950	1390	522
26	818	774	1410	1350	824	602	230	214	100	1760	950	516
27	798	759	1400	1350	808	591	220	206	90	2220	603	488
28	763	765	1430	1300	791	587	210	214	90	1820	646	500
29	735	763	1440	1300	---	605	210	270	90	1500	564	685
30	711	764	1440	1300	---	579	220	217	170	1250	504	714
31	764	---	1440	1300	---	594	---	197	---	1080	443	---
TOTAL	25785	23939	41325	42160	27701	21182	11964	10517	16682	29145	40873	16872
MEAN	832	798	1333	1360	989	683	399	339	556	940	1318	562
MAX	1250	839	1560	1540	1300	814	663	595	1400	4970	5200	1340
MIN	658	759	738	1300	791	579	210	197	90	70	190	319
AC-FT	51140	47480	81970	83620	54940	42010	23730	20860	33090	57810	81070	33470
CAL YR 1976 TOTAL	511372			1397	MAX 4770	MIN 270	AC-FT 1014000					
WTR YR 1977 TOTAL	308145			MEAN 844	MAX 5200	MIN 70	AC-FT 611200					

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 (1.4 km) upstream from Nutria Diversion Dam, 1.3 mi (2.1 km) northeast of Upper Nutria, and 10.4 mi (16.7 km) northwest of Ramah.

DRAINAGE AREA.--71.4 mi² (185 km²).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,860 ft (2,091 m), from topographic map.

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

AVERAGE DISCHARGE.--8 years, 3.52 ft³/s (0.100 m³/s), 2,550 acre-ft/yr (3.14 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 782 ft³/s (22.1 m³/s) Apr. 14, 1973, gage height, 4.58 ft (1.396 m), from rating curve extended above 470 ft³/s (13.3 m³/s); no flow Oct. 1-20, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30 ft³/s (0.85 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 24	1900	73 2.07	3.42 1.042
Aug. 17	2100	*174 4.93	3.94 1.201

Minimum discharge, 0.01 ft³/s (0.0003 m³/s) at times.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.03	.01	.08	.15	.15	.31	.12	.21	.06	.04	.06
2	.03	.03	.01	.08	.15	.15	.31	.12	.22	.05	.04	1.8
3	.03	.03	.01	.08	.15	.15	.35	.12	.21	.05	.05	.46
4	.03	.03	.01	.08	.15	.15	.35	.12	.21	.06	.06	.11
5	.03	.03	.01	.07	.15	.15	1.5	.12	.17	.06	.07	.08
6	.04	.04	.01	.07	.18	.15	1.6	.12	.15	.05	.08	.08
7	.06	.06	.01	.07	.18	.15	.58	.15	.15	.04	.10	.07
8	.04	.05	.01	.07	.18	.15	.44	.15	.15	.04	.12	.06
9	.04	.03	.02	.08	.18	.18	.43	.18	.15	.04	.13	.05
10	.03	.02	.02	.08	.18	.18	.37	.18	.15	.03	.09	.05
11	.03	.02	.02	.08	.18	.18	.30	.16	.12	.03	.21	.05
12	.03	.02	.02	.08	.19	.18	.25	.15	.12	.03	.11	.05
13	.03	.02	.02	.08	.19	.45	.18	.14	.12	.03	.05	.07
14	.03	.02	.02	.08	.17	1.0	.15	.15	.12	.03	.04	.06
15	.03	.02	.02	.09	.17	1.4	.15	.18	.12	.02	.03	.04
16	.03	.02	.02	.09	.18	1.8	.12	.18	.10	.02	.02	.04
17	.03	.02	.02	.09	.18	.92	.12	.18	.10	.02	11	.04
18	.03	.02	.02	.09	.18	.50	.12	.15	.10	.02	4.2	.04
19	.02	.02	.02	.09	.18	.45	.10	.15	.09	.02	1.9	.04
20	.02	.02	.02	.09	.18	3.1	.10	.15	.09	.03	.51	.04
21	.03	.02	.02	.11	.19	3.6	.10	.12	.09	.02	.20	.04
22	.03	.02	.02	.12	.21	2.3	.10	.15	.08	.02	.11	.04
23	.03	.02	.02	.10	.21	1.3	.10	.15	.09	.01	.09	.04
24	.03	.02	.02	.10	.20	.72	.10	.15	.09	5.1	.08	.04
25	.03	.02	.02	.10	.18	.56	.10	.15	.09	2.1	.08	.04
26	.03	.01	.02	.12	.18	.45	.15	.15	.08	.05	.07	.04
27	.03	.01	.03	.12	.15	.45	.15	.15	.08	.02	.07	.04
28	.02	.01	.03	.12	.15	.45	.15	.15	.07	1.6	.07	.09
29	.03	.01	.03	.12	---	.40	.14	.15	.07	.07	.07	.05
30	.04	.01	.03	.12	---	.35	.13	.21	.07	.03	.06	.04
31	.03	---	.03	.15	---	.31	---	.27	---	.03	.06	---
TOTAL	.98	.70	.59	2.90	4.92	22.43	9.05	4.77	3.66	9.78	19.81	3.75
MEAN	.032	.023	.019	.094	.18	.72	.30	.15	.12	.32	.64	.13
MAX	.06	.06	.03	.15	.21	3.6	1.6	.27	.22	5.1	11	1.8
MIN	.02	.01	.01	.07	.15	.15	.10	.12	.07	.01	.02	.04
AC-FT	1.9	1.4	1.2	5.8	9.8	44	18	9.5	7.3	19	39	7.4

CAL YR 1976 TOTAL 43.04 MEAN .12 MAX 5.6 MIN .01 AC-FT 85
WTR YR 1977 TOTAL 83.34 MEAN .23 MAX 11 MIN .01 AC-FT 165

LITTLE COLORADO RIVER BASIN

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09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM

LOCATION.--Lat 35°06'03", long 108°45'03", in NE¼ sec.17, T.10 N., R.18 W., McKinley County, Hydrologic Unit 15020004, on Zuni Indian Reservation, on left bank downstream from highway bridge on State Highway 36, 0.8 mi (1.3 km) upstream from flow line of Black Rock Reservoir, 2.3 mi (3.7 km) northeast of Black Rock, and 5.9 mi (9.5 km) northeast of Zuni Pueblo.

DRAINAGE AREA.--810 mi² (2,100 km²), approximately.

PERIOD OF RECORD.--October 1969 to current year. Prior to October 1974 published as "above Zuni Reservoir".

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,480 ft (1,975 m), from topographic map.

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

AVERAGE DISCHARGE.--8 years, 8.70 ft³/s (0.246 m³/s), 6,300 acre-ft/yr (7.77 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,200 ft³/s (147 m³/s) Aug. 4, 1974, gage height, 6.61 ft (2.015 m), from rating curve extended above 670 ft³/s (19.0 m³/s) on basis of slope-area measurements at gage heights 4.05 ft (1.234 m), 3.94 ft (1.201 m), 5.16 ft (1.573 m), and 6.61 ft (2.015 m); no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 19	2330	*2,320 65.7	5.56 1.695	Aug. 11	1930	2,200 62.3	5.50 1.676
July 25	1900	570 16.1	4.58 1.396	Aug. 17	1900	382 10.8	4.37 1.332

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.10	.20	.90	1.8	.60	.00	.00	.49	.02
2	.00	.00	.00	.08	.30	.90	1.9	.78	.00	.00	.00	3.8
3	.02	.00	.00	.09	.40	1.0	3.4	.58	.00	.00	.00	6.0
4	.00	.00	.00	.12	.50	1.0	2.1	.58	.00	.00	.00	.59
5	.00	.00	.00	.10	.60	1.2	2.9	.49	.00	18	.00	.36
6	.00	.00	.00	.12	.70	1.2	2.7	.53	.00	4.6	.00	.15
7	.00	.00	.00	.11	1.0	1.4	1.5	.67	.00	.45	.00	.11
8	.00	.00	.00	.11	1.1	1.4	1.0	.99	.00	.01	.00	.07
9	.00	.00	.00	.08	1.0	1.5	1.1	1.0	.00	.00	.00	.05
10	.00	.00	.00	.14	.90	1.5	1.0	1.1	.00	.00	.00	.05
11	.00	.00	.04	.12	.92	1.2	1.3	1.4	.00	.00	213	11
12	.00	.00	.60	.10	.95	1.5	1.2	1.1	.00	.00	43	4.7
13	.00	.00	.46	.12	.95	1.4	.98	.93	.00	.00	8.2	5.4
14	.00	.00	.50	.10	.95	2.7	.87	.17	.00	.00	2.7	1.1
15	.00	.00	.58	.08	1.0	1.9	.77	.75	.00	.00	15	.55
16	.00	.00	.44	.10	1.0	2.2	.87	.30	.00	.00	90	.32
17	.00	.00	.46	.10	1.1	1.9	.84	.10	.00	.00	133	.27
18	.00	.00	.47	.11	1.1	2.9	.68	.00	.00	35	56	.23
19	.00	.00	.54	.13	1.1	2.2	.54	.00	.00	197	73	.23
20	.00	.00	.50	.15	1.2	3.2	.65	.00	.00	369	78	.23
21	.00	.00	.46	.13	1.1	2.2	.66	.00	.00	60	11	.24
22	.00	.00	.45	.11	1.0	2.3	.52	.00	.00	7.1	4.7	.26
23	.00	.00	.34	.10	.95	1.8	.50	.00	.00	2.0	2.2	.38
24	.00	.00	.32	.10	.95	3.5	.52	.00	.00	3.4	.93	.53
25	.00	.00	.31	.10	1.0	2.0	.58	.00	.00	86	.26	.40
26	.00	.00	.31	.10	.95	2.4	.63	.00	.00	7.1	.12	.24
27	.00	.00	.43	.12	.92	2.9	.58	.00	.00	.84	.08	.50
28	.00	.00	.24	.11	.90	2.5	.56	.00	.00	1.2	.07	6.9
29	.00	.00	.40	.12	---	2.8	.56	.00	.00	1.8	.06	1.4
30	.00	.00	.30	.11	---	5.1	.49	.00	.00	1.1	.05	.42
31	.00	.00	.20	.10	---	2.5	---	.00	---	.45	.04	---
TOTAL	.02	.00	8.35	3.36	24.74	63.10	33.70	12.07	.00	795.05	731.90	46.50
MEAN	.001	.000	.27	.11	.88	2.04	1.12	.39	.000	25.6	23.6	1.55
MAX	.02	.00	.60	.15	1.2	5.1	3.4	1.4	.00	369	213	11
MIN	.00	.00	.00	.08	.20	.90	.49	.00	.00	.00	.00	.02
AC-FT	.04	.00	17	6.7	49	125	67	24	.00	1580	1450	92

CAL YR 1976 TOTAL 1184.48 MEAN 3.24 MAX 279 MIN .00 AC-FT 2350
WTR YR 1977 TOTAL 1718.79 MEAN 4.71 MAX 369 MIN .00 AC-FT 3410

LITTLE COLORADO RIVER BASIN

09395500 PUERCO RIVER AT GALLUP, NM

LOCATION.--Lat 35°31'48", long 108°44'21", in SW¼ sec. 15, T.15 N., R.18 W., McKinley County, Hydrologic Unit 15020006, 0.5 mi (0.8 km) upstream from crest-stage gage at Gallup which is north of the Santa Fe RR freight depot, 1,500 ft upstream from Second Street Bridge at Gallup, N. Mex.

DRAINAGE AREA.--558 mi² (1,445 km²).

PERIOD OF RECORD.--Water years 1975 to June 1977 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1975 to current year.

WATER TEMPERATURES: August 1975 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,370 micromhos June 12, 1976; minimum daily, 562 micromhos Jan. 27, 1976.

WATER TEMPERATURES: Maximum, 25.5°C May 31, 1976; minimum, 0.0 on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,330 micromhos May 3, 5; minimum daily, 630 micromhos Feb. 14.

WATER TEMPERATURES: Maximum, 23.5°C June 30; minimum, 0.0 on many days during winter months.

CHEMICAL ANALYSES, COMPOSITES OF DAILY SAMPLES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	HARDNESS (CA, MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)
OCT 01-31	761	8.0	100	0	32	5.8	140	6.0	3.6	277
NOV 01-30	808	8.0	98	0	30	5.7	150	6.6	4.0	295
DEC 01-31	871	8.1	82	0	25	4.8	160	7.7	3.1	314
JAN 01-31	826	8.0	81	0	24	5.1	160	7.7	3.0	302
FEB 01-08	841	8.1	82	0	24	5.3	160	7.7	2.8	301
09-22	652	8.1	71	0	21	4.5	120	6.2	2.7	235
23-28	887	8.0	140	0	40	9.1	170	6.3	3.8	315
MAR 01-31	962	7.7	130	0	38	7.4	170	6.6	4.2	281
APR 01-06	829	7.2	110	0	33	5.7	150	6.3	3.5	250
07-30	970	7.3	110	0	34	6.1	180	7.5	4.0	310
MAY 01-06	1320	6.6	120	0	35	6.6	250	10	4.2	320
07-18	964	7.1	98	0	29	6.1	190	8.4	3.8	320
19-31	1090	6.8	110	0	33	7.0	220	9.1	4.1	340
JUN 01-12	1120	8.1	89	0	27	5.3	200	9.2	4.7	330
13-20	1120	8.0	100	0	30	6.1	230	10	4.7	360
21-30	896	8.1	69	0	20	4.6	190	10	4.2	320

DATE	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SI02) (MG/L) (00955)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS-SOLVED ORTHO-PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)
OCT 01-31	0	140	17	.6	11	453	491	.91	.05	90	10
NOV 01-30	0	150	20	.6	12	--	522	.97	.06	100	10
DEC 01-31	0	150	20	.6	15	--	538	.93	.08	110	80
JAN 01-31	0	120	30	.5	15	--	511	.86	.07	120	30
FEB 01-08	0	130	35	.6	14	--	524	.83	.08	130	10
09-22	0	100	22	.6	11	--	401	.76	.07	100	0
23-28	0	180	29	.7	13	--	605	.88	.06	120	60
MAR 01-31	0	190	42	.7	13	--	609	1.1	.11	140	20
APR 01-06	0	180	22	.7	7.9	523	526	--	--	110	20
07-30	0	200	39	1.0	9.3	607	630	.71	.03	150	10
MAY 01-06	0	230	120	.8	13	--	820	.62	.08	180	30
07-18	0	170	36	.8	12	--	610	.90	.02	140	30
19-31	0	200	49	.8	12	--	697	.74	.05	160	30
JUN 01-12	0	180	45	.9	15	--	648	.88	1.0	180	40
13-20	0	230	51	.8	15	--	749	.78	.13	170	20
21-30	0	160	34	.7	15	--	590	.71	.10	140	20

LITTLE COLORADO RIVER BASIN

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09395500 PUERCO RIVER AT GALLUP, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (CA+MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)	
OCT 06...	1040	800	8.2	11.0	96	0	30	5.2	140	6.2	3.9	
DATE	TIME	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SI02) (MG/L) (00955)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS-SOLVED ORTHO. PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)
OCT 06...	281	0	140	19	.7	11	492	.65	.08	100	130	

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BORON (B) (UG/L) (01022)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL LITHIUM (LI) (UG/L) (01132)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELENIUM (SE) (UG/L) (01147)	DIS-SOLVED SELENIUM (SE) (UG/L) (01145)	DIS-SOLVED VANADIUM (V) (UG/L) (01085)
OCT 06...	1040	50	--	100	130	--	--	.2	32	32	4.4
DEC 01-31	--	10	170	110	80	100	90	.1	--	--	--
JUN 21-30	--	2	250	140	20	<100	50	--	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NON-FILTERABLE RESIDUE (MG/L) (00530)	DIS-SOLVED GROSS ALPHA U-NAT. (UG/L) (80030)	SUSPENDED GROSS ALPHA U-NAT. (UG/L) (80040)	DIS-SOLVED GROSS BETA CS-137 (PC/L) (03515)	SUSPENDED GROSS BETA CS-137 (PC/L) (03516)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80050)	SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L) (80060)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS-SOLVED NATURAL URANIUM (U) (UG/L) (22703)	DIS-SOLVED URANIUM (DIRECT FLUORO-METRIC) (PC/L) (80010)
OCT 06...	1040	3100	2800	1400	460	520	390	410	.84	--	1200
NOV 01-30	--	2800	2100	860	200	540	160	480	.44	800	--
JUN 13-20	--	210	3400	48	200	330	160	280	.49	1600	--

LITTLE COLORADO RIVER BASIN

09395500 PUERCO RIVER AT GALLUP, NM -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
1	773	706	891	764	854	968	784	1310	960
2	778	777	904	761	855	934	818	1320	976
3	772	654	881	757	840	920	857	1330	975
4	780	781	877	755	847	934	835	1320	984
5	770	781	875	777	844	971	835	1330	973
6	767	779	909	758	809	974	845	1320	985
7	790	781	876	816	838	958	978	997	983
8	775	793	876	816	838	981	986	991	986
9	792	792	880	827	645	979	986	986	964
10	794	796	874	1010	658	976	929	991	981
11	795	788	845	1020	657	968	986	989	981
12	783	795	849	810	650	961	981	989	965
13	782	790	836	1010	653	963	934	933	1140
14	821	793	849	1010	630	948	924	943	1110
15	800	790	824	1010	659	953	919	943	1110
16	818	855	826	1010	647	958	914	930	1120
17	825	859	826	836	640	966	917	941	1050
18	784	863	822	1020	661	966	917	933	1150
19	809	854	874	820	664	966	986	1050	1150
20	711	805	869	1020	661	885	1000	1060	1150
21	722	795	879	728	648	1050	1000	1050	894
22	716	888	876	721	662	1040	1000	1060	892
23	719	888	875	721	888	1060	994	1060	894
24	709	885	868	708	888	1040	1000	1060	896
25	723	800	861	723	854	1040	997	1110	888
26	721	887	865	739	903	1050	986	1110	900
27	710	887	901	735	892	888	1000	1110	896
28	730	800	903	733	898	888	949	1110	898
29	717	799	906	733	---	888	994	1130	894
30	685	792	910	725	---	882	989	1110	900
31	728	---	905	738	---	881	---	1100	---
MEAN	761	808	871	826	757	962	941	1080	988
WTR YR 1977	MEAN	890	MAX	1330	MIN	630			

WATER TEMPERATURE (DEG.° C), (ONCE-DAILY MEASUREMENT), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
1	5.0	2.0	.0	.0	.0	.0	2.0	6.0	11.0
2	4.5	2.5	.5	.0	.0	.0	2.0	7.0	11.5
3	5.5	.0	.0	.0	.0	.0	2.5	12.0	11.5
4	6.0	1.0	.0	.0	.0	1.0	3.0	8.5	10.5
5	5.5	5.0	.0	.0	.0	1.0	2.0	11.5	11.5
6	7.0	3.0	.5	.0	.0	1.0	2.5	7.5	12.0
7	6.0	3.5	.5	.0	.0	1.0	2.0	8.0	11.0
8	5.5	4.0	.0	.0	.0	1.0	3.5	9.5	12.0
9	5.0	1.5	.0	.0	.0	1.5	2.0	10.5	13.0
10	4.0	2.5	.0	.0	.0	1.5	2.5	12.5	14.0
11	4.0	3.0	.0	.0	.0	2.0	3.5	7.5	14.5
12	5.0	2.0	.0	.0	1.0	2.0	2.0	9.0	15.0
13	5.5	.0	2.0	.0	1.0	2.5	3.0	12.5	16.0
14	4.0	1.0	2.0	.0	1.5	1.5	3.5	11.5	14.5
15	3.5	.0	3.0	.0	1.0	1.5	3.5	10.5	20.0
16	3.0	.0	.0	.0	1.5	2.0	4.0	8.5	18.0
17	4.0	.0	.0	.0	1.5	2.5	4.0	9.0	11.0
18	2.0	.0	.0	.0	1.0	2.5	5.5	10.5	10.5
19	.0	.0	.0	.0	2.0	2.0	5.0	13.0	17.0
20	1.0	.0	.0	.0	1.0	3.0	6.0	9.0	23.0
21	.0	.0	2.5	.0	1.5	3.0	5.0	12.0	15.0
22	2.0	.0	1.5	.0	1.5	3.0	5.5	12.0	17.5
23	3.0	.0	.0	.0	.0	2.0	4.0	8.5	14.5
24	3.5	.0	.0	.0	1.5	1.5	5.5	9.0	18.5
25	4.0	.0	.0	.0	.0	3.5	18.0	9.5	20.5
26	1.0	.0	.0	.0	2.5	3.0	6.0	12.5	15.0
27	1.0	.0	.0	.0	2.0	4.0	7.5	13.5	15.5
28	3.0	.0	.0	.0	.0	3.5	4.5	13.0	19.0
29	2.5	.0	.0	.0	---	2.0	18.5	12.5	21.0
30	1.0	.0	.0	.0	---	3.0	3.5	12.0	23.5
31	3.5	---	.0	.0	---	3.5	---	8.0	---
MEAN	3.5	1.0	.5	.0	.5	2.0	4.5	10.0	15.5
WTR YR 1977	MEAN	4.0	MAX	23.5	MIN	.0			

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

09430500 GILA RIVER NEAR GILA, NM

LOCATION.--Lat 33°03'40", long 108°32'12", in NE¼NW¼ sec.30, T.14 S., R.16 W., Grant County, Hydrologic Unit 15040001, on left bank at Hooker damsite, 1.6 mi (2.6 km) upstream from Mogollon Creek, 7 mi (11 km) northeast of Gila, and at mile 572.5 (921.2 km).

DRAINAGE AREA.--1,864 mi² (4,828 km²).

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).

GAGE.--Water-stage recorder. Datum of gage is 4,655.8 ft (1,419.09 m) above mean sea level, from river-profile survey. Prior to Dec. 31, 1928, at site 5 mi (8 km) upstream at different datum. Dec. 31, 1928, to Jan. 7, 1942, at site 200 ft (61 m) upstream at same datum.

REMARKS.--Records good except those above 500 ft³/s (14 m³/s), which are fair. Diversions for irrigation of about 500 acres (2.0 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--50 years (water years 1928-77), 133 ft³/s (3.767 m³/s) 96,360 acre-ft/yr (119 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,400 ft³/s (719 m³/s) Sept. 29, 1941, gage height, 17.2 ft (5.24 m), from floodmark, from rating curve extended above 3,900 ft³/s (110 m³/s) on basis of velocity-area studies; minimum, 14 ft³/s (0.40 m³/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.--Maximum discharge, 696 ft³/s (19.7 m³/s) at 0630 hours Aug. 20, gage height, 3.35 ft (1.021 m), no other peak above base of 600 ft³/s (17 m³/s); minimum, 18 ft³/s (0.51 m³/s) June 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	64	63	65	88	69	84	99	44	31	109	141
2	62	60	62	65	86	67	86	99	44	31	119	167
3	62	60	62	62	86	67	90	99	45	37	88	170
4	62	60	62	62	84	67	88	99	47	36	76	174
5	65	60	60	62	80	67	88	97	45	35	65	196
6	72	65	60	64	78	67	90	92	45	34	62	289
7	74	78	59	64	78	65	94	90	44	35	57	360
8	76	78	59	64	78	64	99	88	44	32	55	239
9	78	74	58	64	76	62	111	84	45	26	54	185
10	80	74	59	64	76	62	124	82	41	23	52	160
11	78	72	59	58	76	64	136	78	40	25	55	147
12	74	72	59	58	74	65	136	76	35	37	142	133
13	72	72	59	60	72	64	130	76	31	40	220	124
14	70	69	59	62	72	64	124	74	29	40	167	119
15	69	69	59	62	70	64	119	72	26	70	239	111
16	67	69	59	60	70	64	116	70	24	54	406	104
17	65	67	58	60	69	64	111	69	22	54	467	99
18	65	65	59	60	69	64	106	65	21	47	412	92
19	65	65	58	60	69	64	104	65	20	42	430	88
20	64	64	59	60	70	64	102	64	20	52	565	82
21	64	62	58	64	70	65	104	62	21	58	436	78
22	64	62	57	67	70	65	104	62	22	62	375	74
23	64	62	57	69	70	64	102	60	23	76	310	76
24	64	62	60	69	70	65	99	58	25	84	255	74
25	62	62	60	67	72	65	97	57	31	102	228	70
26	60	62	60	65	74	70	99	57	35	144	170	69
27	60	62	63	64	72	84	99	54	35	204	141	69
28	60	63	65	64	70	86	104	52	37	185	122	70
29	60	63	72	65	---	90	102	49	40	200	109	67
30	67	63	72	84	---	92	99	48	36	154	102	67
31	65	---	68	90	---	86	---	44	---	141	104	---
TOTAL	2074	1980	1884	2004	2089	2130	3147	2241	1017	2191	6192	3894
MEAN	66.9	66.0	60.8	64.6	74.6	68.7	105	72.3	33.9	70.7	200	130
MAX	80	78	72	90	88	92	136	99	47	204	565	360
MIN	60	60	57	58	69	62	84	44	20	23	52	67
AC-FT	4110	3930	3740	3970	4140	4220	6240	4450	2020	4350	12280	7720
CAL YR 1976 TOTAL	40556			MEAN 111	MAX 1780	MIN 30	AC-FT 80440					
WTR YR 1977 TOTAL	30843			MEAN 84.5	MAX 565	MIN 20	AC-FT 61180					

09430600 MOGOLLON CREEK NEAR CLIFF, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	HARD- NESS (CA, MG) (00900)
OCT 13...	1330	.60	119	7.2	18.0	10.0	9.6	46
DEC 08...	1111	1.2	115	7.7	10.0	4.5	11.2	41
FEB 24...	1616	6.3	98	7.2	14.5	7.5	10.1	29
APR 21...	1001	14	76	7.7	17.5	10.5	9.6	26
AUG 24...	2001	6.4	92	7.3	26.0	21.0	6.9	32
SEP 11...	1155	31	90	7.2	--	18.0	--	--

DATE	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
OCT 13...	2	14	2.7	6.8	.4	.8	54	0	13
DEC 08...	2	12	2.6	6.2	.4	.6	47	0	14
FEB 24...	2	8.2	2.1	5.6	.5	.6	33	0	14
APR 21...	6	7.6	1.7	4.7	.4	.6	24	--	14
AUG 24...	6	10	1.8	6.2	.5	1.0	32	0	21
SEP 11...	--	--	--	--	--	--	--	--	--

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	CYANIDE (CN) (MG/L) (00720)
OCT 13...	1.8	.4	20	94	86	.03	.01	.01
DEC 08...	1.5	.4	17	81	77	.02	.01	--
FEB 24...	1.2	.4	17	66	65	.01	.01	--
APR 21...	1.0	.4	18	53	60	.00	.02	.00
AUG 24...	1.2	.5	24	74	81	.01	.02	--
SEP 11...	--	--	--	--	--	--	--	--

GILA RIVER BASIN

09430600 MOGOLLON CREEK NEAR CLIFF, NM -- Continued

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL IRON (FE) (UG/L) (01045)
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OCT 13...	1330	1	0	<10	0	<10	40
APR 21...	1001	0	0	<10	<10	<10	100

DATE	TIME	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	TOTAL SILVER (AG) (UG/L) (01077)	TOTAL ZINC (ZN) (UG/L) (01092)
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OCT 13...		<100	0	.0	0	<10	0
APR 21...		<100	0	.0	0	<10	10

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDE GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDE GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS AS SR90 /Y90 (PC/L) (80050)	SUS- PENDE GROSS BETA AS AS SR90 /Y90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED URANIUM (U) (UG/L) (80020)
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OCT 13...	1330	<1	<1.0	<.4	1.4	.5	1.1	.5	.46	.07
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PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL PCB (UG/L) (39516)	PCB IN BOTTOM MA- TERIAL (UG/KG) (39519)	TOTAL ALDRIN (UG/L) (39330)	ALDRIN IN BOTTOM MA- TERIAL (UG/KG) (39333)	TOTAL CHLOR- DANE (UG/L) (39350)	CHLOR- DANE IN BOTTOM MA- TERIAL (UG/KG) (39351)	TOTAL DDD (UG/L) (39360)	DDD IN BOTTOM MA- TERIAL (UG/KG) (39363)	TOTAL DDE (UG/L) (39365)	DDE IN BOTTOM MA- TERIAL (UG/KG) (39368)
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DEC 08...	1111	.0	0	.00	.0	.0	0	.00	.0	.00	.0
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DATE	TIME	TOTAL DDT (UG/L) (39370)	DDT IN BOTTOM MA- TERIAL (UG/KG) (39373)	TOTAL DI- ELDRIN (UG/L) (39570)	DI- ELDRIN IN BOTTOM MA- TERIAL (UG/KG) (39380)	TOTAL ENDO- SULFAN (UG/L) (39388)	ENDO- SULFAN IN BOTTOM MA- TERIAL (UG/L) (39390)	TOTAL ENDRIN (UG/L) (39393)	ENDRIN IN BOTTOM MA- TERIAL (UG/KG) (39398)	TOTAL HEPTA- CHLOR (UG/L) (39410)	HEPTA- CHLOR IN BOTTOM MA- TERIAL (UG/KG) (39413)
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DEC 08...	.00	.0	.00	.00	.0	.00	.00	.0	.00	.00	.0
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DATE	TIME	TOTAL HEPTA- CHLOR EPOXIDE (UG/L) (39420)	HEPTA- CHLOR EPOXIDE IN BOT- TOM MA- TERIAL (UG/KG) (39423)	TOTAL LINDANE (UG/L) (39340)	LINDANE IN BOTTOM MA- TERIAL (UG/KG) (39343)	TOTAL METHYL PARA- THION (UG/L) (39530)	TOTAL METHYL TRI- THION (UG/L) (39600)	TOTAL PARA- THION (UG/L) (39790)	TOTAL TOX- APHENE (UG/L) (39540)	TOTAL TOX- APHENE (UG/L) (39400)	TOTAL HEPTA- CHLOR MA- TERIAL (UG/KG) (39403)	TOTAL HEPTA- CHLOR MA- TERIAL (UG/L) (39786)
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DEC 08...	.00	.0	.00	.0	.00	.00	.00	.00	0	0	.00
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GILA RIVER BASIN

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09430600 MOGOLLON CREEK NEAR CLIFF, NM -- Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL 2,4-D (UG/L) (39730)	TOTAL 2,4,5-T (UG/L) (39740)	TOTAL SILVEX (UG/L) (39760)
DEC 08...	1111	.00	.00	.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (7UM-MF (COL./ 100 ML) (31625)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
OCT 13...	1330	30	5	73	--
DEC 08...	1111	6	3	56	--
FEB 24...	1616	82	0	3	--
APR 21...	1001	680	1	--	18
AUG 24...	2001	260	13	--	260

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)
OCT 13...	1440	.58	10.0	1	.00
NOV 29...	1405	1.4	3.0	2	.01
DEC 08...	1111	1.2	4.5	2	.01
JAN 01...	1205	2.4	2.0	3	.02
JAN 26...	1545	4.1	4.0	1	.01
FEB 21...	1505	7.5	6.0	1	.02
FEB 24...	1616	6.3	7.5	2	.03
MAR 22...	1530	3.2	9.0	2	.02
APR 21...	1001	14	10.5	2	.08
APR 25...	1430	13	16.0	1	.04
MAY 26...	1150	1.0	17.0	1	.00
JUL 25...	1415	17	21.0	3	.14
AUG 17...	1430	21	22.0	3	.17
AUG 24...	2001	6.4	21.0	3	.05
SEP 11...	1155	31	18.0	4	.33

GILA RIVER BASIN

09431100 MANGAS CREEK BELOW MANGAS SPRINGS, NM

LOCATION.--Lat 32°50'57, long 108°31'13", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.5, T.17 S., R.16 W., Grant County, Hydrologic Unit 15040002, 0.1 mi (0.2 km) upstream from Blacksmith Canyon and 15 mi (24 km) southeast of Gila.

DRAINAGE AREA.--177 mi² (458 km²).

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

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
NOV												
10...	0915	3.0	604	8.0	13.0	260	45	75	17	30	.8	2.3
JAN												
08...	1005	3.3	592	7.9	10.0	260	48	79	14	28	.8	2.3
MAR												
21...	1155	3.2	566	7.9	20.0	230	42	71	13	27	.8	2.3
MAY												
05...	1055	3.0	560	7.8	18.0	240	170	71	14	27	.8	1.8
JUL												
11...	0905	2.7	578	7.3	19.0	240	31	73	13	28	.8	2.6
SEP												
09...	0910	2.8	600	7.9	18.0	230	29	74	12	19	.5	4.1

DATE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
NOV												
10...	259	0	63	15	.5	28	390	388	6.6	.05	40	20
JAN												
08...	252	0	71	19	.6	29	--	396	6.6	--	--	--
MAR												
21...	230	0	66	11	.7	29	366	364	6.9	.04	40	10
MAY												
05...	82	0	66	18	.5	29	--	279	2.6	--	--	--
JUL												
11...	250	0	63	14	.5	32	--	373	5.3	--	--	--
SEP												
09...	250	0	66	11	.6	30	378	340	--	--	40	20

GILA RIVER BASIN

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09431500 GILA RIVER NEAR REDROCK, NM
(Radiochemical network station)

LOCATION.--Lat 32°43'37", long 108°40'30", in W½ sec.23, T.18 S., R.18 W., Grant County, Hydrologic Unit 15040002, on left bank 0.2 mi (0.3 km) downstream from Copper Canyon, 0.2 mi (0.3 km) upstream from lower end of box canyon, 4.7 mi (7.6 km) northeast of Redrock, 14 mi (23 km) downstream from Mangas Creek, and at mile 539.2 (867.6 km).

DRAINAGE AREA.--2,829 mi² (7,327 km²).

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.

GAGE.--Water-stage recorder. Altitude of gage is 4,090 ft (1,247 m), from plane table survey. Prior to Dec. 31, 1907, nonrecording gage at site 13.5 mi (21.7 km) upstream at different datum. May 14, 1908, to July 16, 1909, nonrecording gage at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Water-discharge records fair. Diversions for irrigation of about 5,000 acres (20 km²) above station. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--61 years (water years 1906, 1909-10, 1913-55, 1963-77), 195 ft³/s (5.522 m³/s), 141,300 acre-ft/yr (174 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s (1,130 m³/s) Sept. 29, 1941, gage height, 31 ft (9.4 m), from floodmarks, computed on basis of known peak flow for station below Blue Creek; minimum, 2.2 ft³/s (0.062 m³/s) Aug. 5, 1947.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Aug. 16	2245	*3,270 92.6	11.91 3.630

Minimum discharge, 13 ft³/s (0.37 m³/s) June 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	61	61	64	88	67	99	70	34	34	309	236
2	53	61	62	70	90	63	93	69	36	33	194	199
3	51	60	59	70	88	63	96	67	39	26	108	220
4	53	56	63	74	91	60	99	68	37	29	70	220
5	51	57	70	74	90	63	86	69	35	40	51	434
6	63	69	71	74	89	59	83	68	34	32	40	309
7	72	78	61	76	85	55	82	64	34	30	36	396
8	64	93	66	76	87	55	78	58	33	25	38	304
9	64	89	64	76	87	52	79	58	33	19	29	218
10	109	95	66	74	88	48	88	65	33	41	27	164
11	100	87	72	72	84	45	96	62	32	21	79	169
12	91	85	65	73	75	48	91	60	28	22	441	163
13	79	85	62	75	74	48	101	61	26	19	381	149
14	71	81	63	74	79	48	99	66	21	53	269	133
15	61	81	63	73	81	48	86	59	20	27	245	108
16	58	84	63	65	79	48	102	59	18	29	761	87
17	65	84	64	65	78	46	83	60	18	36	548	69
18	63	82	62	64	78	45	72	70	15	31	418	52
19	61	85	61	71	79	50	76	63	14	29	681	51
20	60	73	59	72	78	52	73	62	13	29	783	45
21	58	78	59	72	78	51	73	53	15	37	518	41
22	50	80	57	76	77	47	78	46	16	43	479	39
23	57	75	58	80	81	43	77	42	16	42	419	60
24	70	67	62	80	74	41	65	40	16	53	304	49
25	47	70	58	75	74	43	70	39	22	60	242	48
26	40	81	57	76	77	50	75	37	21	87	191	62
27	45	92	74	74	65	55	77	36	24	114	149	72
28	52	72	81	73	64	58	76	34	28	147	134	57
29	53	65	86	68	---	90	77	33	28	150	114	60
30	57	62	89	79	---	101	71	34	32	206	100	63
31	57	---	87	86	---	103	---	32	---	293	100	---
TOTAL	1935	2288	2045	2271	2258	1745	2501	1704	771	1837	8258	4277
MEAN	62.4	76.3	66.0	73.3	80.6	56.3	83.4	55.0	25.7	59.3	266	143
MAX	109	95	89	86	91	103	102	70	39	293	783	434
MIN	40	56	57	64	64	41	65	32	13	19	27	39
AC-FT	3840	4540	4060	4500	4480	3460	4960	3380	1530	3640	16380	8480

CAL YR 1976	TOTAL	45921.6	MEAN	125	MAX	2730	MIN	9.6	AC-FT	91090
WTR YR 1977	TOTAL	31890.0	MEAN	87.4	MAX	783	MIN	13	AC-FT	63250

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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)
OCT								
08...	1340	35	422	8.3	19.0	14.0	140	0
22...	1030	54	425	8.0	--	13.0	--	--
NOV								
04...	1140	73	413	8.0	--	10.5	--	--
16...	1530	81	397	8.2	--	10.0	130	0
30...	1100	71	398	8.1	3.0	2.0	--	--
DEC								
15...	1035	74	402	7.8	5.0	3.5	130	0
JAN								
02...	1200	65	401	8.0	--	6.0	130	0
FEB								
10...	1245	89	381	8.1	--	9.0	130	0
MAR								
15...	1430	49	408	7.8	--	13.0	130	0
APR								
05...	1420	92	390	8.1	--	16.0	130	0
21...	1625	81	367	7.7	--	19.0	--	--
MAY								
04...	1110	69	382	7.6	--	16.0	--	--
18...	1035	72	396	7.6	--	16.0	140	0
JUN								
03...	1100	38	419	7.7	--	21.0	140	0
29...	1125	28	456	7.4	--	22.0	--	--
JUL								
13...	1100	19	448	7.4	--	23.5	140	0
29...	1110	160	339	7.3	--	22.0	--	--
AUG								
02...	1220	150	368	6.9	--	22.0	--	--
15...	1145	175	316	7.3	--	23.0	100	0
19...	1015	660	264	7.2	--	21.0	--	--
23...	1130	410	270	7.4	--	22.0	--	--
31...	1110	110	400	7.6	--	22.0	--	--
SEP								
15...	1200	104	385	7.9	--	20.0	120	0

GILA RIVER BASIN

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09431500 GILA RIVER NEAR REDROCK, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
OCT									
08...	42	8.7	37	1.4	2.6	210	0	37	13
22...	--	--	--	--	--	--	--	--	--
NOV									
04...	--	--	--	--	--	--	--	--	--
16...	38	7.8	33	1.3	2.1	184	0	33	14
30...	--	--	--	--	--	--	--	--	--
DEC									
15...	40	8.2	34	1.3	2.0	181	0	32	18
JAN									
02...	40	8.2	34	1.3	1.9	181	0	30	18
FEB									
10...	38	7.9	33	1.3	1.8	171	0	30	18
MAR									
15...	40	8.3	35	1.3	1.9	180	0	36	15
APR									
05...	39	8.1	33	1.3	2.0	170	0	34	13
21...	--	--	--	--	--	--	--	--	--
MAY									
04...	--	--	--	--	--	--	--	--	--
18...	41	8.4	36	1.3	2.8	180	0	37	18
JUN									
03...	41	9.1	38	1.4	3.0	190	0	38	18
29...	--	--	--	--	--	--	--	--	--
JUL									
13...	42	8.6	41	1.5	3.1	210	0	36	15
29...	--	--	--	--	--	--	--	--	--
AUG									
02...	--	--	--	--	--	--	--	--	--
15...	32	5.5	25	1.1	2.9	140	0	29	13
19...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
SEP									
15...	36	6.8	31	1.2	2.5	170	0	33	12

GILA RIVER BASIN

09431500 GILA RIVER NEAR REDROCK, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT								
08...	2.2	33	279	279	.00	.05	60	10
22...	--	--	--	--	--	--	--	--
NOV								
04...	--	--	--	--	--	--	--	--
16...	2.3	33	--	255	.08	.06	50	20
30...	--	--	--	--	--	--	--	--
DEC								
15...	2.2	32	--	259	.20	.05	40	10
JAN								
02...	2.1	32	--	257	.20	.07	50	10
FEB								
10...	2.3	30	--	246	.06	.05	40	10
MAR								
15...	2.2	30	--	258	.06	.07	40	10
APR								
05...	2.3	31	245	247	.03	.04	50	20
21...	--	--	--	--	--	--	--	--
MAY								
04...	--	--	--	--	--	--	--	--
18...	2.3	32	--	267	.07	.04	60	0
JUN								
03...	2.3	34	--	277	.04	.03	60	20
29...	--	--	--	--	--	--	--	--
JUL								
13...	2.3	38	--	290	.15	.06	70	10
29...	--	--	--	--	--	--	--	--
AUG								
02...	--	--	--	--	--	--	--	--
15...	1.8	35	--	214	.07	.05	50	20
19...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
SEP								
15...	2.2	39	--	246	--	--	50	10

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL NON- FILTY- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDE GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDE GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS AS SR90 /Y90 (PC/L) (80050)	SUS- PENDE GROSS BETA AS AS SR90 /Y90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)	DIS- SOLVED URANIUM (DIRECT FLUORO- METRIC) (PC/L) (80010)
OCT											
08...	1340	14	12	.8	4.0	<.6	3.5	<.5	.05	--	1.8
MAR											
15...	1430	4	8.4	<.4	3.3	.6	2.6	.6	.07	1.7	--

GILA RIVER BASIN

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09431500 GILA RIVER NEAR REDROCK, NM -- Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70332)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70333)
OCT											
08...	1340	35	14.0	18	1.7	--	--	--	84	--	--
22...	1030	54	13.0	39	5.7	--	--	--	--	--	--
NOV											
16...	1530	81	10.0	25	5.5	--	--	--	--	--	--
30...	1100	71	2.0	22	4.3	--	--	--	--	--	--
DEC											
15...	1035	74	3.5	20	4.0	--	--	--	--	--	--
JAN											
02...	1200	65	6.0	21	3.7	--	--	--	--	--	--
15...	1105	78	3.0	29	6.1	--	--	--	--	--	--
28...	0900	76	6.0	20	4.1	--	--	--	--	--	--
FEB											
10...	1245	89	9.0	28	6.7	--	--	--	--	--	--
MAR											
01...	1515	69	10.0	17	3.2	--	--	--	--	--	--
15...	1430	49	13.0	13	1.7	--	--	--	--	--	--
APR											
05...	1420	92	16.0	19	4.7	--	--	--	--	--	--
21...	1525	81	19.0	17	3.7	--	--	--	--	--	--
MAY											
04...	1110	69	16.0	16	3.0	--	--	--	--	--	--
18...	1035	72	16.0	34	6.6	--	--	--	--	--	--
JUN											
03...	1100	38	21.0	75	7.7	--	--	--	--	--	--
29...	1125	28	22.0	117	8.8	--	--	--	--	--	--
JUL											
13...	1100	19	23.5	143	7.3	--	--	--	--	--	--
29...	1110	160	22.0	483	209	--	--	--	--	--	--
AUG											
02...	1220	150	22.0	10500	4250	--	--	--	--	--	--
15...	1145	175	23.0	657	310	--	--	--	--	--	--
19...	1015	660	21.0	6580	11700	--	--	--	--	--	--
23...	1130	410	22.0	5340	5910	--	--	--	--	--	--
31...	1110	110	22.0	818	243	52	69	91	98	99	100
SEP											
15...	1200	104	20.0	264	74	--	--	--	--	--	--

GILA RIVER BASIN

09432000 GILA RIVER BELOW BLUE CREEK, NEAR VIRDEN, NM

LOCATION.--Lat 32°38'53", long 108°50'43", in SE¼SW¼ sec.18, T.19 S., R.19 W., Grant County, Hydrologic Unit 15040002, on left bank at head of canyon, 1.4 mi (2.3 km) downstream from Blue Creek, 10 mi (16 km) east of Virden, 16 mi (26 km) upstream from New Mexico-Arizona State line, and at mile 523.6 (842.5 km).

DRAINAGE AREA.--3,203 mi² (8,296 km²), excluding Animas River Basin.

PERIOD OF RECORD.--May to November 1914, March to September 1915, July 1927 to current year. July 1927 to May 1931 monthly discharge only, published in WSP 1313, computed as sum of flow at Virden Bridge, 9 mi (14 km) downstream, and in Sunset Canal. Published as Gila River near Duncan, AZ, 1914-15 and as Gila River at Fuller's Ranch, near Duncan, AZ, 1931-38.

REVISED RECORDS.--WSP 1283: Drainage area. WSP 1313: 1929, 1931-32(M).

GAGE.--Water-stage recorder. Altitude of gage is 3,875 ft (1,181 m), from river-profile map. May 11, 1914, to Sept. 30, 1915, at site 6 mi (10 km) downstream, 1,000 ft (300 m) upstream from intake of Sunset Canal. June 1 to July 7, 1931, nonrecording gage at present site and datum.

REMARKS.--Records good. Station is above all Duncan Valley diversions. Diversions for irrigation of about 6,200 acres (25 km²) above station.

AVERAGE DISCHARGE.--50 years (water years 1927-77), 175 ft³/s (4,956 m³/s), 126,800 acre-ft/yr (156 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,700 ft³/s (1,180 m³/s) Sept. 29, 1941, gage height, 25.78 ft (7.858 m); minimum, 1.0 ft³/s (0.028 m³/s) July 14, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,900 ft³/s (54 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 30	1830	2,200 62.3	9.38 2.859	Aug. 13	0600	*4,450 126	11.65 3.551
Aug. 11	2300	3,750 106	10.95 3.338				

Minimum discharge, 14 ft³/s (0.40 m³/s) June 20, 21.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	88	80	68	99	73	78	76	26	24	322	170
2	39	87	80	69	100	69	82	75	27	26	185	121
3	41	85	80	70	99	69	80	75	27	25	129	129
4	41	83	80	74	99	68	82	75	29	23	88	123
5	41	84	76	76	99	67	82	75	30	28	66	139
6	40	84	74	77	96	68	78	74	29	29	52	295
7	38	78	72	75	96	63	79	70	30	25	48	237
8	35	83	78	77	95	62	76	63	29	25	48	214
9	30	82	80	78	95	59	76	62	27	18	59	172
10	32	79	82	78	94	57	74	64	28	17	43	141
11	30	80	76	76	94	56	80	62	28	15	477	134
12	32	80	73	75	85	55	88	58	27	20	911	121
13	35	92	72	77	80	51	99	56	22	31	1360	110
14	38	92	75	76	80	46	99	60	20	32	398	103
15	36	90	76	76	87	48	87	58	18	32	359	94
16	35	88	77	72	85	50	90	55	17	24	647	83
17	46	88	77	68	83	51	94	54	17	28	695	75
18	51	85	78	67	83	49	79	57	16	28	520	68
19	51	82	78	72	80	47	77	58	15	24	756	64
20	51	80	77	74	84	50	74	53	14	19	795	61
21	52	80	76	76	84	49	75	51	14	26	606	58
22	54	79	75	82	85	49	77	46	19	27	526	56
23	56	80	75	83	86	48	83	39	17	30	440	55
24	58	79	68	85	86	46	76	36	17	32	334	55
25	56	79	65	90	77	48	72	36	16	59	276	54
26	54	76	63	90	85	53	77	35	16	58	224	53
27	65	74	66	90	77	57	80	33	16	100	179	56
28	96	78	66	90	71	59	82	30	17	172	156	55
29	95	78	64	90	---	66	83	26	20	170	138	54
30	91	80	70	90	---	76	78	29	20	357	116	51
31	91	---	71	90	---	78	---	28	---	392	122	---
TOTAL	1548	2473	2300	2431	2464	1787	2437	1669	648	1916	11075	3201
MEAN	49.9	82.4	74.2	78.4	88.0	57.6	81.2	53.8	21.6	61.8	357	107
MAX	96	92	82	90	100	78	99	76	30	392	1360	295
MIN	30	74	63	67	71	46	72	26	14	15	43	51
AC-FT	3070	4910	4560	4820	4890	3540	4830	3310	1290	3800	21970	6350
CAL YR 1976	TOTAL	44500	MEAN	122	MAX	2620	MIN	12	AC-FT	88270		
WTR YR 1977	TOTAL	33949	MEAN	93.0	MAX	1360	MIN	14	AC-FT	67340		

LOCATION.--Lat 33°44'12", long 108°46'14", in NE 1/4, Sec.35, T.6 S., R.19 W., Catron County, Hydrologic Unit 15040004, on left bank 1,300 ft (400 m) downstream from Rainbow Bridge Canyon, 1.7 mi (2.7 km) northwest of Reserve, and at mile 563.1 (906.0 km).

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

GAGE.--Water-stage recorder. Altitude of gage is 5,820 ft (1,774 m), from topographic map. Prior to Dec. 15, 1972 at site 1,800 ft (549 m) upstream at datum 21.3 ft (6.49 m) higher.

REMARKS.--Records fair. Possible minor regulation by Luna Lake, 27 mi (43 km) upstream. Diversions for irrigation of about 500 acres (2.0 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 23.4 ft³/s (0.663 m³/s), 16,950 acre-ft/yr (20.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.---Maximum discharge, 11,900 ft³/s (337 m³/s) Oct. 20, 1972, gage height, 7.47 ft (2.277 m) in gage well, 8.05 ft (2.454 m), from outside floodmarks, site and datum then in use, from rating curve extended above 9,000 ft³/s (255 m³/s) on basis of velocity-area study; minimum, 1.0 ft³/s (0.028 m³/s) Mar. 16, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 15 ft (4.6 m), as determined in 1962 from old floodmarks. Major floods of Nov. 26, 1905 and Dec. 3, 1906, exceeded 20,000 ft³/s (566 m³/s) at Alma (downstream). See WSP 1313.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 642 ft³/s (18.2 m³/s) at 1845 hours Sept. 3, gage height, 5.14 ft (1.567 m), no other peak above base of 450 ft³/s (13 m³/s); minimum, 1.1 ft³/s (0.031 m³/s) July 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	5.9	5.5	7.2	5.6	5.0	4.6	4.1	2.3	2.2	4.1	43
2	5.3	5.9	5.5	7.2	5.8	4.7	4.5	3.6	2.5	2.2	3.9	43
3	5.3	5.8	5.7	7.8	5.6	4.5	4.6	3.7	2.7	2.3	3.9	115
4	5.6	5.8	5.4	8.0	5.4	4.7	4.5	4.3	3.0	2.8	3.9	72
5	5.8	6.0	5.4	7.8	5.6	4.6	4.3	4.0	3.5	3.2	3.9	49
6	6.3	7.1	5.3	7.5	5.7	4.5	4.2	3.8	3.6	3.0	3.9	38
7	7.4	8.0	5.0	6.9	6.0	4.4	4.2	3.9	3.5	2.3	4.0	30
8	6.1	7.3	5.2	7.1	5.9	4.5	4.2	3.8	3.5	1.8	4.0	25
9	24	6.6	5.2	6.9	5.9	4.4	4.1	4.2	3.2	1.4	4.0	21
10	8.6	6.2	4.9	6.4	6.6	4.4	4.0	3.6	3.0	1.4	4.2	19
11	11	6.1	4.8	6.7	6.4	4.1	4.0	4.2	2.7	1.5	16	19
12	8.5	6.2	4.8	6.6	6.4	4.1	4.0	4.1	2.6	1.7	9.8	14
13	6.5	6.0	4.8	7.2	6.5	4.3	4.1	4.2	2.2	1.9	14	12
14	5.9	6.2	4.5	6.6	6.4	4.4	4.5	4.4	1.9	1.8	8.8	11
15	5.6	6.2	4.7	6.3	6.6	4.3	4.5	4.1	1.7	2.8	9.8	10
16	5.4	6.2	4.8	5.9	6.5	4.4	4.4	3.9	1.7	2.4	11	9.8
17	5.9	6.1	4.2	6.2	6.4	4.5	4.3	3.7	1.8	2.5	13	9.5
18	6.4	6.1	4.7	6.4	6.4	4.2	4.2	3.7	1.6	2.2	12	9.1
19	6.7	6.0	5.0	6.2	6.2	4.3	4.2	3.5	1.7	2.2	19	8.8
20	6.6	6.0	4.1	6.1	6.0	4.2	4.3	3.2	1.9	2.2	23	8.5
21	6.6	5.9	4.0	6.2	5.8	4.2	4.0	3.4	2.2	2.5	25	8.1
22	6.8	5.8	5.0	6.1	6.0	4.2	3.8	3.0	1.9	7.1	37	8.1
23	6.8	5.6	5.5	5.9	5.7	4.2	4.9	2.8	1.9	10	33	8.0
24	6.7	5.7	5.2	5.8	5.8	4.1	4.6	2.5	2.9	14	33	7.7
25	6.5	5.9	5.1	5.5	5.9	4.1	4.0	2.2	3.1	8.0	29	7.5
26	6.5	6.0	5.1	5.5	5.4	4.3	3.6	2.6	2.7	8.6	27	7.2
27	6.4	6.0	5.7	5.4	5.3	4.8	3.4	2.6	2.6	4.9	27	7.3
28	6.6	6.0	5.7	5.3	5.2	4.9	3.2	2.5	2.3	5.0	28	7.0
29	6.7	5.9	5.9	5.5	---	5.1	2.9	2.1	2.5	4.7	30	6.4
30	6.9	5.7	5.8	5.7	---	4.8	3.7	2.3	2.2	4.5	32	6.1
31	6.3	---	6.0	5.4	---	4.7	---	2.2	---	4.2	34	---
TOTAL	221.4	184.2	158.5	199.3	167.0	137.9	123.8	106.2	74.9	117.3	511.2	640.1
MEAN	7.14	6.14	5.11	6.43	5.96	4.45	4.13	3.43	2.50	3.78	16.5	21.3
MAX	24	8.0	6.0	8.0	6.6	5.1	4.9	4.4	3.6	14	37	115
MIN	5.3	5.6	4.0	5.3	5.2	4.1	2.9	2.1	1.6	1.4	3.9	6.1
AC-FT	439	365	314	395	331	274	246	211	149	233	1010	1270
CAL YR 1976	TOTAL	3609.6	MEAN	9.86	MAX	115	MIN	2.6	AC-FT	7160		
WTR YR 1977	TOTAL	2641.8	MEAN	7.24	MAX	115	MIN	1.4	AC-FT	5240		

09442692 TULAROSA RIVER ABOVE ARAGON, NM

LOCATION.--Lat 33°53'29", long 108°30'54", in NW¼ sec.9, T.5 S., R.16 W., Catron County, Hydrologic Unit 15040004, on right bank 0.4 mi (0.6 km) upstream from first diversion, 1.4 mi (2.3 km) northeast of Aragon, and 8 mi (13 km) upstream from Apache Creek.

DRAINAGE AREA.--94 mi² (244 km²).

PERIOD OF RECORD.--July 1966 to current year. 1955 to 1965 at site 0.6 mi (1.0 km) upstream (drainage area, 89 mi² or 231 km²), annual maximum only.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,750 ft (2,057 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years, 3.35 ft³/s (0.095 m³/s), 2,430 acre-ft/yr (3.00 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 392 ft³/s (11.1 m³/s) Sept. 1, 1971, gage height, 3.13 ft (0.954 m), from rating curve extended above 10 ft³/s (0.28 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.1 ft³/s (0.031 m³/s) July 22, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43 ft³/s (1.22 m³/s) at 1515 hours Sept. 2, gage height, 1.81 ft (0.552 m), no other peak above base of 20 ft³/s (0.57 m³/s); minimum, 2.0 ft³/s (0.057 m³/s) Aug. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.7	2.6	2.9	2.9	3.3	2.8	2.8	3.1	3.0	2.0	2.8
2	2.7	2.7	2.6	2.9	2.9	3.3	2.7	2.8	3.1	3.0	2.2	4.4
3	2.7	2.7	2.6	2.9	2.9	3.3	2.7	2.8	3.1	3.0	2.7	2.7
4	2.7	2.7	2.6	2.9	2.9	3.3	2.7	2.8	3.1	3.3	2.7	2.7
5	2.7	2.7	2.6	2.8	3.0	3.3	2.7	2.8	3.0	3.6	2.7	3.0
6	2.8	2.8	2.6	2.8	3.1	3.3	2.5	2.9	3.0	2.9	2.6	2.7
7	2.9	2.7	2.6	2.8	3.0	3.3	2.6	2.9	3.0	2.9	2.6	2.7
8	2.8	2.7	2.6	2.7	3.1	3.3	2.6	2.9	3.0	2.9	2.7	2.7
9	2.7	2.7	2.6	2.7	3.1	3.3	2.6	2.9	3.1	3.0	2.6	2.7
10	2.7	2.7	2.6	2.7	3.2	3.3	2.5	2.9	3.1	2.9	2.8	2.7
11	2.6	2.7	2.6	2.7	3.3	3.2	2.5	2.9	3.0	2.8	2.5	2.8
12	2.6	2.7	2.6	2.7	3.2	3.2	2.5	3.0	3.0	2.8	2.5	2.8
13	2.6	2.7	2.6	2.7	3.3	3.2	2.5	3.0	3.0	2.8	2.6	2.8
14	2.6	2.6	2.6	2.7	3.3	3.2	2.5	2.9	3.0	2.8	2.8	2.8
15	2.6	2.6	2.7	2.7	3.4	3.1	2.5	2.9	3.0	2.7	3.4	2.8
16	2.6	2.6	2.7	2.6	3.4	3.1	2.6	2.9	3.0	2.7	2.9	2.7
17	2.6	2.6	2.7	2.7	3.4	3.1	2.6	3.0	2.9	2.7	2.7	2.7
18	2.6	2.6	2.7	2.7	3.4	3.1	2.5	3.0	2.9	2.6	2.7	2.7
19	2.6	2.6	2.7	2.7	3.4	3.0	2.6	3.0	3.0	2.5	2.6	2.7
20	2.6	2.6	2.7	2.7	3.4	3.0	2.6	3.0	3.0	2.6	2.6	2.7
21	2.7	2.6	2.7	2.7	3.4	3.0	2.6	3.0	3.0	2.6	2.6	2.7
22	2.7	2.6	2.7	2.8	3.4	2.9	2.6	3.0	3.1	2.6	2.7	2.7
23	2.7	2.6	2.7	2.7	3.4	2.9	2.6	3.1	3.2	2.5	2.7	2.7
24	2.7	2.6	2.7	2.6	3.3	2.9	2.6	3.0	3.3	2.4	2.7	2.7
25	2.7	2.6	2.7	2.6	3.4	2.9	2.7	3.1	3.1	2.3	2.7	2.6
26	2.7	2.6	2.7	2.6	3.4	2.9	2.7	3.1	3.1	2.3	2.7	2.7
27	2.7	2.6	2.6	2.6	3.3	2.9	2.7	3.1	3.0	2.4	2.7	2.7
28	2.7	2.6	2.6	2.7	3.3	2.9	2.7	3.0	3.1	2.3	2.7	2.7
29	2.7	2.6	2.6	2.7	---	2.9	2.7	3.0	3.0	2.3	2.7	2.7
30	2.7	2.6	2.6	2.8	---	2.8	2.7	3.1	2.9	2.2	2.8	2.7
31	2.7	---	2.6	2.7	---	2.8	---	3.1	---	2.1	2.8	---
TOTAL	83.0	79.4	81.8	84.5	90.5	96.0	78.4	91.7	91.2	83.5	82.7	83.5
MEAN	2.68	2.65	2.64	2.73	3.23	3.10	2.61	2.96	3.04	2.69	2.67	2.78
MAX	2.9	2.8	2.7	2.9	3.4	3.3	2.8	3.1	3.3	3.6	3.4	4.4
MIN	2.6	2.6	2.6	2.6	2.9	2.8	2.5	2.8	2.9	2.1	2.0	2.6
AC-FT	165	157	162	168	180	190	156	182	181	166	164	166
CAL YR 1976 TOTAL	1093.3		MEAN 2.99	MAX 21		MIN 2.5	AC-FT 2170					
WTR YR 1977 TOTAL	1026.2		MEAN 2.81	MAX 4.4		MIN 2.0	AC-FT 2040					

GILA RIVER BASIN

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 (1.9 km) downstream from Alma, 4 mi (6 km) northwest of Glenwood, 6 mi (10 km) upstream from Whitewater Creek, and at mile 523.5 (842.3 km).

DRAINAGE AREA.--1,546 mi² (4,004 km²).

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".

GAGE.--Water-stage recorder. Datum of gage is 4,841 ft (1,475.5 m) above mean sea level. Prior to Aug. 11, 1912, nonrecording gages at various sites, within 500 ft (150 m) of each other, 0.8 mi (1.3 km) upstream, at different datums. Aug. 11, 1912, to Feb. 2, 1914, nonrecording gage at approximately present site and datum. Jan. 10, 1964 to Nov. 1, 1972, at datum 3.00 ft (0.91 m) higher.

REMARKS.--Records good. Diversions for irrigation of about 1,500 acres (6.1 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years (water years 1965-77), 64.6 ft³/s (1.829 m³/s), 46,800 acre-ft/yr (57.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,600 ft³/s (867 m³/s) Oct. 20, 1972, gage height, 18.16 ft (5.535 m), present datum, from floodmarks in well, from rating curve extended above 3,500 ft³/s (99.1 m³/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 ft³/s (1,700 m³/s) or greater were computed at Clifton, AZ.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 22	1630	1,010 28.6	4.48 1.366	Sept. 4	0230	1,560 44.2	4.83 1.472
Aug. 13	Unknown	*4,940 140	6.74 2.054				

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	10	10	9.8	7.6	.50	.18	.00	.00	9.8	12
2	.00	.00	8.7	11	9.8	7.9	.45	.20	.00	.00	.65	12
3	.00	1.8	8.2	10	9.8	7.6	.45	.20	.00	1.6	.00	101
4	.00	6.9	8.2	10	9.8	7.2	.40	.20	.00	2.0	.00	261
5	.00	7.8	8.2	10	9.8	7.2	.40	.20	.00	28	.00	88
6	.00	29	7.8	11	9.8	7.6	.40	.18	.00	2.9	.00	66
7	.00	30	6.9	11	9.2	6.8	.40	.18	.00	1.7	.00	44
8	.00	24	6.9	10	9.2	6.4	.40	.18	.00	1.0	.00	23
9	35	20	6.9	9.2	9.2	5.7	.40	.18	.00	.47	.00	15
10	140	18	7.4	6.8	9.2	4.9	.36	.18	.00	.00	36	30
11	33	16	7.4	6.8	9.2	5.7	.36	.18	.00	.00	12	70
12	24	15	7.4	7.6	9.2	5.7	.32	.20	.00	.00	76	41
13	21	15	7.4	9.8	8.7	5.7	.28	.24	.00	.00	150	22
14	19	14	6.9	10	8.7	4.9	.24	.24	.00	.00	130	11
15	18	14	6.5	10	8.3	4.9	.24	.24	.00	19	100	8.2
16	16	12	6.9	8.7	8.3	4.9	.20	.18	.00	.06	120	7.4
17	15	12	6.0	8.7	7.9	4.9	.20	.14	.00	.00	275	.00
18	14	11	6.9	9.8	7.9	3.4	.18	.18	.00	.00	194	.00
19	14	11	6.9	9.8	7.6	3.4	.16	.18	.00	.00	152	.00
20	13	9.6	5.6	9.8	7.6	2.4	.16	.14	.00	.96	162	.00
21	13	10	3.8	9.8	7.6	.86	.16	.10	.00	16	128	.00
22	13	10	3.8	9.8	6.8	.70	.14	.11	.23	40	201	.00
23	12	10	7.4	9.8	7.2	.70	.12	.09	.94	59	128	.00
24	8.4	10	6.9	9.8	6.8	.70	.14	.09	.10	104	100	.00
25	.00	10	6.9	9.8	7.6	.62	.16	.05	.00	124	56	.00
26	.00	9.1	6.9	9.8	7.6	.62	.18	.00	.00	47	31	.00
27	.00	9.1	6.9	9.8	7.6	.56	.18	.00	.00	40	20	.00
28	.00	9.1	7.1	10	7.6	.56	.18	.00	.00	29	14	.00
29	.00	9.1	7.8	9.8	---	.62	.18	.00	.00	24	7.4	.00
30	.00	9.6	7.8	11	---	.86	.18	.00	.00	18	6.0	.00
31	.00	---	7.8	10	---	.86	---	.00	---	16	22	---
TOTAL	408.40	363.10	220.2	299.4	237.8	122.16	8.12	4.24	24.04	574.69	2130.85	811.60
MEAN	13.2	12.1	7.10	9.66	8.49	3.94	.27	.14	.80	18.5	68.7	27.1
MAX	140	30	10	11	9.8	7.9	.50	.24	23	124	275	261
MIN	.00	.00	3.8	6.8	6.8	.56	.12	.00	.00	.00	.00	.00
AC=FT	810	720	437	594	472	242	16	8.4	48	1140	4230	1610

CAL YR 1976 TOTAL 7459.19 MEAN 20.4 MAX 1150 MIN .00 AC=FT 14800
WTR YR 1977 TOTAL 5204.60 MEAN 14.3 MAX 275 MIN .00 AC=FT 10320

GILA RIVER BASIN

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM

LOCATION.--Lat 33°14'48", long 108°52'47", in NE¼ sec. 23, T.12 S., R.20 W., Catron County, Hydrologic Unit 15040004, on left bank 0.2 mi (0.3 km) upstream from hot springs, 5 mi (8 km) south of Glenwood, 6 mi (10 km) downstream from Whitewater Creek, and at mile 511.5 (823.0 km).

DRAINAGE AREA.--1,653 mi² (4,281 km²).

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.

GAGE.--Water-stage recorder. Datum of gage is 4,552.06 ft (1,387.468 m) above mean sea level; prior to Feb. 15, 1934, at site 4.5 mi (7.2 km) upstream at datum 98.82 ft (30.120 m) higher.

REMARKS.--Water-discharge records good. Diversions for irrigation of about 2,000 acres (8.1 km²) above station. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--50 years, 69.7 ft³/s (1.974 m³/s), 50,500 acre-ft/yr (62.3 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,100 ft³/s (966 m³/s) Oct. 20, 1972, gage height, 16.61 ft (5.063 m), from rating curve extended above 22,000 ft³/s (623 m³/s); minimum, 1.5 ft³/s (0.042 m³/s) Aug. 6, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred Jan. 19 and Oct. 14, 1916 when discharges of 60,000 ft³/s (1,700 m³/s) or greater were computed for station at Clifton, AZ. On Nov. 26, 1905, a peak of 25,000 ft³/s (708 m³/s) was measured (by float-area method) at station at Alma (about 12 mi or 19 km upstream, drainage area, 1,560 mi² or 4,040 km²); a similar measurement of 21,000 ft³/s (595 m³/s) was made at the Alma station for peak of Dec. 3, 1906.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
Aug. 13	2215	*1,260	35.7	5.39	1.643
Aug. 17	0600	1,210	34.3	5.23	1.594

Minimum discharge, 13 ft³/s (0.37 m³/s) Oct. 21, Apr. 10, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	25	25	27	26	24	22	18	22	17	38	43
2	20	24	26	27	27	24	22	17	22	17	31	29
3	19	24	26	27	27	25	20	19	21	26	26	68
4	22	24	25	28	27	24	22	19	20	26	23	247
5	23	25	24	27	27	23	21	21	22	56	25	100
6	31	31	24	27	27	22	20	23	22	33	25	70
7	27	44	23	27	27	23	19	23	22	23	24	62
8	29	39	23	27	27	24	18	22	24	21	23	44
9	25	36	24	26	27	24	17	23	21	19	22	39
10	178	35	24	24	27	23	14	22	20	19	50	38
11	58	34	23	24	26	23	18	21	20	18	44	79
12	39	33	22	24	26	22	19	21	19	20	62	86
13	36	32	22	25	25	23	20	21	19	21	163	57
14	33	31	22	26	25	23	18	21	19	21	145	41
15	31	32	24	26	24	22	16	22	16	34	102	37
16	31	31	22	26	24	22	16	22	16	24	144	34
17	29	30	20	25	23	22	16	24	16	20	374	29
18	29	30	24	25	25	21	16	25	15	22	194	23
19	27	31	24	26	24	20	16	25	15	22	229	24
20	27	29	23	26	24	20	15	25	15	23	182	25
21	26	29	23	26	25	17	18	24	15	20	140	24
22	24	30	22	27	24	17	16	25	26	48	190	24
23	24	30	23	27	24	19	18	26	30	90	142	25
24	23	29	25	27	23	19	18	23	20	72	109	23
25	23	28	24	27	24	19	18	23	20	195	83	21
26	23	28	23	27	25	21	20	23	19	74	56	22
27	22	28	23	27	24	24	19	24	18	65	41	22
28	22	28	22	26	24	24	18	24	17	57	34	22
29	22	28	24	26	---	26	19	24	22	43	32	23
30	25	26	24	28	---	24	19	23	18	45	26	23
31	25	---	25	27	---	23	---	23	---	42	25	---
TOTAL	995	904	728	815	708	687	548	696	591	1233	2804	1404
MEAN	32.1	30.1	23.5	26.3	25.3	22.2	18.3	22.5	19.7	39.8	90.5	46.8
MAX	178	44	26	28	27	26	22	26	30	195	374	247
MIN	19	24	20	24	23	17	14	17	15	17	22	21
AC=FT	1970	1790	1440	1620	1400	1360	1090	1380	1170	2450	5560	2780
CAL YR 1976	TOTAL	15162	MEAN 41.4	MAX 940	MIN 15	AC=FT	30070					
WTR YR 1977	TOTAL	12113	MEAN 33.2	MAX 374	MIN 14	AC=FT	24030					

WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

[illegible]

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED FLUORIDE (F) (MG/L) (000950)	DIS-SOLVED SILICA (SIO2) (MG/L) (00955)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF TUEENTS) (MG/L) (70301)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS-SOLVED ORTHO-PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)
OCT 09...	.3	33	234	232	.10	.05	70	20
NOV 26...	.4	35	--	235	.18	.06	20	10
JAN 01...	.4	34	--	234	.29	.10	20	10
FEB 24...	.5	35	--	229	.14	.08	20	10
MAR 25...	.6	36	--	296	.03	.11	40	10
APR 11...	.5	33	224	231	.00	.03	20	10
26...	--	--	--	--	--	--	--	--
MAY 11...	.4	33	--	206	.12	.03	20	10
26...	--	--	--	--	--	--	--	--
JUN 07...	.5	36	--	263	.10	.04	40	0
27...	--	--	--	--	--	--	--	--
JUL 12...	.5	41	--	295	.29	.05	40	10
26...	--	--	--	--	--	--	--	--
AUG 12...	.5	33	--	221	.16	.05	30	20
17...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
SEP 14...	.8	34	204	219	--	--	30	10
26...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	TEMPERATURE (DEG C) (00010)	SUSPENDED SEDIMENT (MG/L) (80154)	SUSPENDED SEDIMENT DIS-CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM (70332)	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM (70333)	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM (70334)
OCT 09...	1150	22	14.0	9	.55	--	--	--	90	--	--	--
NOV 26...	1035	23	12.0	7	.43	--	--	--	--	--	--	--
JAN 01...	1025	28	5.0	26	2.0	--	--	--	--	--	--	--
27...	1010	27	9.5	11	.80	--	--	--	--	--	--	--
FEB 24...	1400	22	15.0	9	.53	--	--	--	--	--	--	--
MAR 25...	0905	18	12.0	13	.63	--	--	--	--	--	--	--
APR 11...	1150	20	17.0	14	.76	--	--	--	--	--	--	--
26...	1330	19	22.0	12	.62	--	--	--	--	--	--	--
MAY 11...	0955	22	13.0	10	.59	--	--	--	--	--	--	--
26...	0910	24	14.0	10	.65	--	--	--	--	--	--	--
JUN 07...	0955	23	18.0	9	.56	--	--	--	--	--	--	--
27...	1250	23	23.0	76	4.7	--	--	--	--	--	--	--
JUL 12...	0925	19	19.0	98	5.0	--	--	--	--	--	--	--
26...	1010	80	18.0	2470	534	--	--	--	--	--	--	--
AUG 12...	1030	51	19.0	1870	257	--	--	--	--	--	--	--
17...	0950	64	19.0	22000	3800	--	--	--	--	--	--	--
18...	1450	170	25.0	3740	1720	--	--	--	--	--	--	--
25...	1215	86	23.0	3930	9130	66	79	96	98	99	99	100
30...	1210	25	25.0	73	4.9	--	--	--	--	--	--	--
SEP 14...	0950	40	16.0	279	30	--	--	--	--	--	--	--
26...	0940	21	16.0	26	1.5	--	--	--	--	--	--	--

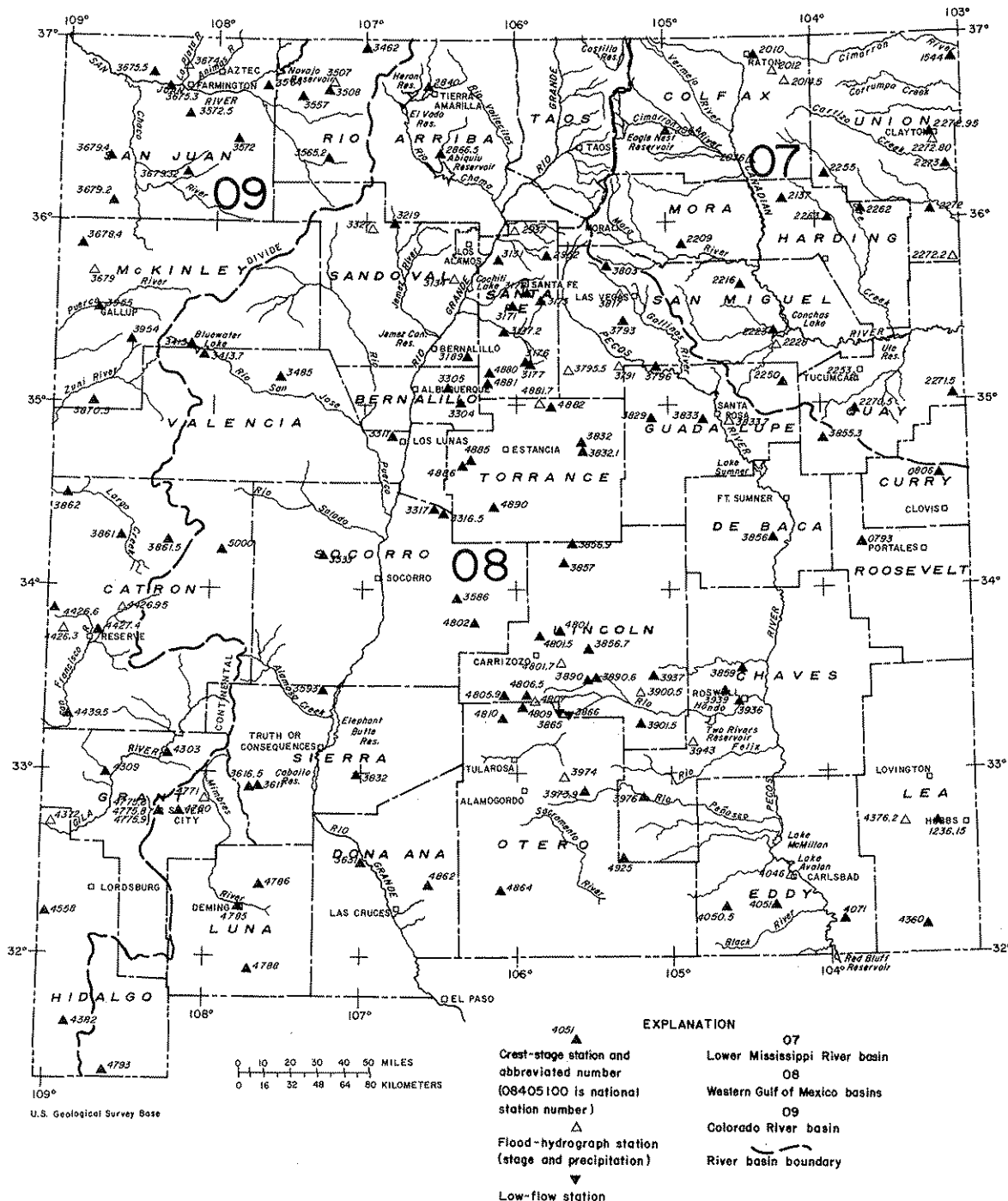


Figure 5.—Map of New Mexico showing location of partial-record stations.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. 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 discharge measurements at low-flow partial-record stations, and the second 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 a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1977

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Rio Grande basin						
08386500	Rio Ruidoso near Ruidoso, N. Mex.	Lat 33°20'11", long 105°43'31", in NW¼SW¼SW¼ sec.19, T.11 S., R.13 E., Lincoln County at Mescalero Apache Indian Reservation boundary, 3.0 miles (4.8 km) west of Ruidoso.	17.2	1953-77	12-14-76 1-25-77 2-17-77 3- 9-77 3-30-77 4-18-77 5- 2-77 6- 1-77 6-29-77 7-19-77 8- 1-77 9-19-77	2.1 3.9 5.7 5.0 14 33 46 10 2.8 5.7 10 5.4
08386600	Carrizo Creek at Ruidoso, NM	Lat 33°19'27", long 105°30'13", in SW¼NW¼SW¼ sec.26, T.11 S., R. 13 E., Lincoln County, at mouth, at Ruidoso.	24.2	1908-09 1953-77	12-14-76 1-25-77 2-17-77 3- 9-77 3-30-77 4-18-77 5- 2-77 6- 1-77 6-29-77 7-19-77 8- 1-77 9-19-77	3.1 3.2 4.0 3.2 3.2 3.6 3.7 3.0 3.2 3.4 3.7 3.7
*08405250	Pecos River below Six Mile Dam, near Carlsbad, NM	Lat 32°22'56", long 104°08'20", in SE¼NW¼NE¼ sec.24, T.22 S., R.27 E., Eddy County, 0.4 mile (0.6 km) below Six Mile Dam, 6.0 miles (9.7 km) southeast of Carlsbad.	18,560	1918-22, 1954, 1961, 1964, 1966, 1970, 1975,† 1976-77	10- 7-76 11-10-76 12-15-76 1-19-77 2-17-77 2-23-77 4-28-77 5-19-77 6-30-77	15 20 22 22 35 16 34 26 18

* Also a water-quality sampling site.

† Prior to 1976 published with measurements at miscellaneous sites or seepage investigations.

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. An S under the station number indicates that a complete hydrograph of flow events and precipitation data are recorded. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each year is given. Information on some lower floods may have been obtained, and discharge measurements made for purposes of establishing the stage-discharge relation, but these are not published herein. The year given in the period of record column represents the first year of a period extending through the current year unless otherwise noted. For some stations, publication of discharge is delayed pending definition of stage-discharge relationship. Published maximums are for water years.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft ³ /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-	05-14-77	11.94	14,300
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-	08-17-77	1.49	110
07201200 S	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-	07-27-77	5.11	66
07201450 S	Green Mountain Arroyo near Raton, N. Mex.	Lat 36°47'00", long 104°15'42", Colfax County, about 1,500 feet upstream from bridge on U.S. Highway 64-87 12.8 miles southeast of Raton.	18.2	1971-	07-19-71 06-16-72 07-02-73 09-20-74 08-09-75 08-30-76 07- -77	3.51 7.23 9.79 8.29 4.91 6.22 8.07d	<10 691 5,030 704 39c 215c 1,400c
07203600 S	Rio del Plano tributary near Taylor Springs, N. Mex.	Lat 36°26'59", long 104°22'34", Colfax County, 1.7 miles south of Sauble Ranch, 11.0 miles northeast of Taylor Springs.	6.71	1971-	07-27-77	7.92	188
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* 1968-	04-25-77	0.89	1c
07213700	Canadian River tributary near Mills, N. Mex.	Lat 36°10'00", long 104°15'47", Harding County, on downstream end of left bridge abutment on State Highway 39, 6 miles north of Mills.	44.2	1954-	- -77	(b)	0
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-	06-29-77	6.26	117
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.	41	1961-	08-29-77	4.65	(+)

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 ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
Arkansas River Basin - Continued							
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.	a65	1959-	08-29-77	7.41	3,100
07222800 S	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.	a12	1971-	07-14-76 08-29-77	16.65d 17.37d	6,010c 7,020c
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-	- -77	-	0
07225300 S	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-	04- -77	10.24	(+)
07225500	Ute Creek near Gladstone, N. Mex.	Lat 36°19'13", long 103°55'30", Union County, on bridge on State Highway 58, 3 miles east of Gladstone.	256	1953-	- -77	(e)	-
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.	a34	1957-	05-13-77	4.55	(+)
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-	05-13-77	4.79	630
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-	08-11-77	5.90	100
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-	08-11-77	9.02	(+)
07227200	Tramperos Creek near Stead, N. Mex.	Lat 36°04'15", long 103°12'10", in NW¼ 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-	05-14-77	8.09	1,560
07227220 S	Fullingim Draw, near Nara Visa, N. Mex.	Lat 35°45'50", long 103°07'30", Union County upstream from culvert on State Highway 18, 11.3 miles north of Nara Visa.	15.1	1971-	07- -77	7.69	(+)
07227280 S	Sand Draw tributary No. 2 near Clayton, N. Mex.	Lat 36°23'33", long 103°22'51", Union County, 0.85 mile north of U.S. Highway 56 and 11.5 miles southwest of Clayton.	1.81	1968-77g	- -77	(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 (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
Arkansas River Basin - Continued							
07227295	Sand Draw tributary near Clayton, N. Mex.	Lat 36°23'20", long 103°19'05", Union County, above culvert on State Highway 58, 8 miles southwest of Clayton.	1.25	1952-	05-14-77	(e)	-
07227300	Sand Draw near Clayton, N. Mex.	Lat 36°20'30", long 103°11'30", Union County, on downstream side of bridge on State Highway 18, 7.5 miles south of Clayton.	a42	1953-	05-14-77	2.96	(+)
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-	08-11-77	1.05	(+)
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-	- -77	(b)	<100
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-	- -77	-	0
Rio Grande basin							
08284000	Rito de Tierra Amarilla at Tierra Amarilla, N. Mex.	Lat 36°41'55", long 106°33'25", Rio Arriba County, 400 ft below culvert on U.S. Highway 84, at Tierra Amarilla.	49.7	1957-	- -77	(b)	<150
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-	08- -77	7.26	1,320
08293700 S	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-	09-04-77	6.02	72
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* 1974-	08-13-77	1.50	12

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 ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
Rio Grande basin - Continued							
08313400 S	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- -77	3.73	(+)
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-	- -77	(b)	<300
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-	08-11-77	8.69	3,600
08317700	Tarhole Canyon near Galisteo N. Mex.	Lat 35°21'55", long 105°50'40", Santa Fe County, at culvert on U.S. Highway 285, 6 miles southeast of Galisteo.	2.15	1952-	- -77	(b)	<200
08317720	Cañada 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.	1.79	1970-	07-08-77	2.39	62
08317800	Cañada de las Minas tributary near Santa Fe, N. Mex.	Lat 35°36'27", long 105°54'42", Santa Fe County, at culvert on U.S. Highway 84, 85 and 285, 1.3 miles northeast of Seton Village, and 5.7 miles south of Santa Fe.	.56	1952-	07-08-77	1.62	20
08318900	San Pedro Creek near Golden, N. Mex.	Lat 36°13'45", long 106°18'00", Sandoval County, 1 mile below bridge on State Highway 10 and 5.5 miles southwest of Golden.	45.2	1953-	08-28-77	0.82	580
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 High- way 126 and 6.5 miles east of Senorita.	26.8	1957-	08-11-77	2.66	94
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-	08-17-77	1.14	(+)
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-	08-29-77	2.70	1,050

Annual maximum discharge at crest-stage partial-record stations - Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
Rio Grande basin - Continued							
08331100	Belen Highline Canal tributary near Los Lunas, N. Mex.	Lat 34°49'20", long 106°49'10", Valencia County, above culvert on State Highway 6, 5.0 miles west of Los Lunas.	.16	1952-53 1955-	08-13-77	5.65	285
08331650	Cañada Montoso near Scholle, N. Mex.	Lat 34°23'11", long 106°28'37", Socorro County, 130 ft upstream from dip on abandoned highway, 500 ft upstream from bridge on U.S. Highway 60, 3.6 miles southwest of Scholle.	a35	1961-	09-01-77	2.03	125
08331700	Abo Arroyo tributary near Scholle, N. Mex.	Lat 34°24'10", long 106°30'35", Socorro County, at culvert on U.S. Highway 60, 2.5 miles south- east of junction of U.S. Highway 60, and State Highway 6, southwest of of Scholle.	.23	1954-	09-01-77	15.07	104
08332700 S	San Pablo Creek near Cuba, N. Mex.	Lat 35°56'55", long 106°56'44", Sandoval County, upstream from bridge on old section of State High- way 44 and 5.6 miles south of Cuba.	12.8	1970-	07- -77	4.65	(+)
08341300	Bluewater Creek above Bluewater Dam, near Bluewater N. Mex.	Lat 35°15'35", long 108°07'05", Valencia County, 2.3 miles south of Bluewater Dam, and 8 miles west of Bluewater.	a75	1953-	06-28-77	0.60	14
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	1963-	- -77	(b)	(+)
08348500	Encinal Creek near Casa Blanca, N. Mex.	Lat 35°08'35", long 107°27'55", Valencia County, 1.8 miles north of village of Encinal and 6.8 miles north of Casa Blanca.	6.19	1937-39* 1959-	05-12-77	5.75	580
08353500	La Jencia Creek near Magdalena, N. Mex.	Lat 34°09'45", long 107°12'35", Socorro County, 3.5 miles northeast of Magdalena.	195	1957-	07-25-77	3.13	1,500
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	- -77	(b)	<100
08359300	San Jose Arroyo near Monticello, N. Mex.	Lat 33°28'05", long 107°14'30", Sierra County, at head of box canyon just below major tributary, 800 ft below culvert on U.S. Highway 85, 13 miles Northeast of Monticello.	26.9	1959-	- -77	(b)	(+)
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-	07-21-77	3.56	395

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 ²)	Period of record	Annual Maximum		
					Date	Gage height (feet)	Discharge (ft ³ /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-	07-21-77	3.61	740
08363100	Rio Grande tributary near Radium Springs, N. Mex.	Lat 32°30'05", long 106°57'05", Doña Ana County, above culvert on U.S. Highway 85, 120 ft above mouth, and 1.4 miles west of Radium Springs.	.40	1955-	09-01-77	4.47	73
08363200	Aleman Draw at Aleman, N. Mex.	Lat 33°00'00", long 107°00'20", Sierra County, on Santa Fe Railroad bridge, 140 ft above dip on Engle-Rincon road, and 0.26 mile west of Aleman.	25.5	1959	08-10-77	8.13	3,500
08379100 S	Pecos River tributary near Sena, N. Mex.	Lat 35°18'37", long 105°23'37", San Miguel County, upstream from culvert on State Highway 3, 0.8 mile north of Sena.	1.24	1971-	- -77	(b)	0
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-	- -77	5.21	425
08379550 S	Cañon 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- -77	4.20	121
08379600	Pecos River tributary near Dilia, N. Mex.	Lat 35°12'50", long 105°04'50", Guadalupe County, above culvert on U.S. Highway 84, and 1.7 miles northwest of Dilia.	.16	1952-	09-08-77	4.52	125
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-	04- -77	1.34	46
08381700 S	Cañon Piedra Lumbré near Las Vegas, N. Mex.	Lat 35°34'14", long 105°17'50", San Miguel County, upstream from bridge on State Road 283, 4.3 miles west-southwest of Las Vegas.	8.06	1971-77g	- -77	(e)	-
08382900	Pecos River tributary near Pintada, N. Mex.	Lat 34°58'06", long 105°05'38", Guadalupe County, in Anton Chico Grant, 1,500 ft south of U.S. Highway 66, 6.8 miles north of Pintada.	.16	1961-	08-19-77	1.38	90

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 (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
Rio Grande basin - Continued							
08383200	Pintada Arroyo tributary near Clines Corners, N. Mex.	Lat 34°50'40", long 105°35'05", Torrance County, above culvert on U.S. Highway 285, 12.2 miles south of Clines Corners.	29.2	1952-	09-02-77	3.19	300
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.	a1	1959-	09-02-77	2.07	105
08383300	Pintada Arroyo near Santa Rosa, N. Mex.	Lat 34°53'20", long 104°43'50", Guadalupe County, at bridge on U.S. Highway 54, and 4.5 miles southwest of Santa Rosa.	896	1959-	08-14-77	3.61	(+)
08383370 S	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-	09- -77	9.51	223
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-	08-11-77	3.36	163
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 1952-	09-02-77	3.74	2,100
08385670	Aragon Creek tributary near Encinosa, 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 of Encinosa.	6.07	1961-	08-13-77	3.92	540
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-	09-02-77	1.85	36
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-	- -77	(b)	<25
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-	08-11-77	3.76	(+)
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-	08-15-77	6.40	2,500
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-	08-15-77	3.59	160

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 ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
Rio Grande basin - Continued							
08390050 S	Rio Hondo tributary at Tinnie, N. Mex.	Lat 33°22'36", long 105°13'01", Lincoln County, upstream from culvert on U.S. Highway 70-380, 0.5 mile east of junction of U.S. Highway 70-380 and State Highway 368, and at Tinnie.	.23	1971-	09-02-71 09-07-72 07-29-73 08-27-74 07-06-75 07-24-76 08-29-77	7.43d 10.80d 3.81 5.05 4.22 4.96 4.73	190c 420 45c 20c 5c 17c 12c
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 Picacho.	1.32	1962-	08-13-77	3.87	<70
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	1958-76* 1977-	07-17-59 07-07-60 10-17-60 09-24-62 08-31-63 06-13-64 07-29-65 06-01-66 08-10-67 07-05-68 - -69 06-29-70 - - 07-20-72 07-21-73 08-11-74 07-22-75 04-29-76 - -77	2.65 2.75 2.89 2.97 3.09 4.65 3.48 4.01 3.84 3.03 - 3.18 - 5.17 2.99 2.85 2.65 2.65 -	9 4 21 22 33 387 81 204 158 17 0 31 0 319 2.2 19 15 8.2 0
08393700	Pancho Canyon near Arabela, N. Mex.	Lat 33°30'36", long 105°11'38", Lincoln County, 200 ft downstream from dip on State Highway 368, 5.6 miles south of Arabela.	16.7	1962-	08-13-77	2.83	(+)
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-	- -77	(b)	<10
08394300 S	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-	- -77	-	0
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-	- -77	-	0
08397400 S	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-	09- -77	1.78	(+)
08397600	Rio Pecos 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 1957-62* 1963-	08-12-77	8.55	1,170
08404600 S	Pecos River tributary at Carlsbad, N. Mex.	Lat 32°26'50", long 104°15'48", Eddy County, upstream from culvert on U.S. Highway 285, at entrance to Botanical-Zoological Gardens, 2.9 miles northwest of county court house in Carlsbad.	.47	1971-77g	- -77	(b)	<5

Annual maximum discharge at crest-stage partial-record stations - Continued

Station No.	Station name	Location	Drainage area. (mi ²)	Period of record	Date	Annual maximum	
						Gage height (feet)	Discharge (ft ³ /s)
Rio Grande basin - Continued							
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.	.2	1959-	08-12-77	1.97	51
08405100	Mosley Canyon near 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-	04-14-77	5.32	(+)
08407100	Pierce Canyon near Malaga, N. Mex.	Lat 32°11'24", long 103°57'41", S.W. 1/4, Sec. 26, T. 24 S., R. 29 E., Eddy County, about 1 mile east of the Pierce Canyon crossing on the Pecos River, 8 miles east of Malaga.	8.55	1975-	- -77	(b)	(+)
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.	20	1963-	- -77	(b)	(+)
08437620 S	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-	- -77	-	0
Mimbres River basin							
08477100 S	Willow Springs Canyon at Mimbres, N. Mex.	Lat 32°51'20", long 107°58'35", Grant County, about 600 ft downstream from State Road 61, 0.2 mile north of post office in Mimbres.	3.84	1970-	07- -77	2.49	(+)
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-	08-31-77	2.70d	700
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-	08-13-77	1.64	70
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-	08-31-77	1.73	(+)
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-	08-31-77	2.97	530
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	1954-	- -77	(b)	(+)

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 ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
Mimbres River basin - Continued							
08478600	Mimbres basin tributary near Florida, N. Mex.	Lat 32°21'25", long 107°37'35", Luna County, above culvert on State Highway 26, and 5 miles southwest of Florida.	.55	1959-	08-16-77	1.69	84
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-	10-27-76	2.92	480
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-	07-25-77	1.98	29
Tularosa Valley							
08480100	White Oaks Canyon at White Oaks, N. Mex.	Lat 33°46', long 105°44', Lincoln County, 40 ft upstream from culvert on State Highway 349, 1 mile northeast of White Oaks.	1.14	1961-	08-13-77	2.41	(+)
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-	08-13-77	5.80	2,400
08480170 S	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-	08-10-77	8.71d	(+)
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-	08-10-77	1.20	(+)
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-	- -77	(b)	(+)
08480650	Minnie Hall Draw near Three Rivers, N. Mex.	Lat 33°23'40", long 105°58'11", Lincoln County, 8 miles northeast of Three Rivers.	9.70	1956-	08-13-77	12.28	1,550
08480700 S	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 ¹ / ₂ 1959-	08-16-77	3.89	187

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 (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
Tularosa Valley - Continued							
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-	- -77	(b)	<100
08481000	Three Rivers at Three Rivers, N. Mex.	Lat 33°18'10", long 106°04'20", Otero County, 150 ft below Southern Pacific Railroad bridge, 400 ft above bridge on U.S. Highway 54, and 1.3 miles south of Three Rivers.	96.0	1956-	09-15-76 08-21-77	2.47 3.03	960 1,550
08486200	Black Prince Canyon tributary near Organ, N. Mex.	Lat 32°26'11", long 106°32'03", Doña 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-	- -77	-	0
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-	- -77	(e)	-
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-	07-11-77	7.92	144
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-	07-11-77	3.65	(+)
08488170 S	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-	08- -77	5.80	19c
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-	- -77	(b)	<100
08488500	Cañon 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-	09-01-77	1.29	54
08488600	Arroyo del Cuervo near Torreon, N. Mex.	Lat 34°41'35", long 106°18'27", Torrance County, in Town of Torreon Grant, about 0.3 mile above culvert on State Road 10 and 2 miles south of Torreon.	11.8	1969-	09-01-77	2.52	200

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 ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
Estancia Valley - Continued							
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.	3.9	1953-	- -77	(b)	(+)
Crow Flats							
08492500	Fleming Draw near Piñon, 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 Piñon.	16.6	1959-	- -77	(b)	<200
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-	08-15-77	3.59	(+)
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-	07-20-77	10.16	2,600
09350700 S	Ruben Canyon near Gobernador, N. Mex.	Lat 36°44'26", long 107°14'33", Rio Arriba County, in Carson National Forest, upstsrream from culvert on State Highway 17, and 6.5 miles east of Gobernador.	5.06	1970-	09- -77	3.72	(+)
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-	07-20-77	1.25	24
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-	07-20-77	7.27	1,060
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-	08-11-77	2.24	400
09356520	Burro Canyon near Lindrith, N. Mex.	Lat 36°16'21", long 107°14'46", Rio Arriba County, upstream from culvert on State Highway 537; 11.5 miles west of Lindrith.	9.11	1970-	08-11-77	5.46	132

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 (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
San Juan River basin - Continued							
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-	08-11-77	4.04	270
09357250	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-	07-26-76 08-11-77	4.61 3.67	78 (+)
09367400 S	La Plata River tributary near Farmington, N. Mex.	Lat 36°47'10", long 108°13'31", San Juan County, about 700 ft upstream from culvert on State Highway 17 and 4.1 miles northwest of Farmington.	1.03	1970-	09-05-70 08-21-71 12-26-71 03- -73 10-10-73 09-08-75 07-24-77	2.50 3.24d 2.67 4.25 1.90 2.26 3.20	43 196 67 1,130 8 7 202
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-	09-25-76 07-03-77	.66 .96	<70 <70
09367550	Stevens Arroyo near Kirtland, N. Mex.	Lat 36°46'00", long 108°22'10", San Juan County, upstream from gravel road to Young's Lake, 0.6 mile north of El Paso Natural Gas, San Juan Plant, and 2.3 miles north of Kirtland.	4.59	1970-	07-03-77	11.73	(+)
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.	a2.1	1953-54	08-10-77	4.61	460
09367900 S	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-	07- -77	2.50	1,900
09357920	Coyote Wash tributary near Naschitti, N. Mex.	Lat 36°05'55", 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-	08-10-77	6.95	(+)
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-	08-11-77	1.83	(+)
09367940	Peña Blanca Arroyo near Newcomb, N. Mex.	Lat 36°21'39", long 108°43'09", San Juan County, on bridge on U.S. Highway 666, 5.2 miles north of Newcomb.	h46.8	1967-	04- -76 08-10-77	5.00 7.88	114c (+)

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 ²)	Period of record	Annual Maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
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-	07-23-77	2.91	550
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-	07-23-77	2.77	(+)
09386200	Carrizo Creek near Salt Lake N. Mex.	Lat 34°31', long 109°01', 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.	560	1957-	07-23-77	2.98	(+)
09387050	Galestena Canyon tributary near Black Rock, N. Mex.	Lat 34°58'45", long 108°40'00", McKinley County, 100 ft below bridge on State Highway 32 and 10.5 miles southeast of Black Rock.	a19	1957-	08-17-77	1.83	62
09395400	Milk Ranch Canyon near Fort Wingate, N. Mex.	Lat 35°26'30", 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	1949-1953-	09-27-77	.14	45
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* 1956-	- -77	(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-	08-11-77	(b)	(+)
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.	228	1957-	08-11-77	6.26	3,250
09437200 S	Mexican Canyon at Virden, N. Mex.	Lat 32°41'03", long 108°59'00", Hidalgo County, upstream from dip in State Road 82, and about 0.8 mile east of Virden.	3.40	1968-	- -77	(b)	(+)
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-	07-25-77	4.05	395
09442630 S	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-	07- -77	2.87	56

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 (mi ²)	Period of record	Annual Maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
Gila River Basin - Continued							
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.	10.8 31.9	1954-	07-23-77	2.34	320
09442695 S	Negro Canyon at Aragon, N. Mex.	Lat 33°52'47", long 108°33'08", Catron County, above culvert on State Highway 12, at west edge of Aragon.	9.62	1958-	08- -77	2.34	372
09442740	Tularosa River near Reserve, N. Mex.	Lat 33°44'00", long 108°42'10", Catron County, 150 ft west of Eagle Peak Lookout road and 3.3 miles northeast of Reserve.	426	1956-	08-10-77	2.78	190
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-	08-31-77	1.81	(+)
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-	08-11-77	2.40	110

< Less than.

S Flood-hydrograph site.

+ Discharge not yet determined.

* Operated as continuous-record gaging station.

a Approximately.

b Peak did not reach bottom of gage.

c Estimated.

d From floodmark.

e Gage height not determined.

f Contributing area.

g Discontinued at end of year.

h Revised.

j May not have been peak for year.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*); measurements of peak flow by a dagger (†).

Discharge measurements made at miscellaneous sites during water year 1977

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements Date	Discharge (ft ³ /s)
Arkansas River basin						
Chicorica Creek a07202000	Canadian River	Lat 36°46'13", long 104°23'45", in S½ sec.4, T.29 N., R.24 E., Colfax County, at highway bridge near east boundary of Maxwell Grant, 300 ft downstream from Una de Gato Creek, 4.4 miles northeast of Hebron, and 9.0 miles south of Raton, NM.	381	1945-52† 1966-76	10-13-76 11-18-76 12-15-76 1-11-77 2- 9-77 3- 9-77 4- 6-77 5- 3-77 6- 1-77 6-28-77 7-27-77 8-22-77 9-20-77	0.29 .53 1.7 1.3 1.2 .58 .32 1.9 .23 .004 4.8 10 2.9
Canadian River 07224500	Arkansas River	Lat 35°24'12", long 104°11'18", San Miguel County, in Pablo Montoya Grant, 300 ft below Conchas Dam, and 24 miles north of Newkirk, NM.	7,417	1936-38† 1942-72† 1973-76	10- 1-76 10-22-76 11-10-76 12-10-76 1-11-77 2- 8-77 2-28-77 3-31-77 4-21-77 5-24-77 6-21-77 6-28-77 9-28-77	4.0 3.6 3.9 4.1 2.9 4.2 3.9 3.5 3.6 3.4 3.2 3.5 3.7
Canadian River a07227140	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 Stateline, 14.7 miles north of Glenrio, NM.		1969-76	10-20-76 11-17-76 12-15-76 1-19-77 2-16-77 3-16-77 4-20-77 5-25-77 7-20-77 8-18-77 9-28-77	6.3 9.7 5.9 11 7.6 5.9 227 9.8 3.4 b3,000 7.7
Rio Grande basin						
Red River a08266820	Rio Grande	Lat 36°40'53", long 105°39'24", in NW¼NW¼ sec.10, T.28 N., R.12 E., Taos County, 0.3 mile downstream from State Fish Hatchery, near Questa, NM.	185	1963, 1965-66 1969-76	10-28-76 11-18-76 12-15-76 1-19-77 2-22-77 3-15-77 4-12-77 5-10-77 6- 7-77 7- 6-77 8- 3-77 8-31-77 9-28-77	37 30 29 36 34 33 33 54 52 57 31 41 36
Alamosa Creek 08360000	Rio Grande	Lat 33°34'09", long 107°35'33", in SE¼ sec.31, T.8 S., R.7 W., Socorro County, just downstream from Wildhorse Creek, and 15 miles northwest of Monticello, NM.	403	1931-42† 1958-71† 1972-76	11-10-76 2-10-77 5-12-77 8- 9-77	*5.3 *7.6 *6.6 *6.0

Measurements at miscellaneous sites

Discharge measurements made at miscellaneous sites during water year 1977

Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements		
				Date	Discharge (ft ³ /s)	
Rio Grande basin--Continued						
Gallinas River 08382000	Pecos River	Lat 35°28'08", long 105°09'39", San Miguel County, in Las Vegas Grant, on right bank 0.8 miles upstream from ford on Lourdes-Romeroville road, 1.2 miles northwest of Lourdes, 2.8 miles downstream from Pagosa Canyon, 9 miles south of Las Vegas, and at river mile 51.5.	313 1951-63†	5-18-77	4.7	
				6-15-77	2.6	
				7-13-77	2.9	
				7-27-77	4.6	
				8-15-77	3.7	
				9- 8-77	4.4	
				9-20-77	3.5	
				9-21-77	3.7	
10- 6-77	4.5					
Lea Lake Drain	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 Park visitor center southeast of Roswell, NM.	-	12-13-76	*4.4	
				3-22-77	*3.9	
				6-13-77	*2.7	
Blue Springs 08405450	Black River	Lat 32°11'07", long 104°16'50", in SW¼NE¼SW¼ sec.27, R.24 S., R.26 E., Eddy County, above all diversions, 5.5 miles east of White City, NM.	-	1907	10-22-76	*11
				1919-1920	12- 2-76	*11
				1923	4-21-77	*11
				1935	8-10-77	*9.2
				1952-70 1974-1976		
Castle Springs	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.	-	1975-76	12- 2-76	*0.28
					4-21-77	*.64
					8-10-77	*.42
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 of Mangas Springs, NM.	177 1972-76	11-10-76	*3.0	
				1- 8-77	*3.3	
				3-21-77	*3.3	
				5- 5-77	*3.0	
				7-11-77	*2.8	
				9- 9-77	*2.8	

* Base flow.

† Operated as a continuous record station.

a Also a water-quality continuing record station.

b Estimated.

SEEPAGE INVESTIGATIONS

A seepage or low-flow investigation along a watercourse involves discharge measurements or observations of no flow at selected sites in a given reach of channel, plus measurements of inflow and diversions, field commentary relative to observations, water temperatures, and any other relative data. Measuring sites are described to the extent that they may be used in subsequent investigations. Sometimes temporary recording installations are used to supplement records at regular gaging stations in the study of flow trends.

Field work proceeds from the most upstream measuring site. Hydrographers may alternate measurements, or the main reach may be divided and hydrographers assigned to each subreach, with overlapping measurements to be made at joining points. (These would be listed together, the discharge above the line representing the last measurement of the hydrographer working the upper reach).

Indicated gains or losses may sometimes appear incompatible because of diurnal or other flow variations, or because of small inaccuracies in open-channel measurements. Trends in a given reach may vary with the seasons, or because of regulation. Successive investigations can serve to delineate a sustained trend, or a progressive change in trend.

RIO GRANDE BASIN

Gallinas River seepage investigation

REACH.--On Gallinas River from gaging station "Gallinas Creek near Montezuma" (station 08380500) to "Gallinas River near Colonias" (station 08387200), a distance of about 72 river miles.

PREVIOUS INVESTIGATIONS.--None.

DATE.--July 26-27, 1977, and Sept. 20-21, 1977.

WEATHER AND STREAMFLOW.--Considerable precipitation occurred throughout the reach during the period of the July investigation. A heavy shower caused a peak of about 26 ft³/s at 2300 hours July 25 at the gaging station "near Montezuma," the upstream site for this investigation. Discharge decreased to 6.5 ft³/s by 1030 hours July 26, when this investigation began; by noon flow had receded to 5.8 ft³/s. A temporary recorder at river mile 51.5 (near Lourdes) showed little effect from precipitation until 0600 hours July 26 when flow increased from 1.8 ft³/s to 3.4 ft³/s by 1000 hours. Flow continued at 3.4 ft³/s until 1600 hours when it again increased, peaking at 6.0 ft³/s at 1800 hours. Flow decreased to 3.4 ft³/s at 0600 hours July 27 and then increased again, peaking at 5.4 ft³/s at 1200 hours. There was no flow at the gage "near Colonias" prior to 1930 hours July 27.

At the time of the September investigation there was no precipitation in the area. The "near Montezuma" gage showed only minimal diurnal fluctuation. The temporary gage "near Lourdes" showed a much greater diurnal; at 0800 hours Sept. 20 the flow was 4.2 ft³/s, decreasing uniformly to 2.4 ft³/s at 0200 hours Sept. 21, then increasing to 3.7 ft³/s at 0900 hours and again decreasing to 2.2 ft³/s by 2400 hours. The gage "near Colonias" recorded a gradual recession from a peak on Sept. 14; mean daily discharges of 1.3 ft³/s, 1.0 ft³/s, and 0.48 ft³/s were recorded on Sept. 19-21, respectively.

REMARKS.--The results of the July investigation are rated as good (+10%) to fair (+15%) for that portion made on July 26 from river mile 74.4 to 56.3. Indicated gains and losses were not computed for that portion from river mile 51.5 to 2.4 made on July 27 since most of the discharge measurements were affected by storm runoff; accuracy of this portion is rated as poor.

Results of the September investigation are rated as good.

All known sources of inflow or diversion were measured and included in this tabulation. There were no active ditch diversions downstream from river mile 51.0. Although not operational one pump diversion was noted at river mile 30.5.

River mile	Stream	Location	July 26-27, 1977					Sept. 20-21, 1977				
			Time	Water temp °C	Discharge, in ft ³ /s			Time	Water temp °C	Discharge, in ft ³ /s		
					Main stream	Trib or diver.	Indic. gain or loss			Main stream	Trib or diver.	Indic. gain or loss
74.4	Gallinas Creek	Lat 35°39'07", long 105°19'06", at gaging station 08380500 nr Montezuma	1035	17.5	6.49	-	-	1005	13.0	2.22	-	-
72.4	do.	Lat 35°39'11", long 105°17'37", below dam at Hot Springs	1130	19.5	1.59	-	a-4.90	1030	14.0	.11	-	a-2.11
71.1	Unnamed diversion†	Lat 35°39'06", long 105°16'20", at head nr Montezuma	0945	-	-	0	-	1050	-	-	0	-
71.1	Seepage*	Lat 35°39'03", long 105°16'21", at mouth, from Peterson Reservoir nr Montezuma	1100	20.0	-	+4.40	-	1150	17.0	-	+3.31	-
71.0	Storrie Lake feeder canal†	Lat 35°39'02", long 105°16'17", at head nr Montezuma	1000	22.0	-	-2.06	-	1100	18.5	-	-2.3	-
71.0	Gallinas Creek	Lat 35°38'58", long 105°16'16", below Storrie Lake feeder canal nr Montezuma	1030	21.5	.96	-	+1.03	1130	18.0	.97	-	+7.8
68.6	Unnamed diversion†	Lat 35°37'20", long 105°14'40", at upper road crossing nr Camp Luna	1250	25.5	-	-1.34	-	1300	20.0	-	-1.13	-
68.2	Gallinas Creek	Lat 35°37'16", long 105°14'44", at upper road crossing nr Camp Luna	1225	27.0	.15	-	+5.3	1240	20.0	.15	-	+3.1

Gallinas River seepage investigation--Continued

River mile	Stream	Location	July 26-27, 1977					Sept. 20-21, 1977				
			Time	Water temp °C	Discharge, in ft ³			Time	Water temp °C	Discharge, in ft ³ /s		
					Main stream	Trib or diver.	Indic. gain or loss			Main stream	Trib or diver.	Indic. gain or loss
66.1	Unnamed diversion*	Lat 35°35'57", long 105°13'33", at head near athletic field in Las Vegas	1230	22.0	-	- .70	-	0900	-	-	0	-
66.1	Gallinas Creek	Lat 35°35'56", long 105°13'31", below unnamed ditch in Las Vegas	1245	-	0	-	+ .55	0940	15.5	.95	-	+ .80
64.9	Unnamed diversion†	Lat 35°35'09", long 105°12'59", at U.S. Hwy. 85 in Las Vegas	1325	-	-	- .13	-	1100	15.5	-	-1.09	-
64.9	Gallinas Creek	Lat 35°35'09", long 105°12'59", below ditch at U.S. Hwy. 85 in Las Vegas	1335	-	0	-	+ .13	1030	-	0	-	+ .14
63.1	do.	Lat 35°34'18", long 105°12'26", above Arroyo Pecos nr Las Vegas	1410	25.5	1.78	-	b+1.78	1240	18.5	2.46	-	b+2.46
63.1	Arroyo Pecos†	Lat 35°34'18", long 105°12'25", at mouth nr Las Vegas	1445	27.5	-	+2.45	-	1315	22.5	-	+2.11	-
56.3	Gallinas River	Lat 35°30'41", long 105°12'20", above Smith Canyon nr McAllister Lake	1555	26.5	5.19	-	+ .96	1615	22.5	3.20	-	-1.37
56.3	Smith Canyon†	Lat 35°30'41", long 105°12'18", at mouth nr McAllister Lake	1545	26.5	-	+ .06	-	1545	23.5	-	+ .04	-
51.5	Gallinas River	Lat 35°28'08", long 105°09'39" (revised), at discontinued gaging station 08382000 nr Lourdes	0840	22.0	4.63	-	-	1510 1000	22.0 16.5	3.46 3.74	- -	+ .22 -
50.8	San Augustin ditch†	Lat 35°27'52", long 105°09'19", at head at San Augustin (Lourdes)	0840	22.5	-	-2.85	-	1035	15.0	-	- .27	-
50.7	Gallinas River	Lat 35°27'45", long 105°09'25", below San Augustin ditch at San Augustin (Lourdes)	0910	22.5	1.43	-	-	1100	15.5	4.52	-	+1.05
46.4	do.	Lat 35°26'30", long 105°06'58", near Concepcion	0940	24.0	3.31	-	-	1135	18.5	3.21	-	-1.31
40.5	do.	Lat 35°25'11", long 105°03'03", at ford at La Liendre	1030	25.0	2.03	-	-	1230	19.5	3.96	-	+ .75
30.5	do.	Lat 35°22'52", long 104°57'00", at first ford upstream from Chaperito	1150	27.5	2.20	-	-	1330	21.0	3.50	-	- .46
22.6	do.	Lat 35°19'54", long 104°56'11", at ford above Agua Azul spring	1210	-	2.08	-	-	1430	22.0	3.05	-	- .45
13.2	do.	Lat 35°15'59", long 104°54'59", at ford near Park Springs Ranch	1345	28.5	4.06	-	-	1515	22.0	3.37	-	+ .32
6.3	do.	Lat 35°12'59", long 104°54'01", at ford at San Miguel-Guadalupe Co line	1525	29.0	12.6	-	-	1600	20.5	1.15	-	-2.22
2.4	do.	Lat 35°10'55", long 104°53'59", at gaging station 08382500 nr Colonias	1605	-	0	-	-	1650	23.0	.45	-	- .70

† Left bank.

* Right bank.

a Diversion at river mile 74.0 by Public Service Co. of New Mexico for city of Las Vegas municipal water supply is included in this indicated loss.

b Effluent from city of Las Vegas sewage treatment plant enters Gallinas Creek at river mile 64.1 and is included in this indicated gain.

SEEPAGE INVESTIGATIONS

RIO GRANDE BASIN

Pecos River - Summer Dam to Fort Summer Diversion Dam

REACH.--From gaging station 08384500, Pecos River below Summer Dam to "below Fort Summer Diversion Dam," a distance of 16.9 mi (27.2 km); river mile 701.7 (1,129.0 km) to 684.8 (1,101.8 km).

The reach is in the extreme lower end of the high, grass and juniper covered plateau area southeast of the Sangre de Cristo Mountains. The upper 10 mi (16 km) of the reach are in an incised canyon. The canyon walls are outcroppings of Santa Rosa sandstone.

Downstream from river mile 692 (1,113 km) the canyon widens and the river meanders across the alluvial fill from one occasional bluff to another. These bluffs are predominantly of the Artesia Group sandstones with caps of Santa Rosa sandstone.

For the first 11 mi (18 km) the streambed is gravel and cobbles overlying sandstone and there is little alluvial fill on the banks. Below this reach the streambed becomes sandy, in part at least, due to the gradient change caused by the Fort Summer Diversion Dam. The channel widens and there is progressively more alluvial fill on the banks. The streambed gradient is approximately 7 ft (2.1 m) per mile for the first 10 mi (16 km) and 3.5 ft (1.1 m) per mile for the last 7 mi (11 km) of the reach.

PREVIOUS INVESTIGATIONS.--Jan. 7, 1959, June 15, Nov. 28, 1960, May 22, 1962 (Summer Dam to Acme).

DATE.--May 26, 1977.

WEATHER.--During the morning of May 26 the sky was completely overcast but by mid-afternoon the clouds had dissipated except for an occasional thunderhead. A light southwesterly wind was blowing. A rain caused the flow in the Fort Summer main canal to increase from 97 ft³/s at 2400 hours on May 24 to 110 ft³/s at 0500 hours on May 25 after which it receded to 97 ft³/s at 0200 hours on May 26.

REMARKS.--Access to the reach was by 4-wheel-drive vehicle along the river banks with many fordings from one bank to the other. To insure that the investigation would not be interrupted by stuck vehicles, it was necessary for the two technicians to alternate (leapfrog) to the measuring sites.

The discharge measurements made at the two gaging stations were made in concrete lined sections and are probably within +1 percent of true values but the measurements made in the open channel of the river are considered to be fair (+8 percent). The indicated gains or losses in the sub-reaches are more of an index of the errors in measurements than of actual gains or losses. The daily discharges for the two stations for the period May 26 through June 2 provide a better index of what happens in the reach than the seepage run. Inflow to the reach was steady from May 24 through May 26.

SEEPAGE INVESTIGATIONS

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RIO GRANDE BASIN

Pecos River - Sumner Dam to Fort Sumner Diversion Dam -- Continued

Pecos River Mile	Stream	Location	Time	Water Temp. °C	Discharge, in ft ³ /s		
					Main Stream	Trib. or diver.	Indic. gain or loss
701.7	Pecos River	Lat 34°36'15", long 104°23'14", in lot 1, sec.2, T.4 N., R.24 E., DeBaca County, 1,200 ft (366 m) downstream from "below Sumner Dam"(gaging station 08384500).	1000	18.0	98.3	-	-
700.4	do.	Lat 34°35'34", long 104°24'08", in NW¼NW¼ sec.11, T.4 N., R.24 E., DeBaca County, 1.3 mi (2.1 km) downstream from station 08384500.	1115	18.5	103	-	+4.7
698.8	do.	Lat 34°34'38", long 104°25'16", in SE¼NE¼ sec.16, T.4 N., R.24 E., DeBaca County, 60 ft (18 m) upstream from mouth of Salado Creek.	1145	18.0	95.4	-	-7.6
698.8	Salado Creek	Lat 34°34'40", long 104°25'17", in NE¼NE¼ sec.16, T.4 N., R.24 E., DeBaca County, on right bank, of Pecos River, 60 ft (18 m) upstream from mouth.	1210	19.0	-	.08	-
696.2	Pecos River	Lat 34°33'09", long 104°24'59", in NE¼SW¼ sec.22, T.4 N., R.24 E., DeBaca County, 0.3 mi (0.5 km) upstream from Arroyo Guadalupe.	1245	18.5	97.3	-	+1.8
694.1	do.	Lat 34°32'45", long 104°23'32", in NW¼SW¼ sec.26, T.4 N., R.24 E., DeBaca County, 1.8 mi (2.9 km) downstream from Guadalupe Arroyo.	1400	19.5	100	-	+2.7
692.3	Sand Springs	Lat 34°32'08", long 104°22'29", in NW¼NW¼ sec.36, T.4 N., R.24 E., DeBaca County, on right bank of Pecos River, at mouth.	1415	16.5	-	.03	-
691.9	Pecos River	Lat 34°32'26", long 104°22'14", in SW¼NE¼ sec.25, T.4 N., R.24 E., DeBaca County, 0.4 mi (0.6 km) downstream from Sand Springs.	1445	19.5	89.9	-	-10.1
690.2	do.	Lat 34°32'36", long 104°20'41", in NW¼NE¼SW¼ sec.29, T.4 N., R.25 E., DeBaca County, 0.7 mi (1.1 km) upstream from Dark Canyon.	1515	20.0	98.2	-	+8.3
689.5	Dark Canyon Springs	Lat 34°32'45", long 104°20'10", in NW¼SE¼NE¼ sec.29, T.4 N., R.25 E., DeBaca County, on left bank of Pecos River, 4.7 mi (7.6 km) upstream from Fort Sumner	1600	-	-	.01	-
689.5	Pecos River	Lat 34°32'43", long 104°20'10", in NW¼SE¼NE¼ sec.29, T.4 N., R.25 E., DeBaca County, 4.7 mi (7.6 km) upstream from Fort Sumner Diversion Dam.	1610	20.0	91.6	-	-6.6
688.6	Windmill Draw	Lat 34°32'11", long 104°19'38", in SW¼SE¼SW¼ sec.28, T.4 N., R.25 E., DeBaca County, on left bank of Pecos River at mouth, 3.8 mi (6.1 km) upstream from Fort Sumner Diversion Dam.	1600	-	-	.002 est.	-
687.4	Pecos River	Lat 34°31'26", long 104°19'07", in NW¼SE¼SE¼ sec.33, T.4 N., R.25 E., DeBaca County, 2.6 mi (4.2 km) upstream from Fort Sumner Diversion Dam.	1630	21.0	94.2	-	+2.6
685.9	do.	Lat 34°30'54", long 104°17'39", in SE¼SW¼NW¼ sec.2, T.3 N., R.25 E., DeBaca County, 1.1 mi (1.8 km) upstream from Fort Sumner Diversion Dam.	1800	21.0	98.3	-	+4.1
684.8	Fort Sumner main canal	Lat 34°30'30", long 104°16'40", in SE¼SW¼SW¼ sec.1, T.3 N., R.25 E., DeBaca County, station 08385000, on left bank of Pecos River, 200 ft (60 m) downstream from diversion dam, 3.0 mi (4.8 km) northwest of Fort Sumner.	1830	20.5	-	96.2	-
684.8	Pecos River	Lat 34°30'30", long 104°16'42", in SW¼SW¼SW¼ sec.1, T.3 N., R.25 E., DeBaca County, at left downstream side of diversion dam, 3.0 mi (4.8 km) northwest of Fort Sumner.	1845	20.5	.08	-	-2.0

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

Water-quality partial-record stations are particular sites where chemical-quality, biological and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are collected less than quarterly; usually one to three times a year. The first five stations are listed in ascending order of station numbers after which listing is in order of ascending latitude. 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 1976 TO SEPTEMBER 1977

08329520 VILLA DEL OSO DRAIN AT ALBUQUERQUE, NM (LAT 35 08 04 LONG 106 34 16 00)

		INSTAN- TANEOUS DIS- CHARGE (CFS) (000061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (000095)	PH (UNITS) (000400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (000070)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA-MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)		
AUG													
18...	0125	1.1	49	6.0	23.0	19	28	18	3	6.8	.3		
18...	0146	.81	49	6.3	23.0	6	18	18	4	6.9	.3		
18...	0200	.36	56	6.4	23.0	5	20	29	12	10	1.0		
SEP													
02...	2100	1.0	44	6.5	20.5	20	37	18	0	6.7	.2		
02...	2130	.75	45	6.5	20.0	15	30	19	1	7.0	.4		
02...	2200	.36	52	6.5	20.0	10	24	24	4	9.3	.3		
		DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAH- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	
AUG													
18...	2.0	.2	1.3	18	0	4.0	2.0	.0	3.7	38	30		
18...	2.2	.2	1.2	18	0	3.9	1.6	.0	3.1	35	29		
18...	4.7	.4	1.4	21	0	11	9.6	.0	3.6	66	52		
SEP													
02...	1.8	.2	1.3	22	0	4.8	1.0	.1	2.7	27	30		
02...	1.7	.2	1.1	22	0	2.8	.9	.1	2.8	31	28		
02...	2.0	.2	1.2	25	0	2.6	1.2	.1	3.0	36	33		
		TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (MG/L) (01020)	DIS- SOLVED IRON (FE) (MG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (MG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	
AUG													
18...	.35	.00	.07	.61	1.0	.17	.14	20	30	20	8.8		
18...	.30	.00	.09	.34	.73	.16	.13	20	30	8	8.4		
18...	.31	.00	.10	.05	.46	.17	.12	30	30	8	7.7		
SEP													
02...	.11	.11	.03	.78	.92	.13	.03	30	30	0	7.0		
02...	.16	.13	.02	.59	.77	.11	.02	30	30	0	6.7		
02...	.12	.12	.01	.78	.91	.11	.05	30	30	0	7.6		
		TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
AUG													
18...	980	30	<100	9	40	20	.0	.0	0	0	20	6	
18...	550	30	<100	14	20	8	.0	.0	0	0	10	4	
18...	280	30	<100	11	20	8	.0	.0	0	0	20	0	
SEP													
02...	1400	30	<100	7	60	0	.0	.0	2	0	40	0	
02...	610	30	<100	5	30	0	.0	.0	1	0	50	0	
02...	240	30	<100	5	20	0	.0	.0	0	0	40	0	

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

08329520 VILLA DEL OSO DRAIN AT ALBUQUERQUE, NM (LAT 35 08 04 LONG 106 34 16 00)

Continued

		TOTAL NITRITE PLUS NITRATE IN BOT. MAT. (MG/KG) (00633)	TOTAL PHOS- PHORUS IN BOT- TOM MA- TERIAL (MG/KG) (00668)	TOTAL ARSENIC IN BOTTOM MA- TERIAL (UG/G) (01003)	TOTAL CADMIUM IN BOTTOM MA- TERIAL (UG/G) (01028)	TOTAL CHRO- MIUM IN BOTTOM MA- TERIAL (UG/G) (01029)	TOTAL COBALT IN BOTTOM MA- TERIAL (UG/G) (01038)	TOTAL COPPER IN BOTTOM MA- TERIAL (UG/G) (01043)
SEP 02...	2200	8.2	19	5	1	10	10	10

		TOTAL IRON IN BOTTOM MA- TERIAL (UG/G) (01170)	TOTAL LEAD IN BOTTOM MA- TERIAL (UG/G) (01052)	TOTAL MANGA- NESE IN BOTTOM MA- TERIAL (UG/G) (01053)	TOTAL MERCURY IN BOTTOM MA- TERIAL (UG/G) (71921)	TOTAL SELE- NIUM IN BOTTOM MA- TERIAL (UG/G) (01148)	TOTAL ZINC IN BOTTOM MA- TERIAL (UG/G) (01093)	ORGANIC CARBON IN BOT- TOM MA- TERIAL (C) (00687)
SEP 02...	9100	150	390	.0	0	76	12	

DATE	TIME	TOTAL PCB (UG/L) (39516)	TOTAL ALDRIN (UG/L) (39330)	TOTAL CHLOR- DANE (UG/L) (39350)	TOTAL DDD (UG/L) (39360)	TOTAL DDE (UG/L) (39365)	TOTAL DDT (UG/L) (39370)	TOTAL DI- AZINON (UG/L) (39570)	TOTAL DI- ELDRIN (UG/L) (39380)	TOTAL ENDO- SULFAN (UG/L) (39388)	TOTAL ENDRIN (UG/L) (39390)
SEP 02...	2100	.0	.00	.1	.00	.00	.00	1.8	.00	.00	.00

DATE	TIME	TOTAL ETHION (UG/L) (39398)	TOTAL HEPTA- CHLOR (UG/L) (39410)	TOTAL HEPTA- CHLOR EPOXIDE (UG/L) (39420)	TOTAL LINDANE (UG/L) (39340)	TOTAL MALA- THION (UG/L) (39530)	TOTAL METHYL PARA- THION (UG/L) (39600)	TOTAL METHYL TRI- THION (UG/L) (39790)	TOTAL PARA- THION (UG/L) (39540)	TOTAL TOX- APHENE (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)
SEP 02...		.00	.00	.00	.02	.05	.00	.00	.00	0	.00

		DATE	TIME	TOTAL 2,4-D (UG/L) (39730)	TOTAL 2,4,5-T (UG/L) (39740)	TOTAL SILVEX (UG/L) (39760)
		SEP 02...	2100	.16	.03	.10

		DATE	TIME	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31625)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) (31673)
		AUG 18...	0146	500000	230000	320000
		SEP 02...	2100	130000	110000	62000
		SEP 02...	2130	--	82000	59000

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA: WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

08405450 BLUE SPRINGS ABOVE DIVERSIONS, NM (LAT 32 11 05 LONG 104 17 05 10)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
OCT 22...	1130	11	1570	7.7	19.0	14
DEC 02...	1200	11	1550	7.8	18.5	14
AUG 10...	1040	9.2	1620	7.6	20.5	24

09367700 ALAMO WASH NEAR TANNER LAKE, NM (LAT 36 14 07 LONG 108 10 52 00)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	SAMPLE SOURCE (72005)
JUL 20...	2000	E500	1300	7.3	413	40
AUG 11...	2400	E1000	1120	7.7	307	40

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	TOTAL BORON (B) (UG/L) (01022)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL LITHIUM (LI) (UG/L) (01132)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	SAMPLE SOURCE (72005)
JUL 20...	2000	--	1800	160	30	2100	1100	790	--	--	9800	40
AUG 11...	2400	640	--	--	--	--	--	--	2.4	0	--	40

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE- D SEDI- MENT (MG/L) (80154)	SUS- PENDE- D SEDI- MENT CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL 20...	2000	E500	205000	277000	69	40
JUL 20...	2100	E1000	163000	440000	82	--
AUG 11...	2300	E500	166000	224000	55	--
AUG 11...	2400	E1000	144000	389000	75	40

09367932 HUNTER WASH TRIBUTARY AT ROAD CROSSING 5 MILES SOUTH OF BISTI, NM (LAT 36 15 33 LONG 108 15 06 00)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	SAMPLE SOURCE (72005)
JUL 16...	2200	E500	2200	6.6	1980	40

WATER QUALITY DATA: WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

09367932 HUNTER WASH TRIBUTARY AT ROAD CROSSING 5 MILES SOUTH OF BISTI, NM (LAT 36 15 33 LONG 108 15 06 00)
Continued

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	SAMPLE SOURCE (72005)
JUL 16...	2200	2500	5.1	0	40

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDIM- MENT CHARGE (MG/L) (80154)	SUS- PENDE SEDIM- MENT CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JAN 30...	1615	E200	310	167	58	--
JUL 16...	2200	E500	278000	375000	85	40

09367938 CHACO RIVER AT HIGHWAY BRIDGE NEAR BURNHAM, NM (LAT 36 21 57 LONG 108 33 57 10)
(LOCAL IDENTIFIER-NR049.0367X0923)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SAMPLE SOURCE (72005)
JUL 20...	1830	E1000	2000	6.7	--	429	--	40
20...	1930	E2000	1200	6.8	--	476	--	40
20...	2030	E5000	1350	6.9	--	--	--	40
AUG 11...	0130	E1000	930	7.2	--	340	--	40
11...	0300	E1500	700	7.4	70	230	4.9	40

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
AUG 11...	2015	8400	8.3	310

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COPPER (CU) (UG/L) (01042)
JUL 20...	1830	940	--	--	--	--	--	--	--	--
20...	1930	--	5600	--	230	--	30	280	--	--
20...	2030	--	--	--	--	--	--	--	--	--
AUG 11...	0130	440	--	--	--	--	--	--	--	--
11...	0300	--	7800	0	320	70	20	210	10	920

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

09367938 CHACO RIVER AT HIGHWAY BRIDGE NEAR BURNHAM, NM (LAT 36 21 57 LONG 108 33 57 10)
(LOCAL IDENTIFIER-NR049.0367X0923)--Continued

DATE	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	SAMPLE SOURCE (72005)
JUL										
20...	--	--	--	--	6.2	0	--	--	--	40
20...	1200	--	830	--	--	--	9600	--	--	40
20...	--	--	--	--	--	--	--	--	4.2	40
AUG										
11...	--	--	--	--	2.6	0	--	--	--	40
11...	800	22	440	8	--	--	5100	440	--	40

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)
------	------	---	---	---

AUG				
11...	2015	84	3.3	0

DATE	TIME	DIS- SOLVED RA-226 (PLAN- CHET COUNT) (PC/L) (09510)	SAMPLE SOURCE (72005)
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JUL			
20...	2030	.1	40

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL						
20...	1830	E1000	150000	405000	99	40
20...	1930	E2000	120000	648000	92	40
20...	2030	E5000	145000	1960000	93	40
AUG						
11...	0130	E1000	66100	178000	91	40
11...	0230	E2000	47000	254000	96	40
11...	0300	E1500	E48700	197000	E97	40
11...	0330	E5000	50500	682000	97	40

CHACO RIVER BELOW ESCAVADO WASH NR CHACO NAT MONUMENT, NM (LAT 36 04 53 LONG 108 01 20 10)
(LOCAL IDENTIFIER-21N.11W.05.4220)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS) (00095)	PH (UNITS) (00400)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	SAMPLE SOURCE (72005)
AUG						
12...	1730	E500	925	7.4	458	40

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CHACO RIVER BELOW ESCAVADO WASH NR CHACO NAT MONUMENT, NM (LAT 36 04 53 LONG 108 01 20 10)
(LOCAL IDENTIFIER-21N.11W.05.4220) -- Continued

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	SAMPLE SOURCE (72005)
------	------	---	---	---	-----------------------------

AUG 12...	1730	1000	2.5	0	40
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DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (000061)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL 21...	0630	E500	11900	16100	95	--
AUG 12...	1730	E500	148000	200000	74	40

COYOTE WASH NR NASCHITTI, NM (LAT 36 08 09 LONG 108 32 34 10)
(LOCAL IDENTIFIER-NR067.0225X0788)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (000061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (000095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA.MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)
------	------	---	--	--------------------------	--	---	--	---

JUL 20...	2030	E20	360	6.9	--	--	--	--
20...	2100	E100	360	6.9	--	--	--	--
21...	0200	E200	355	6.9	--	--	--	--
27...	1500	E20	515	7.5	25.0	--	--	--
AUG 12...	0130	E20	390	7.1	--	--	--	--
12...	0200	E100	430	7.2	--	110	0	41
12...	1300	E200	280	7.0	--	--	--	--

DATE	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)
------	--	---	--	---	---	--	---	--	---

JUL 20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
AUG 12...	--	--	--	--	--	--	--	--	--
12...	2.5	61	2.5	5.3	220	0	60	5.3	.6
12...	--	--	--	--	--	--	--	--	--

DATE	DIS- SOLVED SILICA CONSTITUENTS (SIO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	DIS- SOLVED NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	SAMPLE SOURCE (72005)
------	---	---	---	--	---	---	--	-----------------------------

JUL 20...	--	--	--	--	--	--	186	40
20...	--	--	--	--	--	--	143	40
21...	--	--	--	--	--	--	--	40
27...	--	--	--	--	--	--	46	40
AUG 12...	--	--	--	--	--	--	408	40
12...	13	300	.55	.02	70	30	395	40
12...	--	--	--	--	--	--	216	40

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

COYOTE WASH NR NASCHITTI, NM (LAT 36 08 09 LONG 108 32 34 10)
(LOCAL IDENTIFIER-NR067.0225X0788) -- Continued

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	TOTAL BORON (B) (UG/L) (01022)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	TOTAL COBALT (CO) (UG/L) (01037)
JUL							
20...	2030	260	--	--	--	--	--
20...	2100	--	2700	260	20	180	200
27...	1500	--	2500	260	10	--	--
AUG							
12...	0130	490	--	--	--	--	--
12...	1300	--	2600	230	20	160	--

DATE	TIME	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL LITHIUM (LI) (UG/L) (01132)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	SAMPLE SOURCE (72005)
JUL								
20...	--	--	--	--	1.2	1	--	40
20...	--	--	500	240	--	--	1500	40
27...	250	300	230	--	--	--	1800	40
AUG								
12...	--	--	--	--	1.4	1	--	40
12...	360	400	210	--	--	--	1600	40

DATE	TIME	DIS- SOLVED RA-226 (PLAN- CHET COUNT) (PC/L) (09510)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)	SAMPLE SOURCE (72005)
JUL				
21...	0200	.2	1.0	40

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL							
20...	2030	E20	--	27100	1460	97	40
20...	2100	E100	--	20400	5510	90	40
21...	0200	E200	--	17600	9500	97	40
27...	1500	E20	25.0	10900	589	100	40
AUG							
12...	0130	E20	--	44000	2380	89	40
12...	0200	E100	--	44600	12000	94	40
12...	1300	E200	--	21800	11800	93	40

CHACO RIVER BELOW DE-NA-ZIN WASH NEAR BISTI, NM (LAT 36 11 37 LONG 108 20 21 10)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
JUL									
21...	0100	E500	1200	7.0	--	--	--	--	--
21...	0200	E1000	1150	7.2	--	--	--	--	--
AUG									
12...	0600	E500	1075	7.1	59	280	460	0	390

CHACO RIVER BELOW DE-NA-ZIN WASH NEAR BISTI, NM (LAT 36 11 37 LONG 108 20 21 10) -- Continued

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE DIS- CHARGE (MG/L) (80154)	SUS- PENDE DIS- CHARGE (T/DAY) (80155)	SUS- SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL						
21...	0030	500	90100	122000	97	--
21...	0100	E500	207000	279000	58	40
AUG						
12...	0600	E500	83100	112000	84	40

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (CA,MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DISSOLVED CALCIUM (CA) (MG/L) (00915)
FEB 17...	1700	E.10	495	7.6	2.5	24	0	8.9
JUL 20...	2000	E200	520	6.9	--	--	--	--
20...	2030	E1000	520	6.9	--	--	--	--

[illegible]

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

COAL CREEK ABOVE TANNER LAKE NEAR BISTI, NM (LAT 36 14 04 LONG 108 07 47 10)
(LOCAL IDENTIFIER-23N.12W.17.222) -- Continued

DATE	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	SAMPLE SOURCE (72005)		
FEB 17...	13	330	2.6	.03	150	30	17	29		
JUL 20...	--	--	--	--	--	--	472	40		
20...	--	--	--	--	--	--	464	40		
DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	TOTAL COBALT (CO) (UG/L) (01037)	TOTAL COPPER (CU) (UG/L) (01042)	
FEB 17...	1700	--	300	200	150	10	50	50	160	
JUL 20...	2000	430	--	--	--	--	--	--	--	
20...	2030	--	7500	390	--	20	1400	--	<10	
DATE	TIME	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	SAMPLE SOURCE (72005)
FEB 17...	110000	30	200	70	4	--	--	900	29	
JUL 20...	--	--	--	--	--	1.7	2	--	40	
20...	--	--	800	340	--	--	--	3700	40	
DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT (MG/L) (80155)	% FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)			
FEB 17...	1700	E.10	2.5	6980	1.9	100	29			
JUL 20...	2000	E200	--	41600	22500	94	40			
20...	2030	E1000	--	46000	124000	82	40			

DE-NA-ZIN WASH 1.5 MILES NORTHEAST AND ABOVE TANNER LAKE, NM (LAT 36 14 45 LONG 108 07 15 10)
(LOCAL IDENTIFIER-23N.12W.09.311)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	SAMPLE SOURCE (72005)
JUL 20...	2015	E500	550	7.2	206	40
AUG 11...	2230	E500	1075	7.5	306	40
DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BORON (B) (UG/L) (01022)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	SAMPLE SOURCE (72005)
JUL 20...	2015	340	--	1.4	0	40
AUG 11...	2230	90	340	--	0	40

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DE-NA-ZIN WASH 1.5 MILES NORTHEAST AND ABOVE TANNER LAKE, NM (LAT 36 14 45 LONG 108 07 15 10)
(LOCAL IDENTIFIER-23N.12W.09.311) -- Continued

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDI- MENT CHARGE (MG/L) (80154)	SUS- PENDE SEDI- MENT CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL 20...	2015	E500	78800	106000	67	40
AUG 11...	2230	E500	158000	107000	64	40

CHACO RIVER BELOW HUNTER WASH NEAR BURNHAM, NM (LAT 36 17 51 LONG 108 32 52 10)
(LOCAL IDENTIFIER-NR049.0268X1397)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SAMPLE SOURCE (72005)
JUL 21...	0800	E500	950	7.1	--	570	--	40
21...	1230	E1500	1100	7.0	60	501	5.7	--
21...	1500	E3000	1000	7.0	--	--	--	40
AUG 12...	1230	E3000	790	7.3	--	323	--	40

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
JUL 21...	0800	840	--	--	--	--	--	--	--
21...	1230	--	7000	200	260	60	30	1700	4
AUG 12...	1230	490	--	--	--	--	--	--	--

DATE	TIME	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (SE) (UG/L) (01147)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	SAMPLE SOURCE (72005)
JUL 21...	--	--	--	--	--	3.6	0	--	--	40
21...	1000	16	560	30	--	--	7100	900	--	--
AUG 12...	--	--	--	--	--	1.9	0	--	--	40

DATE	TIME	DIS- SOLVED RA-226 (PLAN- CHET COUNT) (PC/L) (09510)	SAMPLE SOURCE (72005)
JUL 21...	1500	.3	40

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDI- MENT CHARGE (MG/L) (80154)	SUS- PENDE SEDI- MENT CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL 21...	0800	E500	124000	167000	81	40
21...	0815	800	103000	222000	80	--
21...	1430	1500	84900	344000	87	--
21...	1500	E3000	112000	907000	85	40

SANOSTEE WASH NEAR SANOSTEE, NM (LAT 36 28 13 LONG 108 34 41 10)
(LOCAL IDENTIFIER-NR049.0433X0206)

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SANOSTEE WASH NEAR SANOSTEE, NM (LAT 36 28 13 LONG 108 34 41 10)
(LOCAL IDENTIFIER-NR049.0433X0206) -- Continued

DATE	TIME	DIS- SOLVED RA-226 (PLAN- CHET COUNT) (PC/L) (09510)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)	SAMPLE SOURCE (72005)
JUL 21...	0200	.4	4.6	40
AUG 23...	1000	.2	27	--

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL 20...	2400	E50	--	64300	8680	74	40
21...	0100	E100	--	47500	12800	85	40
21...	0200	E200	--	128000	69100	97	40
27...	1300	E20	27.0	93000	5020	93	29
AUG 11...	0400	30	--	84900	6880	81	--
11...	0415	E20	--	84900	4580	81	40
11...	0430	150	--	86400	35000	87	--
23...	0800	E20	--	243000	19700	56	40
23...	0900	50	--	134000	18100	68	40
23...	1000	150	--	143000	57900	66	--
23...	1100	300	--	373000	302000	54	--

SHUMWAY ARROYO ABOVE DUNLAP FARM NEAR WATERFLOW, NM (LAT 36 46 31 LONG 108 26 10 10)
(LOCAL IDENTIFIER-30N.15W.32.223)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	HARD- NESS (CA, MG) (MG/L) (00900)
OCT 27...	1330	1.0	6000	8.3	19.5	12.5	--	1600
NOV 17...	1500	.81	3500	8.8	13.5	11.0	--	820
DEC 06...	1400	.16	5500	7.1	5.5	7.0	--	1000
JAN 05...	0920	1.8	4800	8.6	.0	8.0	--	1500
FEB 03...	1345	.37	9500	7.8	3.5	.5	9.8	2500
MAR 10...	1300	1.1	5750	8.2	9.0	8.5	8.5	1900
APR 14...	1330	3.0	5900	8.9	27.0	21.5	9.5	1700
MAY 12...	1300	.60	9010	8.1	21.0	15.5	--	2100
JUN 15...	1030	1.0	7010	8.4	30.0	28.0	--	3100
JUL 14...	1330	.19	8200	8.4	33.0	31.0	6.2	3300
SEP 01...	1200	1.0	5600	8.6	30.5	23.0	8.2	1900
29...	0900	1.2	5500	8.9	19.0	14.0	9.0	1500

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SHUMWAY ARROYO ABOVE DUNLAP FARM NEAR WATERFLOW, NM (LAT 36 46 31 LONG 108 26 10 10)
(LOCAL IDENTIFIER-30N.15W.32.223)--Continued

DATE	NON-CAR-BONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD-SORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)
OCT 27...	1500	430	130	1100	12	21	119	0	3500
NOV 17...	690	190	83	520	7.9	7.0	125	12	1500
DEC 06...	1000	280	84	570	7.7	11	42	0	1900
JAN 05...	1400	400	120	540	6.1	12	143	0	2300
FEB 03...	2200	380	380	1700	15	9.8	327	0	4900
MAR 10...	1800	400	230	990	9.8	19	185	0	3500
APR 14...	1600	420	150	760	8.1	19	68	16	2500
MAY 12...	2000	450	240	1700	16	16	180	0	4500
JUN 15...	2900	450	490	1200	9.3	11	250	14	4900
JUL 14...	3100	550	470	1300	9.8	10	250	5	5300
SEP 01...	1700	440	200	780	7.7	21	280	20	3000
29...	1400	440	99	570	6.4	21	160	0	2300

DATE	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SiO2) (MG/L) (00955)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS-SOLVED ORTHO-PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)
OCT 27...	370	1.0	13	5640	3.7	.37	910	30
NOV 17...	210	.7	5.8	2610	3.9	.10	500	10
DEC 06...	220	.8	12	3110	2.7	.05	660	40
JAN 05...	150	.9	21	3630	3.1	.36	560	20
FEB 03...	660	.4	5.5	8280	19	.02	490	0
MAR 10...	300	1.2	28	5600	8.9	.58	590	10
APR 14...	250	1.1	27	4190	2.7	.15	640	40
MAY 12...	710	1.5	16	7740	4.3	.04	810	100
JUN 15...	230	.5	2.6	7490	15	.08	500	20
JUL 14...	220	.4	4.1	8050	14	.05	480	40
SEP 01...	200	1.8	44	4870	4.2	.34	690	20
29...	190	1.9	37	3750	2.2	.44	1100	30

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BORON (B) (UG/L) (01022)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL LITHIUM (LI) (UG/L) (01132)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELENIUM (SE) (UG/L) (01147)
OCT 27...	1330	7	970	910	30	100	260	.0	10

WATER QUALITY DATA: WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

POWERPLANT ARROYO BELOW SAN JUAN POWERPLANT RESERVOIR, NM (LAT 36 47 06 LONG 108 26 26 10)
(LOCAL IDENTIFIER-30N.15W.29.322)

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)
JAN												
05...	1210	.50	8000	8.2	4.5	5.0	--	11.0	--	3400	3200	410
FEB												
03...	1420	1.0	7630	7.8	7.0	11.5	--	12.0	--	3000	2700	410
MAR												
10...	1350	.75	8250	8.5	3.5	10.0	--	11.6	--	3300	3100	420
APR												
14...	1430	1.5	5900	8.2	25.5	23.5	--	10.4	--	3100	2900	430
MAY												
12...	1330	1.0	7680	8.2	19.0	17.5	--	--	--	3100	2900	440
JUN												
15...	1103	.50	7500	7.8	26.0	22.0	3	--	21	3200	3000	450
JUL												
14...	1400	.15	7850	8.2	33.5	29.0	--	9.2	--	3200	3000	430
SEP												
01...	1230	.75	7800	8.0	29.0	25.0	--	9.6	--	3100	2900	430
28...	1845	.30	16750	8.1	26.0	19.5	--	8.4	--	5200	4900	440

DATE	DIS- SOLVED MAG- NESIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)
JAN											
05...	580	1100	8.2	12	280	0	4800	250	.3	6.1	--
FEB											
03...	470	1100	8.8	11	264	0	4600	230	.3	4.9	--
MAR											
10...	550	1300	9.8	13	256	1	5300	230	.5	1.6	--
APR											
14...	490	1100	8.6	14	230	0	5000	180	.3	1.4	--
MAY											
12...	490	1100	8.6	12	250	0	4700	180	.4	1.4	--
JUN											
15...	510	1200	9.2	11	270	0	5400	200	.4	3.4	8480
JUL											
14...	510	1200	9.3	10	230	0	4900	210	.4	2.7	--
SEP											
01...	490	1200	9.4	13	250	0	4900	180	.4	3.6	--
28...	1000	2300	14	11	420	0	8400	440	.6	1.7	--

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)
JAN											
05...	7400	--	23	--	--	--	--	.00	370	20	--
FEB											
03...	7050	--	21	--	--	--	--	.00	380	20	--
MAR											
10...	8040	--	22	--	--	--	--	.02	400	0	--
APR											
14...	7400	--	16	--	--	--	--	.01	420	40	--
MAY											
12...	7120	--	17	--	--	--	--	.03	410	20	--
JUN											
15...	7980	15	15	.02	.71	16	.03	.01	430	20	7.8
JUL											
14...	7440	--	15	--	--	--	--	.01	460	20	--
SEP											
01...	7400	--	14	--	--	--	--	.04	460	10	--
28...	13000	--	34	--	--	--	--	.00	730	40	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 WESTWATER ARROYO AT SAN JUAN POWERPLANT, NM (LAT 36 47 37 LONG 108 25 47 10)
 (LOCAL IDENTIFIER-30N.15W.21.333)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	AIR TEMPER- ATURE (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	HARD- NESS (CA+MG) (MG/L) (00900)
OCT								
27...	1305	1.0	5500	8.1	18.0	15.0	--	2000
NOV								
17...	1430	.50	2500	8.7	13.0	14.5	--	650
DEC								
06...	1530	1.0	4000	5.5	5.5	12.0	--	1000
JAN								
05...	1220	2.5	4200	8.9	3.0	18.0	7.2	1400
FEB								
03...	1515	.50	17500	8.0	6.0	8.5	16.8	1900
MAR								
10...	1500	1.0	5400	8.2	8.0	12.0	--	1500
APR								
14...	1530	2.0	4400	7.9	26.5	22.0	8.0	1400
MAY								
12...	1330	1.5	4840	7.4	20.0	16.0	--	1800
JUN								
15...	1140	.10	24000	8.5	32.0	28.0	--	2400
JUL								
14...	1430	.05	18600	--	33.0	34.0	--	1200
SEP								
01...	1330	1.0	4000	8.7	31.0	28.5	7.1	1600
28...	1815	1.0	4200	8.7	26.0	25.0	8.3	1400

DATE	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
OCT									
27...	1900	440	210	760	7.5	21	80	0	3100
NOV									
17...	560	180	48	200	3.4	6.3	85	12	860
DEC									
06...	1000	270	89	540	7.3	12	4	0	1800
JAN									
05...	1300	420	76	500	5.9	14	100	15	2200
FEB									
03...	1600	350	260	4200	41	9.8	396	0	6600
MAR									
10...	1400	410	120	760	8.5	19	122	0	2700
APR									
14...	1300	400	93	590	6.9	19	64	0	2200
MAY									
12...	1700	520	110	630	6.6	18	38	0	2700
JUN									
15...	2100	400	350	6300	56	14	390	16	10000
JUL									
14...	1100	300	98	1900	24	10	82	0	3800
SEP									
01...	1300	470	100	520	5.7	25	250	41	2300
28...	1300	420	87	470	5.5	21	120	0	2100

WATER QUALITY DATA: WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

WESTWATER ARROYO AT SAN JUAN POWERPLANT, NM (LAT 36 47 37 LONG 108 25 47 10)
(LOCAL IDENTIFIER-30N.15W.21.333)--Continued

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT 27...	210	1.0	16	4810	2.3	.76	880	40
NOV 17...	60	.6	7.8	1420	1.6	.15	590	80
DEC 06...	170	.9	14	2910	1.5	.09	650	890
JAN 05...	99	1.0	23	3400	1.0	.27	820	60
FEB 03...	2500	.6	4.0	14100	5.6	.00	690	10
MAR 10...	220	1.7	40	4340	1.6	.69	680	20
APR 14...	180	1.3	33	3550	.65	.25	670	50
MAY 12...	180	2.2	30	4220	1.2	.01	820	60
JUN 15...	3300	1.7	4.0	20600	8.8	.08	1500	100
JUL 14...	890	1.1	18	7080	3.8	.06	670	40
SEP 01...	150	2.3	70	3810	.59	.43	750	20
28...	150	1.9	43	3360	1.6	.42	1200	20

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL LITHIUM (LI) (UG/L) (01132)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)
OCT 27...	1305	10	940	880	40	100	250	.0	10

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

Samples are collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin. Such sites are referred to as miscellaneous sites. The first four stations are listed in ascending order of station numbers after which stations are listed in order of latitudes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

08264500 RED RIVER BELOW ZWERGLE DAMSITE NEAR RED RIVER, NM (LAT 36 40 25 LONG 105 22 50 00)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)
NOV 18...	1100	11	191	7.9	.0	2	96	5

DATE	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
NOV 18...	31	4.4	2.5	.1	.7	110	0	13	.7

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
NOV 18...	.1	6.4	107	114	.18	.00	4	10

DATE	TIME	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL MOLYB- DENUM (MO) (UG/L) (01062)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)
NOV 18...	1100	4	10	2	0

08350500 RIO SAN JOSE NEAR LAGUNA, NM (LAT 35 01 25 LONG 107 19 32)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)
JAN 24...	1230	27	2700	8.3	4.0	700	420	140	84
DATE	TIME	DIS- SOLVED SODIUM AD- SORP- TION RATIO (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)
JAN 24...	340	5.6	8.6	336	0	950	160	.9	19

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

08350500 RIO SAN JOSE NEAR LAGUNA, NM (LAT 35 01 25 LONG 107 10 32)
Continued

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL NITROGEN (N) (MG/L) (00600)	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS-SOLVED ORTHO-PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)		
JAN 24...	1870	.85	.88	2.3	.42	.24	380	40	4.4		
DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	TOTAL BORON (B) (UG/L) (01022)	DIS-SOLVED BORON (B) (UG/L) (01020)	TOTAL CADMIUM (CD) (UG/L) (01027)	TOTAL CHROMIUM (CR) (UG/L) (01034)	TOTAL COBALT (CO) (UG/L) (01037)	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL IRON (FE) (UG/L) (01045)	DIS-SOLVED IRON (FE) (UG/L) (01046)
JAN 24...	1230	4	0	400	380	<10	0	<50	10	3600	40
DATE	TIME	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS-SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MANGANESE (MN) (UG/L) (01055)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL MOLYBDENUM (MO) (UG/L) (01062)	TOTAL SELENIUM (SE) (UG/L) (01147)	TOTAL SILVER (AG) (UG/L) (01077)	TOTAL STRONTIUM (SR) (UG/L) (01082)	DIS-SOLVED VANADIUM (V) (UG/L) (01085)
JAN 24...		<100	290	280	110	.0	3	4	<10	2100	3.4
DATE	TIME	TOTAL NON-FILTERABLE RESIDUE (MG/L) (00530)	DIS-SOLVED GROSS ALPHA AS (UG/L) (80030)	SUSPENDED GROSS ALPHA AS (UG/L) (80040)	DIS-SOLVED GROSS BETA AS (PC/L) (03515)	SUSPENDED GROSS BETA AS (PC/L) (03516)	DIS-SOLVED GROSS BETA AS SR90 (PC/L) (80050)	SUSPENDED GROSS BETA AS SR90 (PC/L) (80060)	DIS-SOLVED RA-226 (PC/L) (09511)	DIS-SOLVED NATURAL URANIUM (U) (UG/L) (22703)	
JAN 24...	1230	140	140	6.0	21	30	16	24	.11	91	

09357000 SAN JUAN RIVER AT BLOOMFIELD, NM (LAT 36 42 00 LONG 107 59 10 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (CA, MG) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)
APR 27...	1130	367	476	8.5	14.0	150	52	47	8.0	44	1.6	2.3
DATE	TIME	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SI02) (MG/L) (00955)	DIS-SOLVED (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS-SOLVED ORTHO-PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)
APR 27...		120	0	140	3.6	.3	9.9	315	.05	.01	30	40

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA: WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

09367000 LA PLATA RIVER AT LA PLATA, NM (LAT 36 56 00 LONG 108 11 00 00)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)	SUS- PENDEO ORGANIC CARBON (C) (MG/L) (00689)	
APR 29...	1540	.90	3400	7.9	24.0	140	10	10	5.9	.6	
DATE	TIME	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)
APR 29...	1540	460	140	30	10	50	50	40	10	4100	4100
DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDEO SEDI- MENT (MG/L) (80154)	SUS- PENDEO SEDI- MENT (MG/L) (80155)	SUS- PENDEO SEDI- MENT (MG/L) (80155)	SUS- PENDEO SEDI- MENT (MG/L) (80155)	SUS- PENDEO SEDI- MENT (MG/L) (80155)	SUS- PENDEO SEDI- MENT (MG/L) (80155)	SUS- PENDEO SEDI- MENT (MG/L) (80155)	
APR 29...	1540	.90	24.0	10	.02	89					

CASTLE SPRING ABOVE DIVERSION DAM AT MILE 15.4, NM (LAT 32 11 59 LONG 104 15 13 10)
(LOCAL IDENTIFIER-24S.26E.24.441)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
DEC 02...	1130	.28	1940	7.8	15.0	30
AUG 10...	1130	--	1860	7.6	24.5	20

EAST SIDE CANAL 10 MILES SOUTH OF LAS CRUCES, NM (LAT 32 13 08 LONG 106 45 28 10)
(LOCAL IDENTIFIER-24S.02E.17.41)

DATE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
AUG 31...	801	7.9	210	68	60	14	88	2.7	6.2
DATE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	
AUG 31...	170	0	160	64	.7	10	489	.45	

WATER QUALITY DATA: WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

RINCONADA CREEK NEAR SAN FIDEL, NM (LAT 35 03 19 LONG 107 36 55 10)
(LOCAL IDENTIFIER-10N.07W.31.23121)

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (CA+MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)
JAN 21...	1315	9500	8.2	.0	2700	2100	280	480	1800

DATE	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SIO2) (MG/L) (00955)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)
JAN 21...	15	16	643	0	4700	680	1.9	18	8300

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL NITROGEN (N) (MG/L) (00600)	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS-SOLVED ORTHO. PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (MG/L) (01020)	DIS-SOLVED IRON (FE) (MG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
JAN 21...	.07	.08	.50	.20	.04	1800	60	12

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	TOTAL BORON (B) (UG/L) (01022)	DIS-SOLVED BORON (B) (UG/L) (01020)	TOTAL CADMIUM (CD) (UG/L) (01027)	TOTAL CHROMIUM (CR) (UG/L) (01034)	TOTAL COBALT (CO) (UG/L) (01037)	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL IRON (FE) (UG/L) (01045)	DIS-SOLVED IRON (FE) (UG/L) (01046)
JAN 21...	1315	5	100	1800	1800	10	?	<50	30	4300	60

DATE	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS-SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MANGANESE (MN) (UG/L) (01055)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL MOLYBDENUM (MO) (UG/L) (01062)	TOTAL SELENIUM (SE) (UG/L) (01147)	TOTAL SILVER (AG) (UG/L) (01077)	TOTAL STRONTIUM (SR) (UG/L) (01082)	DIS-SOLVED VANADIUM (V) (UG/L) (01085)
JAN 21...	100	730	760	290	.5	12	2	10	7700	2.1

DATE	TIME	TOTAL NON-FILTERABLE RESIDUE (MG/L) (00530)	DIS-SOLVED GROSS ALPHA AS (UG/L) (80030)	SUSPENDED GROSS ALPHA AS (UG/L) (80040)	DIS-SOLVED GROSS BETA AS (PC/L) (03515)	SUSPENDED GROSS BETA AS (CS-137) (PC/L) (03516)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80050)	SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L) (80060)	DIS-SOLVED RA-226 METHOD (MG/L) (09511)	DIS-SOLVED NATURAL URANIUM (U) (UG/L) (22703)
JAN 21...	1315	170	190	6.9	46	17	37	13	.02	36

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

TIJERAS CREEK 3.0 MILES SOUTHWEST OF TIJERAS, NM (LAT 35 03 31 LONG 106 27 30 10)
(LOCAL IDENTIFIER-10N.05E.30.3224)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
JUN 08...	1000	720	8.0	24.8	1.2	1.2

TIJERAS CREEK 2.0 MILES SOUTHWEST OF TIJERAS, NM (LAT 35 04 00 LONG 106 25 30 10)
(LOCAL IDENTIFIER-10N.05E.29.114)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
JUN 08...	0955	770	7.8	24.8	1.3	1.3

RIO PAGUATE AT PAGUATE, NM (LAT 35 08 08 LONG 107 22 48 10)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED ORTH- PHOS- PHORUS (P) (MG/L) (00671)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
JAN 18...	1355	1.2	492	8.0	4.0	210	15	53	18	22	.7	4.2

DATE	TIME	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTH- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
JAN 18...	233	0	64	6.5	.3	37	320	.03	.01	20	20	

RIO MOQUINO NEAR PAGUATE, NM (LAT 35 09 12 LONG 107 21 18 10)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED ORTH- PHOS- PHORUS (P) (MG/L) (00671)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
JAN 18...	1450	3.7	1430	7.8	.0	580	330	130	63	110	2.0	6.1

DATE	TIME	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTH- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
JAN 18...	308	0	540	11	.4	19	1040	.87	.02	70	0	

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PUERCO RIVER NEAR STATELINE, NM (LAT 35 22 40 LONG 109 02 20 10)
(LOCAL IDENTIFIER-21N.13W.11.144)

		INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPEC- IFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)		
OCT 06...	0830	3.7	1320	7.5	6.0	140	0	43		
JUL 06...	1500	9.1	1000	7.9	27.0	--	--	--		
DATE	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFAIE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	
OCT 06...	7.9	230	8.5	6.1	323	0	290	55	.9	
JUL 06...	--	--	--	220	--	--	--	--	.9	
DATE	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)		
OCT 06...	12	824	3.1	2.0	240	60	--	--		
JUL 06...	--	--	3.4	--	--	90	7200	319		
DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
OCT 06...	0830	1	--	--	--	240	--	--	--	--
JUL 06...	1500	7	6	8000	1700	--	20	4	250	0
DATE	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)
OCT 06...	--	--	--	--	--	60	--	--	--	--
JUL 06...	400	45	330	5	340000	90	700	2	15000	7200
DATE	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	
OCT 06...	--	--	14	14	--	--	--	--	--	
JUL 06...	1.9	.0	5	5	4600	3400	1.2	1700	30	

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PUERCO RIVER NEAR STATELINE, NM (LAT 35 22 40 LONG 109 02 20 10)
(LOCAL IDENTIFIER-21N.13W.11.144) -- Continued

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDED GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDED GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80050)	SUS- PENDED GROSS BETA AS SR90 /Y90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)	DIS- SOLVED URANIUM (DIRECT FLUORO- METRIC) (PC/L) (80010)
OCT 06...	0830	338	1200	1300	120	480	96	400	.39	--	630
JUL 06...	1500	44000	210	5200	26	2000	20	1600	.27	69	--

SPRINGS IN SAN MARCOS ARROYO NEAR CERRILLOS, NM (LAT 35 27 52 LONG 106 05 34 01)
(LOCAL IDENTIFIER-14N.08E.09.2434)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)
JUL 27...	1130	600	7.1	14.0	240	10	73	14

DATE	TIME	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	RICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)
JUL 27...	38	1.1	2.7	280	0	67	16	.6	28	

DATE	TIME	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)
JUL 27...	376	380	.53	.05	70	10	0	.6	

DATE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	HEXA- VALENT CHRO- MIUM (CR6) (UG/L) (01032)	DIS- SOLVED COPPER (CU) (UG/L) (01040)
JUL 27...	1130	1	300	70	0	0	0	0

DATE	TIME	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
JUL 27...	10	2	0	.0	2	0	2	

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PUERCO RIVER AT THE HOGBACK, NM (LAT 35 31 50 LONG 108 41 14 10)

DATE	TIME	INSTANTANEOUS CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (CA, MG) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)			
OCT 06...	1125	4.1	780	8.2	13.5	92	0	29			
JUL 06...	1130	3.8	960	8.3	23.5	--	--	--			
DATE	TIME	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	
OCT 06...	4.8	140		6.3	3.5	282	0	130	18	.6	
JUL 06...	--	--	--	--	37	--	--	--	--	.5	
DATE	TIME	DIS-SOLVED SILICA (SiO2) (MG/L) (00955)	DIS-SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS-SOLVED ORTHO. PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)		
OCT 06...	11		479	.56	.06	100	20	--	--		
JUL 06...	--	--	--	.43	--	--	80	8	145		
DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS-SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS-SOLVED BARIUM (BA) (UG/L) (01005)	DIS-SOLVED BORON (B) (UG/L) (01020)	TOTAL CADMIUM (CD) (UG/L) (01027)	DIS-SOLVED CADMIUM (CD) (UG/L) (01025)	TOTAL CHROMIUM (CR) (UG/L) (01034)	DIS-SOLVED CHROMIUM (CR) (UG/L) (01030)	
OCT 06...	1125	2	--	600	--	100	<10	--	40	--	
JUL 06...	1130	19	1	4900	100	--	20	1	290	0	
DATE	TIME	TOTAL COBALT (CO) (UG/L) (01037)	DIS-SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS-SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS-SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS-SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MANGANESE (MN) (UG/L) (01055)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)
OCT 06...	<50	--	50	--	--	20	<100	--	--	--	
JUL 06...	400	0	410	7	420000	80	600	11	9600	8	
DATE	TIME	TOTAL MERCURY (HG) (UG/L) (71900)	DIS-SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELENIUM (SE) (UG/L) (01147)	DIS-SOLVED SELENIUM (SE) (UG/L) (01145)	TOTAL STRONTIUM (SR) (UG/L) (01082)	DIS-SOLVED STRONTIUM (SR) (UG/L) (01080)	DIS-SOLVED VANADIUM (V) (UG/L) (01085)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS-SOLVED ZINC (ZN) (UG/L) (01090)	
OCT 06...	.2	--	30	30	--	--	5.6	20	--		
JUL 06...	.6	.0	28	20	3400	590	1.5	2300	50		

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PUERCO RIVER AT THE HOGBACK, NM (LAT 35 31 50 LONG 108 41 14 10)
Continued

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDED GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDED GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS SR90 (PC/L) (80050)	SUS- PENDED GROSS BETA AS SR90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
OCT 06...	1125	2400	2800	1100	420	600	380	510	.88	1200
JUL 06...	1130	15000	1700	4200	140	1200	110	1100	.95	720

PUERCO RIVER NEAR SPRINGSTEAD, NM (LAT 35 36 46 LONG 108 33 09 10)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION (RATIO) (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
OCT 06...	1310	7.4	680	8.4	19.0	53	0	16	3.2	130	7.8	2.6

DATE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT 06...	250	9	88	12	.5	16	403	.49	.02	90	20

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)
OCT 06...	1310	1	90	20	31	31

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDED GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDED GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS SR90 (PC/L) (80050)	SUS- PENDED GROSS BETA AS SR90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
OCT 06...	1310	79	2800	1400	240	650	200	520	1.9	1100

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PUERCO RIVER TRIBUTARY BELOW MINES AT CHURCHROCK, NM (LAT 35 39 23 LONG 108 29 47 10)

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (CA+MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)
OCT 06...	1350	6.9	650	8.8	23.0	41	0	10	3.8
JUL 06...	0900	6.8	680	8.8	22.0	--	--	--	--

DATE	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	BROMIDE (BR) (MG/L) (71870)
OCT 06...	130	8.9	1.4	230	15	86	8.8	.4	--
JUL 06...	--	--	2.0	--	--	--	--	.1	.1

DATE	DIS-SOLVED SILICA (SI02) (MG/L) (00955)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS-SOLVED ORTHO-PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
OCT 06...	19	391	.62	.12	80	40	--	--
JUL 06...	--	--	.07	--	--	10	0	11

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS-SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS-SOLVED BARIUM (BA) (UG/L) (01005)	DIS-SOLVED BORON (B) (UG/L) (01020)	TOTAL CADMIUM (CD) (UG/L) (01027)	DIS-SOLVED CADMIUM (CD) (UG/L) (01025)	TOTAL CHROMIUM (CR) (UG/L) (01034)	DIS-SOLVED CHROMIUM (CR) (UG/L) (01030)
OCT 06...	1350	1	--	--	--	80	--	--	--	--
JUL 06...	0900	3	1	1400	800	--	<10	1	40	0

DATE	TOTAL COBALT (CO) (UG/L) (01037)	DIS-SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS-SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS-SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS-SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MANGANESE (MN) (UG/L) (01055)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)
OCT 06...	--	--	--	--	--	40	--	--	--	--
JUL 06...	<50	0	<10	1	5400	10	<100	6	100	0

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PUERCO RIVER TRIBUTARY BELOW MINES AT CHURCHROCK, NM (LAT 35 39 23 LONG 108 29 47 10)
Continued

DATE	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT 06...	--	--	36	36	--	--	20	--	--
JUL 06...	.1	.0	35	25	190	150	10	40	0

DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDE GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDE GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS SR90 (PC/L) (80050)	SUS- PENDE GROSS BETA AS SR90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)	DIS- SOLVED URANIUM (DIRECT FLUORO- METRIC) (PC/L) (80010)
OCT 06...	1350	44	2900	44	340	62	300	59	60	--	930
JUL 06...	0900	260	1600	400	160	200	130	160	14	480	--

ESCAVADO WASH AT HWAY 56 BRIDGE NEAR CHACO CANYON TRADING POST, NM (LAT 36 06 14 LONG 107 57 20 10)
(LOCAL IDENTIFIER-22N.11W.25.433)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- RID- ITY (JTU) (00070)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)
FEB 17...	1330	E49	440	8.6	2.5	7900	270	6	0	2.3	.1	93

DATE	TIME	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA DUE AT CONSTI- TUENTS (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF SOLIDS (MG/L) (70301)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRITE (N) (MG/L) (00613)
FEB 17...	16	1.2	230	0	54	2.1	1.0	13	383	293	2.8	.02

DATE	TIME	TOTAL NITRITE PLUS NITRATE (N) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	SAMPLE SOURCE (72005)
FEB 17...	3.1	2.8	.02	8.4	12	1.7	.13	150	50	0	77	29	

DATE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	HEXA- VALENT CHRO- MIUM (CR6) (UG/L) (01032)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED IRON (FE) (UG/L) (01046)
FEB 17...	1330	14	0	150	0	0	13	50

NOTE.--Sample collected Feb. 17 was by dip method.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ESCAVADO WASH AT HIWAY 56 BRIDGE NEAR CHACO CANYON TRADING POST, NM (LAT 36 06 14 LONG 107 57 20 10)
(LOCAL IDENTIFIER-22N.11W. 25.433) -- Continued

		TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED NIUM (SE) (UG/L) (01145)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	SAMPLE SOURCE (72005)			
FEB 17...		600	2	0	.5	3	0	40	29			
DATE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDE GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDE GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80050)	SUS- PENDE GROSS BETA AS SR90 /Y90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED URANIUM (U) (UG/L) (80020)	SAMPLE SOURCE (72005)	
FEB 17...		1330	20000	12	1100	4.1	500	3.3	400	.16	4.0	29
DATE	TIME			INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)			
FEB 17...		1330	E49	2.5	34600	4580	95	29				

AH-SHI-SLE-PAH WASH SIX MILES SW OF KIMBETO, NM (LAT 36 09 16 LONG 107 56 35 10)
(LOCAL IDENTIFIER-22N.10W.07.143)

					TOTAL LITHIUM (LI) (UG/L) (01132)		
		DATE		TIME			
		MAY 09...		1525	220		
		INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT (MG/L) (80155)	% FINER THAN .062 MM (70331)	SUS- SED- SIEVE DIAM. % FINER THAN .062 MM (70331)
DATE	TIME						
MAY 13...	1630	303	14.5	23900	19600		98

TRIBUTARY TO DE-NA-ZIN WASH 0.9 MILE NORTH OF TANNER LAKE, NM (LAT 36 14 39 LONG 108 08 42 10)
(LOCAL IDENTIFIER-23N.12W.08.1341)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	SAMPLE SOURCE (72005)
JUL 20...	0145	E20	1750	7.0	328	40
JUL 20...	0200	E50	590	7.8	266	40
AUG 10...	2200	E20	675	7.8	195	40

NOTE.--Under SAMPLE SOURCE the number 29 indicates dip or grab sample and 40 indicates single-stage sample.

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA: WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

TRIBUTARY TO DE-NA-ZIN WASH 0.9 MILE NORTH OF TANNER LAKE, NM (LAT 36 14 39 LONG 108 08 42 10)
(LOCAL IDENTIFIER -23N.12W.08.1341) -- Continued

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BORON (B) (UG/L) (01022)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	SAMPLE SOURCE (72005)
JUL 20...	0145	550	--	--	3.2	0	--	40
20...	0200	--	2	--	--	--	2	40
AUG 10...	2200	40	--	190	1.4	3	--	40

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDIMENT (MG/L) (80154)	SUS- PENDE SEDIMENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL 20...	0145	E20	108000	5830	91	40
20...	0200	E50	65400	8830	90	40
AUG 10...	2200	E20	48700	3940	76	40

TRIBUTARY TO DE-NA-ZIN WASH 1.8 MILES NORTH OF TANNER LAKE, NM (LAT 36 15 28 LONG 108 08 46 10)
(LOCAL IDENTIFIER-23N.12W.05.1334)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TOTAL ORGANIC CARBON (C) (00680)	SAMPLE SOURCE (72005)
JUL 20...	0130	E20	1750	6.8	471	40
AUG 10...	2100	E20	800	7.2	452	40

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BORON (B) (UG/L) (01022)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	SAMPLE SOURCE (72005)
JUL 20...	0130	980	--	3.8	0	40
AUG 10...	2100	55	280	2.1	2	40

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDIMENT (MG/L) (80154)	SUS- PENDE SEDIMENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JUL 20...	0130	E20	118000	6370	93	40
AUG 10...	2100	E20	70200	4740	82	40

NOTE.--Under SAMPLE SOURCE the number 40 indicates single-stage samples.

WATER QUALITY DATA: WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CHACO R AB FOUR CORNERS POWERPLANT NR FRUITLAND, NM (LAT 36 34 17 LONG 108 33 49 10)
(LOCAL IDENTIFIER-NR032.0352X1230)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L) (00681)
JUL 21...	0215	E2000	1400	6.8	--	504	--
AUG 11...	1020	E2000	1075	7.4	120	486	8.2

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
JUL 21...	0215	660	--	--	--	--	--	--	--
AUG 11...	1020	--	4900	0	410	120	20	260	10

DATE	TOTAL COBALT (CO) (UG/L) (01037)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)
JUL 21...	--	--	--	--	--	4.6	2	--	--
AUG 11...	600	1000	18	670	20	--	--	8500	860

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PEN- DED SEDIMENT (MG/L) (80154)	SUS- PEN- DED SEDIMENT (T/DAY) (80155)	SUS- SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUL 21...	0200	500	13700	18500	88
JUL 21...	0215	E2000	114000	616000	94
AUG 11...	1000	800	118000	255000	86
AUG 11...	1015	2000	202000	1090000	50
AUG 11...	1030	4000	58500	632000	99

SAN JUAN RIVER AT WEST HAMMOND BRIDGE, NM (LAT 36 41 22 LONG 108 05 43 10)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
APR 27...	1315	337	525	8.7	17.0	170	74	55	8.6	51	1.7	2.2

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA: WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SAN JUAN RIVER AT WEST HAMMOND BRIDGE, NM (LAT 36 41 22 LONG 108 05 43 10)
Continued

DATE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
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APR 27...	110	5	180	4.1	.3	10	371	.05	.01	40	40
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DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT (MG/L) (80155)	SUS- PENDE SEDI- MENT (MG/L) (80155)	SUS- PENDE SEDI- MENT (MG/L) (80155)
APR 27...	1315	337	17.0	30	27	66	

SAN JUAN RIVER AT BLANCO BRIDGE, NM (LAT 36 43 27 LONG 107 48 48 10)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA, MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
APR 27...	1040	280	260	8.7	10.5	110	29	34	6.3	20	.8	2.1

DATE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)
APR 27...	98	1	60	3.0	.2	9.9	185	.13	.01	30	20

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT (MG/L) (80155)	SUS- PENDE SEDI- MENT (MG/L) (80155)	SUS- PENDE SEDI- MENT (MG/L) (80155)
APR 27...	1040	280	10.5	14	11	84	

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SAN JUAN RIVER AT FRUITLAND BRIDGE, NM (LAT 36 44 22 LONG 108 44 09 10)

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARDNESS (CA+MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)	
APR 28...	0730	300	600	8.0	14.5	15	240	120	77	12	
DATE	TIME	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SIO2) (MG/L) (00955)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)
APR 28...	64		1.8	3.0	150	0	220	16	.4	8.8	476
DATE	TIME	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITROGEN (N) (MG/L) (00610)	TOTAL ORGANIC NITROGEN (N) (MG/L) (00605)	TOTAL NITROGEN (N) (MG/L) (00600)	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS-SOLVED ORTHO. PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
APR 28...	.12		.10	.05	1.0	1.2	.19	.06	60	30	3.2
DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	TEMPERATURE (DEG C) (00010)	SUSPENDED SEDIMENT (MG/L) (80154)	SUSPENDED SEDIMENT CHARGE (T/DAY) (80155)	SUSPENDED SEDIMENT % FINER THAN .062 MM (70331)					
APR 28...	0730	300	14.5	34	28	85					

SAN JUAN RIVER IN HOGBACK DIVERSION BYPASS NR FRUITLAND, NM (LAT 36 44 47 LONG 108 32 14 10)

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARDNESS (CA, MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)	
APR 28...	0850	105	850	8.1	16.0	13	290	150	89	16	
DATE	TIME	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SIO2) (MG/L) (00955)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)
APR 28...	76		1.9	3.1	170	0	290	20	.5	7.7	587

WATER QUALITY DATA: WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SAN JUAN RIVER IN HOGBACK DIVERSION BYPASS NR FRUITLAND, NM (LAT 36 44 47 LONG 108 32 14 10)
Continued

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
APR 28...	.17	.05	.06	.34	.57	.07	.03	70	20	3.5
DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80154)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)
APR 28...	0850	105	16.0	9	2.6	84				

SAN JUAN RIVER AT SHIPROCK BRIDGE, NM (LAT 36 46 50 LONG 108 41 34 10)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	
APR 28...	1215	122	1400	8.4	19.0	18	470	320	130	35	
DATE	TIME	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)
APR 28...	130	2.6	4.2	180	0	530	45	.9	5.7	972	
DATE	TIME	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
APR 28...	.61	.44	.07	.34	1.0	.04	.01	600	30	3.7	
DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80154)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	
APR 28...	1215	122	19.0	32	11	97					

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

WESTWATER ARROYO POND AT SAN JUAN POWERPLANT, NM (LAT 36 48 08 LONG 108 25 14 10)
(LOCAL IDENTIFIER-30N. 15W.21.231)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
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AUG 02...	1415	.17	320	7.4	31.0	6.0
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DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)
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AUG 02...	1415	3	.0	1
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DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
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AUG 02...	1415	.17	31.0	177	.08	89
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WESTWATER ARROYO ABOVE SAN JUAN MINE NR WATERFLOW, NM (LAT 36 48 43 LONG 108 25 50 10)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
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JUL 28...	1700	E50	3500	7.3	1120
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DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)
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JUL 28...	1700	630	3.1	0
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DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
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JUL 28...	1700	E50	51500	6950	96
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ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA: WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ANIMAS RIVER BELOW HIWAY 550 AT AZTEC, NM (LAT. 36 49 30 LONG 108 00 12 10)
(LOCAL IDENTIFIER-30N.11W.09.311)

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARDNESS (CA, MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)
APR 27...	1415	195	580	8.0	18.5	25	240	130

DATE	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM ADSORPTION RATIO (00931)	DIS-SOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)
APR 27...	76	11	25	.7	3.4	130	0	150	16

DATE	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED SILICA (SI02) (MG/L) (00955)	DIS-SOLVED (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS-SOLVED ORTHO. PHOSPHORUS (P) (MG/L) (00671)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
APR 27...	.6	7.1	354	.06	.01	60	30	19

DATE	TIME	TOTAL ALUMINUM (AL) (UG/L) (01105)	DIS-SOLVED ALUMINUM (AL) (UG/L) (01106)	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS-SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS-SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS-SOLVED BORON (B) (UG/L) (01020)	TOTAL CADMIUM (CD) (UG/L) (01027)	DIS-SOLVED CADMIUM (CD) (UG/L) (01025)	TOTAL CHROMIUM (CR) (UG/L) (01034)
APR 27...	1415	1300	10	2	1	100	0	80	60	<10	0	10

DATE	DIS-SOLVED CHROMIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS-SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS-SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS-SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS-SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS-SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MANGANESE (MN) (UG/L) (01055)
APR 27...	0	<50	0	30	3	4100	30	<100	0	50	50	600

DATE	TOTAL MERCURY (HG) (UG/L) (71900)	DIS-SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL MOLYBDENUM (MO) (UG/L) (01062)	DIS-SOLVED MOLYBDENUM (MO) (UG/L) (01060)	TOTAL SELENIUM (SE) (UG/L) (01147)	DIS-SOLVED SELENIUM (SE) (UG/L) (01145)	TOTAL STRONTIUM (SR) (UG/L) (01082)	DIS-SOLVED STRONTIUM (SR) (UG/L) (01080)	DIS-SOLVED VANADIUM (V) (UG/L) (01085)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS-SOLVED ZINC (ZN) (UG/L) (01090)
APR 27...	.0	.0	0	2	1	1	700	870	1.7	100	20

DATE	TIME	DIS-SOLVED NATURAL URANIUM (U) (UG/L) (22703)
APR 27...	1415	2.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ANIMAS RIVER BELOW HIWAY 550 AT AZTEC, NM (LAT 36 49 30 LONG 108 00 12 10)
(LOCAL IDENTIFIER-30N.11W.09.311) -- Continued

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDEO SEDI- MENT (MG/L) (80154)	SUS- PENDEO SEDI- MENT (MG/L) (80155)	SUS- PENDEO SEDI- MENT (MG/L) (80155)	SUS- PENDEO SEDI- MENT (MG/L) (80155)
APR 27...	1415	195	18.5	227	120	45	

SAN JUAN RIVER ABOVE MANCOS, NM (LAT 36 55 17 LONG 108 56 02 10)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)
APR 28...	1400	100	1700	8.5	24.0	27	540	410

DATE	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	RICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
APR 28...	130	52	170	3.2	4.8	160	0	660	44

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
APR 28...	.9	2.6	1170	5.0	.00	590	20	5.5

DATE	TIME	TOTAL ALUM- INUM (AL) (UG/L) (01105)	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
APR 28...	1400	170	0	0	100	100	580	590	10	1	0	0

DATE	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MAN- GANESE (MN) (UG/L) (01055)
APR 28...	<50	0	10	1	350	20	100	6	80	80	40

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SAN JUAN RIVER ABOVE MANCOS, NM (LAT 36 55 17 LONG 108 56 02 10)
Continued

DATE	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL MOLYB- DENUM (MO) (UG/L) (01062)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
APR 28...	.0	.0	7	7	14	14	1700	1700	.3	30	10

DATE	TIME	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
APR 28...	1400	6.0

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT CHARGE (T/DAY) (80155)	SUS- SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 28...	1400	100	24.0	13	3.5	96

SAN JUAN RIVER AT FOUR CORNERS BRIDGE, CO (LAT 37 00 10 LONG 109 01 50 10)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)
APR 28...	1545	112	1700	8.4	22.0	27	540	410

DATE	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
APR 28...	130	51	180	3.4	5.0	150	2	680	47

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED (SUM OF CONSTITU- ENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
APR 28...	1.0	2.1	1190	4.2	.00	660	20	5.3

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SAN JUAN RIVER AT FOUR CORNERS BRIDGE, CO (LAT 37 00 10 LONG 109 01 50 10)
Continued

DATE	TIME	TOTAL ALUM- INUM (AL) (UG/L) (01105)	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)
APR 28...	1545	280	0	0	0	100	100	640	660	<10	0	0

DATE	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MAN- GANESE (MN) (UG/L) (01055)
APR 28...	0	<50	0	<10	1	360	20	100	4	90	80	30

DATE	TIME	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL MOLYB- DENUM (MO) (UG/L) (01062)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
APR 28...		.0	.0	8	8	15	15	1700	1700	.2	30	20

DATE	TIME	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
APR 28...	1545	5.8

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT (MG/L) (80155)	SUS- PENDE SEDI- MENT (MG/L) (80155)	SUS- PENDE SEDI- MENT (MG/L) (80155)
APR 28...	1545	112	22.0	27	8.2	60	

SAN JUAN RIVER ABOVE McELMO CREEK AT ANETH, UT (LAT 37 12 51 LONG 109 11 21 10)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)
APR 28...	1720	125	1750	8.5	22.5	26	540	420

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SAN JUAN RIVER ABOVE McELMO CREEK AT ANETH, UT (LAT 37 12 51 LONG 109 11 21 10)
Continued

DATE	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
APR 28...	130	52	200	3.8	5.3	150	0	690	53

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
APR 28...	.9	2.0	1230	4.6	.01	630	20	8.6

DATE	TIME	TOTAL ALUM- INUM (AL) (UG/L) (01105)	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)
APR 28...	1720	250	10	0	0	620	100	620	630	10	0	0

DATE	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MAN- GANESE (MN) (UG/L) (01055)
APR 28...	0	<50	0	<10	2	1500	20	100	2	90	90	140

DATE	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL MOLYB- DENUM (MO) (UG/L) (01062)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
APR 28...	.0	.0	8	8	15	14	1600	1800	.0	30	10

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
APR 28...	1720	125	22.5	5.0

DATE	TIME	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)
APR 28...	1720	125	22.5	659	222	51					

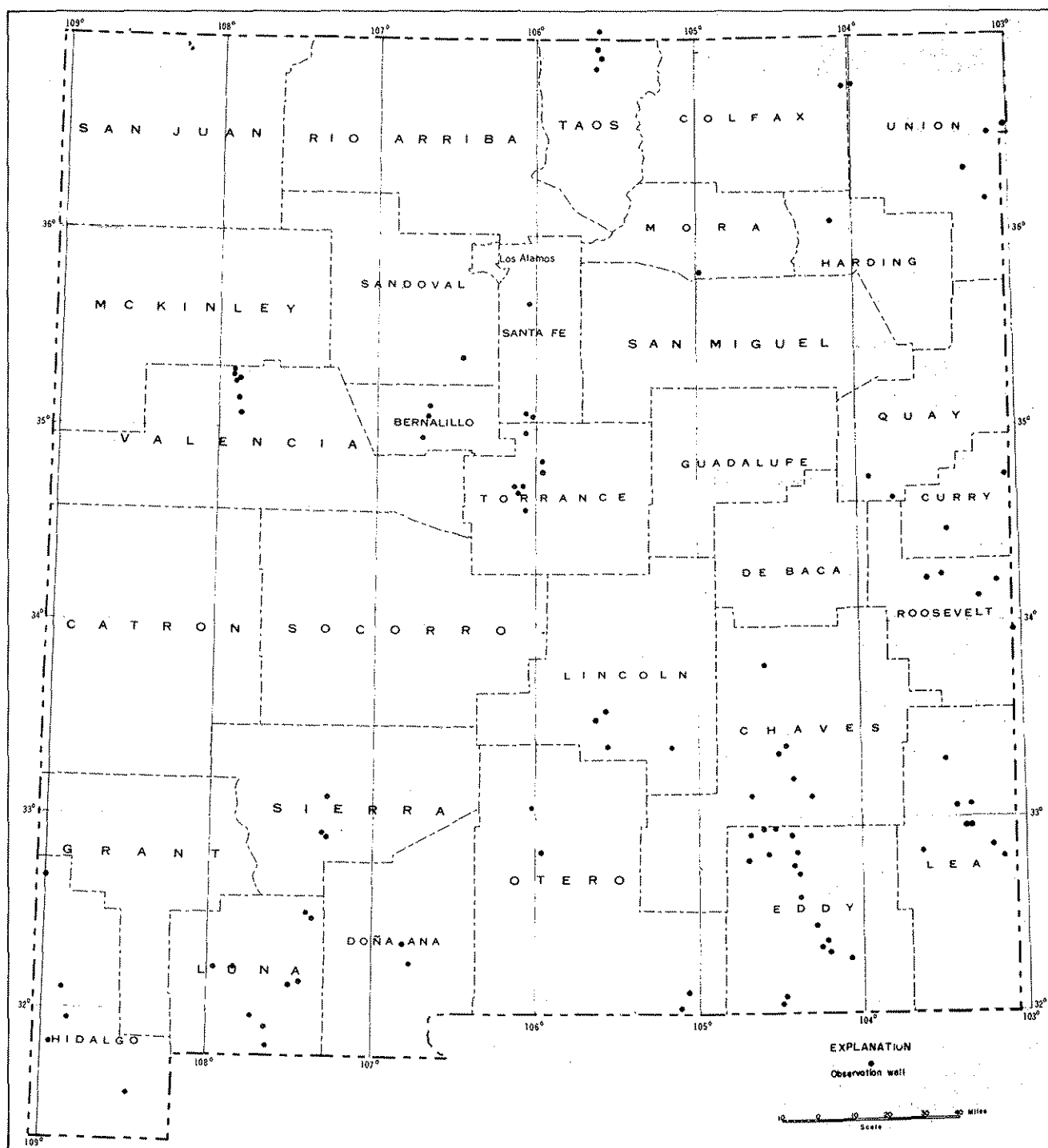


Figure 6.-- Map of New Mexico showing location of observation wells.

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 11	12.98

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 12	29.38
Aug. 15	31.03

350415106403001. Local number, 10N.2E.24.413.

LOCATION.--Lat 35°04'15", long 106°40'30", Hydrologic Unit 13020203.

Owner: City of Albuquerque.

AQUIFER.--Alluvium and Santa Fe Group.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (0.15 m), depth and casing information not available.

DATUM.--Altitude of land-surface datum is 4,945 ft (1,507 m). Measuring point: Top east side of casing, 5.50 ft (1.68 m) above land-surface datum.

PERIOD OF RECORD.--Nov. 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.17 ft (4.93 m) below land-surface datum, Aug. 15, 1977; 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 18	16.74
Aug. 15	16.17

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, 285.65 ft (87.07 m) below land-surface datum, Aug. 23, 1972.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 13	285.23
Aug. 5	well being pumped

GROUND-WATER LEVELS

565

CHAVES COUNTY

Roswell Basin

331930104261001. Local number, 118.25E.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, 20.36 ft (6.21 m) below land-surface datum, Aug. 22, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 13	19.85
Aug. 8	well being pumped

332200104270001. Local number, 128.25E.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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 13	79.03
Aug. 8	80.27

331205104245101. Local number, 128.25E.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, 174.04 ft (53.04 m) below land-surface datum, June 5, 1973.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		1976						1977				
5	81.71	48.07	35.53	30.82	29.70	.....	.....	105.56	130.68	.....	149.63	82.84
10	73.27	45.10	34.78	29.84	31.76	.....	.....	95.76	143.92	.....	157.68	82.29
15	72.24	42.03	33.81	30.01	31.71	81.08	.....	81.53	141.96	.....	133.06	92.34
20	64.44	40.48	33.22	29.18	37.91	86.03	.....	91.99	118.54	.....	141.95	106.72
25	55.43	37.95	32.00	28.94	.....	107.88	119.18	104.31	127.53	150.36	96.97	.....
eom	48.93	37.14	31.02	28.70	.....	131.93	126.72	119.71	135.04	146.18	85.75	.....

WTR YEAR 1977 MAX 28.46 Feb. 1, 1977 MIN 158.02 July 28, 1977

330700104402501. Local number, 148.23E.8.144.

LOCATION.--Lat 33°07'00", long 104°40'25", Hydrologic Unit 13060009.

Owner: M. D. Kincaid.

AQUIFER.--San Andres Limestone of Permian Age.

WELL CHARACTERISTICS.--Drilled stock water-table well, diameter 8 in (0.20 m), depth 460 ft (140 m), casing information not available.

DATUM.--Altitude of land-surface datum is 3,845 ft (1,173 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--Apr. 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 257.55 ft (78.50 m) below land-surface datum, Feb. 9, 1943; lowest measured, 327.34 ft (99.77 m) below land-surface datum, Aug. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Aug. 8	319.56

GROUND-WATER LEVELS

CHAVES COUNTY

Roswell Basin

330640104174501. Local number, 14S.26E.12.433b.

LOCATION.--Lat 33°06'40", long 104°17'45", Hydrologic Unit 13060007.

Owner: C. B. Donaghy.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 13 in (0.33 m), depth 125 ft (38.1 m), cased 0-125 ft (0-38.1 m), perforated 50-115 ft (15.2-35.1 m).

DATUM.--Land-surface datum is 3,396.4 ft (1,035.2 m) above mean sea level. Measuring point: Top of casing, at land surface datum.

PERIOD OF RECORD.--Jan. 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.50 ft (3.81 m) below land-surface datum, Jan. 22, 1942; lowest measured, 23.77 ft (7.25 m) below land-surface datum, Aug. 25, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 20	20.81
Aug. 8	23.32

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 120 ft (37 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, 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 27	7.99
Sept. 22	6.59

COSTILLA COUNTY (in Colorado)

Sunshine Valley

375655105354001. Local number, 1N.74W.33.332.

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, 134.87 ft (41.11 m) below land-surface datum, Aug. 19, 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 27	131.06
Aug. 31	132.10

CURRY COUNTY

Clovis Area

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, 348.97 ft (106.37 m) below land-surface datum, Aug. 15, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 4	348.63
Aug. 15	348.97

CURRY COUNTY

Clovis Area

4344500103052001. 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 (90.21 m) below land-surface datum, Aug. 15, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 4	290.35
Aug. 15	295.98

DONA ANA COUNTY

Rincon and Mesilla Valleys

3222101064830001. 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 (3.08 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 27	10.12
Aug. 1	14.23

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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, 13.16 ft (4.01 m) below land-surface datum, Dec. 3, 1947; lowest, same as for period of record.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 27	20.76
Aug. 1	23.10

EDDY COUNTY

Roswell Basin

325510104410001. Local number, 16S.23E.15.323.

LOCATION.--Lat 32°55'10", long 104°41'00", Hydrologic Unit 13060007.

Owner: D. W. Runyan.

AQUIFER.--San Andres Limestone of Permian Age.

WELL CHARACTERISTICS.--Drilled stock water-table well, diameter 10 in (0.25 m), depth 1,485 ft (453 m), cased.

DATUM.--Altitude of land-surface datum is 3,900 ft (1,189 m). Measuring point: Top of casing, 0.70 ft (0.21 m) below land-surface datum.

PERIOD OF RECORD.--Jan. 1951-Jan. 1965, Feb. 1970-Aug. 1971, Jan. 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 225.16 ft (68.63 m) below land-surface datum, Jan. 12, 1951; lowest measured, 277.60 ft (84.61 m) below land-surface datum, Aug. 5, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, 211.87 ft (64.58 m) below land-surface datum, Mar. 25, 1945; lowest, same as period of record.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 13	277.16
Aug. 8	274.33

GROUND-WATER LEVELS

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 Hunic.

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, 90.03 ft (29.53 m) below land-surface datum Jan. 13, 1977; 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 13	90.03
Aug. 8	well being pumped

325712104314501. Local number, 16S.25E.6.313.

LOCATION.--Lat 32°57'12", long 104°31'45", Hydrologic Unit 13060007.

Owner: Frank Childress.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 20 in (0.51 m), depth 39 ft (11.9 m), cased to 39 ft (11.9 m).

DATUM.--Altitude of land-surface datum is 3,600 ft (1,097 m). Measuring point: Top of 20 in (0.51 m) wood cribbing, 0.40 ft (0.12 m) above land-surface datum.

PERIOD OF RECORD.--Sept. 1937-Jan. 1966, Aug. 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.41 ft (7.44 m) below land-surface datum, July 17, 1961; lowest measured, 31.66 ft (9.65 m) below land-surface datum, Aug. 8, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 13	31.64
Aug. 8	31.66

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, 109.00 ft (33.22 m) below land-surface datum, Aug. 31, 1972.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 14	91.45
Aug. 8	well being pumped

324831104435701. Local number, 17S.23E.30.13244.

LOCATION.--Lat 32°48'31", long 104°43'57", Hydrologic Unit 13060007.

Owner: Village of Hope.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled public-supply artesian well, diameter 16 in (0.41 m), depth 600 ft (183 m), cased to 558 ft (170 m), perforated 498-558 ft (152-170 m).

DATUM.--Altitude of land-surface datum is 4,095 ft (1,248 m). Measuring point: Top of 2 in (0.05 m) pipe extension out of north side of concrete base, 2.00 ft (0.61 m) above land-surface datum.

PERIOD OF RECORD.--Dec. 1968, Jan. 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 544.18 ft (178.53 m) below land-surface datum, Jan. 13, 1977, lowest measured, 553.18 ft (168.61 m) below land-surface datum, Aug. 7, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 13	544.18
Aug. 9	546.90

EDDY COUNTY

Roswell Basin

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, 106.28 ft (32.39 m) below land-surface datum, Aug. 16, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 13	91.24
Aug. 8	well being pumped

324615104421001. Local number, 18S.23E.5.333.

LOCATION.--Lat 32°46'15", long 104°42'10", Hydrologic Unit 13060010.

Owner: Joe Clements.

AQUIFER.--San Andres Limestone of Permian Age.

WELL CHARACTERISTICS.--Drilled stock water-table well, diameter 6 in (0.15 m), depth 500 ft (152 m), surface casing.

DATUM.--Land-surface datum is 4,007.6 ft (1,221.5 m) above mean sea level. Measuring point: Top of casing, 0.40 ft (0.12 m) above land-surface datum.

PERIOD OF RECORD.--July 1945 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 385.50 ft (117.50 m) below land-surface datum, July 21, 1945; lowest measured, 478.73 ft (145.92 m) below land-surface datum, Jan. 14, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 13	471.08
Aug. 9	462.72

324624104244501. Local number, 18S.26E.6.442a.

LOCATION.--Lat 32°46'24", long 104°24'45", Hydrologic Unit 130600007.

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 1976 TO SEPTEMBER 1977
DAILY HIGHEST WATER LEVEL, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		1976						1977				
5	142.81	120.04	.....	99.87	93.72	98.71	142.97	146.45	160.00	157.32	186.34	.....
10	138.33	116.93	.....	98.45	92.77	102.09	142.48	139.98	160.80	162.51	191.31	.....
15	136.21	113.85	.....	97.34	92.69	108.55	137.49	130.25	157.98	171.30	.....	.....
20	133.74	111.61	104.48	97.34	96.05	118.97	138.49	140.48	157.98	175.24	.....	.....
25	129.68	.....	102.76	96.00	95.70	139.23	139.45	149.29	158.07	176.67	.....	.....
eam	123.62	.....	101.07	94.69	95.04	141.57	145.29	158.21	153.12	182.53	.....	.....
WTR YEAR 1977	MAX	92.61	Feb. 14, 1977	min	191.32	Aug. 11, 1977						

324325104233001. Local number, 18S.26E.23.121a.

LOCATION.--Lat 32°43'25", long 104°23'30", Hydrologic Unit 13060011.

Owner: Town of Dayton.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 250 ft (76.2 m), cased to 182 ft (55.5 m), casing slotted 92-182 ft (28.0-55.5 m).

DATUM.--Altitude of land-surface datum is 3,403 ft (1,037 m). Measuring point: Top of casing, 0.06 ft (0.02 m) above land-surface datum.

PERIOD OF RECORD.--Aug. 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 59.79 ft (18.22 m) below land-surface datum, Feb. 5, 1952; lowest, 118.29 ft (36.05 m) below land-surface datum, Sept. 26, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		1976						1977				
5	.....	117.69	117.69	117.90	117.81	118.02	117.99	117.95	118.06	118.11	118.18	118.24
10	.....	117.68	117.80	117.82	117.84	117.73	117.90	117.95	118.07	118.07	118.17	118.23
15	.....	117.68	117.81	117.88	117.88	118.00	117.94	118.00	118.05	118.13	118.18	118.21
20	117.69	117.74	117.88	117.80	117.80	117.85	117.98	118.01	118.07	118.12	118.19	118.24
25	117.67	117.61	117.79	117.80	117.85	117.90	117.91	118.04	118.07	118.13	118.19	118.26
eam	117.79	117.74	117.80	117.82	117.86	117.86	117.97	118.11	118.09	118.14	118.21	118.24
WTR YEAR 1977	MAX	117.63	Oct. 22 and Nov. 8, 1976	MIN	118.29	Sept. 26, 1977						

GROUND-WATER LEVELS

EDDY COUNTY

Roswell Basin

323540104232001. Local number, 20S.26E.8.121.

LOCATION.--Lat 32°35'40", long 104°23'20", Hydrologic Unit 13060011.

Owner: Moutry.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 13 in (0.33 m), depth 364 ft (111 m), casing information not available.

DATUM.--Altitude of land-surface datum is 3,286 ft (1,002 m). Measuring point: Top of basal flange of pump head, 0.20 ft (0.06 m) above land-surface datum.

PERIOD OF RECORD.--Jan. 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.87 ft (7.89 m) below land-surface datum, Jan. 2, 1943; lowest measured, 90.25 ft (27.51 m) below land-surface datum, Aug. 8, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 18	64.47
Aug. 8	90.25

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 13	13.40

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, 207.75 ft (63.32 m) below land-surface datum, Aug. 25, 1973.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		1976						1977				
5	.....	203.61	198.97	195.37	.....	.....	.....	203.38	205.40	.....	.....	.....
10	.....	203.19	198.89	195.40	.....	.....	198.00	204.08	.....	.....	.....	.....
15	202.00	200.17	198.48	.....	.....	.....	199.30	204.18	.....	.....	.....	.....
20	203.40	201.48	197.00	.....	.....	.....	200.64	204.40	.....	.....	.....	.....
25	203.00	201.06	197.11	.....	.....	.....	201.00	204.00	.....	.....	.....	.....
com	203.88	197.79	196.46	.....	.....	.....	202.40	204.95	.....	.....	.....	.....

WTR YEAR 1977 MAX 195.00 Jan. 4, 1977 MIN 206.00 June 7, 1977

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), cased.

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 (24.72 m) below land-surface datum, Aug. 8, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 14	60.87
Aug. 8	81.10

Carlsbad Area

321740104035501. Local number, 23S.27E.9.211.

LOCATION.--Lat 32°17'40", long 104°03'55", Hydrologic Unit 13060011.

Owner: J. A. Cox.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 16 in (0.41 m), depth 200 ft (60.9 m).

DATUM.--Altitude of land-surface datum is 3,150 ft (960 m). Measuring point: Top of casing, under pump base, 1.25 ft (0.41 m) above land-surface datum.

PERIOD OF RECORD.--July 1949-Nov. 1955, Jan. 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.70 ft (12.71 m) below land-surface datum, Sept. 15, 1950; lowest measured, 60.92 ft (18.57 m) below land-surface datum, Jan. 13, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, same as period of record; lowest measured, 68.22 ft (20.79 m) below land-surface datum, Jan. 28, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 13	59.76
Aug. 10	57.96

321740104035501. Local number, 23S.28E.23.133.

LOCATION.--Lat 32°17'40", long 104°03'55", Hydrologic Unit 13060011.

Owner: A. R. Donaldson.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 16 in (0.41 m), depth 148 ft (45.1 m), cased.

DATUM.--Altitude of land-surface datum is 3,020 ft (921 m). Measuring point: Bottom edge of north 1/2 in (1.27 cm) hole in west side of pump base, 0.80 ft (0.24 m) above land-surface datum.

PERIOD OF RECORD.--Sept. 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.25 ft (11.66 m) below land-surface datum, Sept. 14, 1950; lowest measured, 93.62 ft (28.54 m) below land-surface datum, Aug. 8, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 14	60.95
Aug. 8	93.62

320602104285201. Local number, 25S.24E.27.421.

LOCATION.--Lat 32°06'02", long 104°28'52", Hydrologic Unit 13060011.

Owner: Walker Hood.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 16 in (0.41 m), depth 101 ft (31 m), uncased.

DATUM.--Altitude of land-surface datum is 3,701 ft (1,128 m). Measuring point: Northwest corner of pumpbase, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--Apr. 1952-Aug. 1967, Jan. 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 55.22 ft (16.83 m) below land-surface datum, Sept. 21, 1966; lowest measured, 85.10 ft (25.93 m) below land-surface datum, Aug. 25, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 21	56.42
Aug. 10	63.17

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, 42.29 ft (12.89 m) below land-surface datum, Nov. 8, 1955; 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 21	46.44
Aug. 10	48.78

GROUND-WATER LEVELS

HARDING COUNTY

360340104085001. Local number, 21N.26E.3.4443.

LOCATION.--Lat 36°03'40", long 104°08'50", Hydrologic Unit 11080007.

Owner: Unknown.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in (0.13 m), depth 120 ft (36.3 m), cased to 120 ft (36.3 m).

DATUM.--Altitude of land-surface datum is 5,870 ft (1,777 m). Measuring point: Top of 5 in (0.13 m) galvanized casing, 0.30 ft (0.09 m) above land-surface datum on east side.

PERIOD OF RECORD.--1976.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.92 ft (25.27 m) below land-surface datum, Jan. 28, 1976; lowest measured, 83.12 ft (25.33 m) below land-surface datum, Aug. 22, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, 82.16 ft (24.88 m) below land-surface datum, June 10, 1969; lowest measured, same as period of record.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 24	83.03
Aug. 22	83.12

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, 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, 9.97 ft (3.02 m) below land-surface datum, Aug. 25, 1976; 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 4	11.14
Aug. 15	11.05

Animas Valley

320700108515001. Local number, 25S.20W.24.313.

LOCATION.--Lat 32°07'00", long 108°51'50", Hydrologic Unit 15040003.

Owner: Rudiger and Jundt.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 16 in (0.41 m), depth 358 ft (109 m), cased to 320 ft (97.5 m).

DATUM.--Land-surface datum is 4,221.43 ft (1,286.69 m) above mean sea level. Measuring point: Top of casing, 0.43 ft (0.13 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.43 ft (12.93 m) below land-surface datum, Apr. 1, 1948; lowest measured, 108.26 ft (33.00 m) below land-surface datum, Aug. 11, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 4	94.02
Aug. 11	108.26

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, 132.12 ft (40.27 m) below land-surface datum, Jan. 19, 1950; lowest measured, 182.08 ft (55.50 m) below land-surface datum, Aug. 3, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, 131.90 ft (40.20 m) below land-surface datum, July 29, 1949; lowest measured, same as period of record.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 11	171.94
Aug. 8	well being pumped

San Simon Creek Valley

315010108570001. Local number, 28S.21W.30.222.

LOCATION.--Lat 31°50'10", long 108°57'00", Hydrologic Unit 15040006.

Owner: C. L. Johnston.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 8 in (0.20 m), depth 471 ft (143 m), cased to 471 ft (143 m).

DATUM.--Altitude of land-surface datum is 4,440 ft (1,355 m). Measuring point: Hole in west side of casing, 0.70 ft (0.21 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 112.62 ft (34.33 m) below land-surface datum, Jan. 19, 1971; lowest measured, 121.35 ft (36.99 m) below land-surface datum, Aug. 3, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, 110.88 ft (33.80 m) below land-surface datum, Jan. 15, 1969; lowest measured, same as period of record.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 3	119.92
Aug. 3	121.35

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, 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level, same as period of record; lowest, 79.37 ft (24.19 m) below land-surface datum, Sept. 3-4, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		1976						1977				
5	50.55	49.01	48.35	.....	.....	.....	.....	48.26	.....	.....	.....	.....
10	.....	48.81	.....	.....	.....	.....	.....	48.29	.....	.....	.....	.....
15	.....	48.68	.....	.....	.....	.....	.....	48.38	.....	.....	.....	.....
20	50.47	48.51	48.35	.....	.....	.....	.....	48.37	48.42	48.66	.....	.....
25	49.90	48.51	.....	.....	.....	.....	.....	.....	.....	48.64	.....	.....
com	49.45	48.38	.....	.....	.....	.....	48.30	.....	.....	.....	.....	.....

WTR YEAR 1977 MAX 48.25 May 3, 1977 MIN 51.06 Oct. 1, 1976

LEA COUNTY

Tatum-Lovington-Hobbs Area

331740103285001. Local number, 12S.34E.11.413.

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, 33.90 ft (10.33 m) below land-surface datum, Aug. 16, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 7	33.69
Aug. 16	33.90

330325103245501. Local number, 14S.35E.33.433.

LOCATION.--Lat 33°03'25", long 103°24'55", Hydrologic Unit 12080003.

Owner: W. A. Anderson.

AQUIFER.--Ogallala Formation of Pliocene Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 62 ft (18.9 m), not cased.

DATUM.--Land-surface datum is 4,013.61 ft (1,223.35 m) above mean sea level. Measuring point: Top of concrete collar on well, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--Nov. 1929 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.65 ft (12.09 m) below land-surface datum, May 21, July 25, 1951 and Jan. 9, May 24, 1952; lowest measured, 46.84 ft (14.28 m) below land-surface datum, Aug. 13, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 7	45.65
Aug. 16	45.24

GROUND-WATER LEVELS

LEA COUNTY

Tatum-Lovington-Hobbs Area

330400103193401. Local number, 14S.36E.32.121.

LOCATION.--Lat 33°04'00", long 103°19'34", Hydrologic Unit 12080003.

Owner: E. T. Howell.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 7	68.10
Aug. 16	69.15

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, 65.00 ft (19.81 m) below land-surface datum, Dec. 14, 16, and 24, 1973; 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 1976 TO SEPTEMBER 1977
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		1976						1977				
5	65.97	65.94	65.88	65.80	65.69	65.57	65.45	.....	65.53	65.72	65.84	65.99
10	65.96	65.91	65.89	65.78	65.68	65.42	65.43	.....	65.53	65.74	65.86	65.99
15	65.95	65.90	65.89	65.78	65.67	65.48	65.42	.....	65.60	65.77	65.89	65.98
20	65.99	65.92	65.90	65.77	65.65	65.44	65.42	.....	65.62	65.77	65.91	66.00
25	65.96	65.87	65.85	65.74	65.56	65.44	.....	65.40	65.65	65.80	65.94	66.03
com	66.02	65.91	65.80	65.73	65.58	65.44	.....	65.48	65.67	65.83	65.97	65.99

WTR YEAR 1977 MAX 65.40 Mar. 16, Apr. 14 and 19, May 25, 1977 MIN 66.03 Sept. 18, 25-27, 1977

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, 78.56 ft (23.95 m) below land-surface datum, Sept. 13, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 8	76.16
Aug. 16	well being pumped

324947103371001. Local number, 17S.33E.13.341.

LOCATION.--Lat 32°49'47", long 103°37'10", Hydrologic Unit 12080003.

Owner: Potash Co. of America.

AQUIFER.--Ogallala Formation of Pliocene Age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (0.15 m), depth 252 ft (76.8 m), cased to 252 ft (76.8 m).

DATUM.--Altitude of land-surface datum is 4,124 ft (1,257 m). Measuring point: Top of casing, 1.10 ft. (0.34 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 146.00 ft (44.50 m) below land-surface datum, Jan. 21, 1953; lowest measured, 169.62 ft (51.70 m) below land-surface datum, Sept. 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		1976						1977				
5	167.74	167.74	167.90	168.06	168.18	168.42	168.64	168.63	168.93	169.15	169.20	169.53
10	167.67	167.65	167.96	168.08	168.19	168.26	168.56	168.61	168.97	168.98	169.20	169.59
15	167.71	167.75	167.96	168.13	168.28	168.60	168.62	168.70	168.93	169.01	169.30	169.52
20	.....	167.74	168.10	168.20	168.29	168.49	168.58	168.71	169.07	168.96	169.35	169.52
25	.....	167.81	167.96	168.17	168.29	168.44	168.55	168.78	169.05	169.03	169.35	169.59
com	.....	167.90	168.05	168.19	168.35	168.47	168.67	168.92	169.07	169.11	169.40	169.57

WTR YEAR 1977 MAX 167.55 Nov. 8, 1976 MIN 169.62 Sept. 28, 1977

GROUND-WATER LEVELS

575

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), cased.

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, 71.94 ft (21.93 m) below land-surface datum, Aug. 16, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 7	65.67
Aug. 16	71.94

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, 52.74 ft (16.08 m) below land-surface datum, Aug. 16, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 7	50.58
Aug. 16	52.74

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 26	29.98

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, 38.39 ft (11.70 m) below land-surface datum, Aug. 14, 1973; 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 26	39.99

GROUND-WATER LEVELS

LINCOLN COUNTY

Hondo Valley

33214510533001. Local number, 11S.14E.15.431.

LOCATION.--Lat 33°21'45", long 105°33'30", Hydrologic Unit 13060008, 0.1 mi (0.16 km) west of Valley View Motel.

Owner: E. H. Fuchs.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), depth 90 ft (27.4 m), casing information not available.

DATUM.--Altitude of land-surface datum is 6,200 ft (1,890 m). Measuring point: Top of east edge of 8 in (0.20 m) casing, 1.00 ft (0.30 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.16 ft (17.42 m) below land-surface datum, Mar. 26, 1958; lowest measured, 63.75 ft (19.43 m) below land-surface datum, Aug. 10, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 25	58.65

332157105094101. Local number, 11S.18E.16.444.

LOCATION.--Lat 33°21'57", long 105°09'41", Hydrologic Unit 1306008, 0.4 mi (0.6 km) south of Picacho Bridge on east of Casey Canyon Road.

Owner: Lincoln County Limestone 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 (13.72 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 25	45.02

LUNA COUNTY

Mimbres Valley

323110107235001. Local number, 20S.5W.31.334.

LOCATION.--Lat 32°31'10", long 107°23'50", 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 421 ft (128 m), perforated 221-421 ft (67-128 m).

DATUM.--Altitude of land-surface datum is 4,486.6 ft (1,367.5 m). Measuring point: 1/2 in (1.3 cm) pipe west side of pumpbase, 1.00 ft (0.30 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 54.69 ft (16.67 m) below land-surface datum, Jan. 19, 1959; lowest measured, 100.46 ft (30.62 m) below land-surface datum, Sept. 8, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Aug. 10	well being pumped

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, 153.10 ft (46.66 m) below land-surface datum, Aug. 4, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 31	152.72
Aug. 10	153.03

GROUND-WATER LEVELS

577

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), cased.

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 1976 TO SEPTEMBER 1977
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		1976						1977				
5	111.83	109.66	108.01	107.43	107.11	107.42	108.88	109.64	110.25	110.66	110.60	110.61
10	111.49	109.32	108.11	107.49	106.96	107.19	108.82	109.76	110.11	110.60	110.64	110.49
15	111.17	109.07	107.80	107.32	107.00	107.61	109.00	109.09	110.37	110.68	110.60	110.36
20	110.82	108.80	107.85	107.21	107.06	107.71	109.22	109.09	110.46	110.60	110.66	110.20
25	110.38	108.44	107.54	107.18	107.03	107.99	109.48	110.03	110.50	110.68	110.60	109.80
eam	110.10	108.47	107.47	107.23	107.31	108.58	109.57	110.22	110.52	110.63	110.63	109.31
WTR YEAR 1977 MAX 106.81 Feb. 22, 1977 MIN 112.04 Oct. 1, 1976												

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, 190.38 ft (58.03 m) below land-surface datum, May 11, 1956.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	WATER LEVEL
Aug. 11	well being pumped

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, 106.39 ft (32.43 m) below land-surface datum, Aug. 9, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 27	50.37
Aug. 9	106.39

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: MP 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 27	90.36
Aug. 9	89.56

GROUND-WATER LEVELS

LUNA COUNTY

Mimbres Valley

315525107374501. Local number, 27S.8W.35.122.

LOCATION.--Lat 31°55'25", long 107°37'45", Hydrologic Unit 13030202.

Owner: M. M. Gibson.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 12 in (0.30 m) to 8 in (0.20 m), depth 550 ft (168 m), cased to 550 ft (168 m), perforated 155-550 ft (47-168 m).

DATUM.--Altitude of land-surface datum is 4,070 ft (1,241 m). Measuring point: Top of casing, 0.20 ft (0.06 m) above land-surface datum.

PERIOD OF RECORD.--July 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.84 ft (6.35 m) below land-surface datum, Mar. 16, 1953; lowest measured, 112.58 ft (34.31 m) below land-surface datum, Aug. 3, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 20	81.55
Aug. 9	111.86

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 ft (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 (14.40 m) below land-surface datum, Aug. 11, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 20	36.28
Aug. 11	47.26

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, 12.70 ft (3.89 m) below land-surface datum, Aug. 9, 1977; 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Aug. 9	12.70

MORA COUNTY

354840104590301. Local number, 18N.18E.1.333.

LOCATION.--Lat 35°48'40", long 104°59'03", Hydrologic Unit 11080004.

Owner: Sellman Bros.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 14 in (0.36 m), depth 100 ft (30.5 m), cased.

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.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.97 ft (1.82 m) below land-surface datum, Aug. 23, 1976; lowest measured, 5.97 ft (1.82 m) below land-surface datum, Aug. 23, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, 4.40 ft (1.33 m) below land-surface datum Mar. 25, 1969; lowest measured, 6.86 ft (2.09 m) below land-surface datum, Aug. 22, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 24	6.24
Aug. 22	6.86

GROUND-WATER LEVELS

579

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, diameter 17 in (0.43 m), depth 230 ft (70.1 m), 16 in (0.41 m) to 14 in (0.36 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, 128.38 ft (39.13 m) below land-surface datum, Aug. 31, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Feb. 28	120.35
Aug. 31	128.38

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 1 1/2 in (3.8 cm) pipe with screw plug on south side of concrete base, 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, 80.54 ft (24.55 m) below land-surface datum, Aug. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Feb. 28	76.12
Aug. 31	79.10

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, 76.33 ft (23.27 m) below land-surface datum, Aug. 9, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, 33.64 ft (10.65 m) below land-surface datum, Jan. 15, 1957; lowest measured, same as period of record.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 21	57.56
Aug. 9	76.33

QUAY COUNTY

House Area

343810103463001. Local number, 5N.30E.18.331.

LOCATION.--Lat 34°38'10", long 103°46'30", Hydrologic Unit 13060004.

Owner: W. C. and H. J. Lee.

AQUIFER.--Ogallala Formation of Pliocene Age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 16 in (0.41 m), depth 75 ft (22.9 m), cased to 60 ft (18.3 m).

DATUM.--Altitude of land-surface datum is 4,640 ft (1,414 m). Measuring point: Top of concrete pump base, 0.50 ft (0.15 m) above land-surface datum.

PERIOD OF RECORD.--May 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.76 ft (10.60 m) below land-surface datum, Mar. 28, 1946; lowest measured, 51.49 ft (15.69 m) below land-surface datum, Aug. 11, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 6	48.08
Aug. 15	48.60

GROUND-WATER LEVELS

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 6	97.43
Aug. 15	98.16

ROOSEVELT COUNTY

Portales Valley

341400103353701. Local number, 1S.32E.16.112.

LOCATION.--Lat 34°14'00", long 103°35'37", Hydrologic Unit 12050001.

Owner: Dorsey Nash.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 16 in (0.41 m), depth unknown, surface casing.

DATUM.--Altitude of land-surface datum is 4,010 ft (1,249 m). Measuring point: Edge of center hole in old car wheel, 0.30 ft (0.10 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 80.75 ft (24.61 m) below land-surface datum, Jan. 6, 1971; lowest measured, 86.26 ft (26.29 m) below land-surface datum, Aug. 16, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, 66.78 ft (20.35 m) below land-surface datum, Jan. 17, 1961; lowest measured, same as period of record.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Aug. 16	86.26

341530103292001. Local number, 1S.33E.4.1121.

LOCATION.--Lat 34°15'30", long 103°29'20", Hydrologic Unit 12050001.

Owner: Unknown.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 12 in (0.30 m), depth unknown.

DATUM.--Altitude of land-surface datum is 4,109 ft (1,252 m). Measuring point: Top of casing level with 4 ft x 4 ft (1 m x 1 m) concrete base, 1.00 (0.30 m) above land-surface datum.

PERIOD OF RECORD.--Jan. 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 79.07 ft (24.10 m) below land-surface datum, Jan. 8, 1973; lowest measured, 86.00 ft (26.21 m) below land-surface datum, Aug. 16, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 5	82.75
Aug. 16	86.00

341317103083301. Local number, 1S.36E.14.31111.

LOCATION.--Lat 34°13'17", long 103°08'33", Hydrologic Unit 12050001.

Owner: City of Portales.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled unused observation water-table well, diameter 18 in (0.46 m), depth 208 ft (63.4 m).

DATUM.--Altitude of land-surface datum is 4,032 ft (1,229 m). Measuring point: Top of casing, 0.70 ft (0.21 m) below top of concrete base which is 0.80 ft (0.24 m) above land-surface datum.

PERIOD OF RECORD.--May 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 54.74 ft (16.68 m) below land-surface datum, May 30, 1972; lowest, 72.83 ft (22.20 m) below land-surface datum, Sept. 29, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		1976						1977				
5	.....	63.01	63.18	64.78	65.39	65.33	64.52	65.91	64.36	69.14	67.29	66.06
10	.....	63.38	63.13	64.27	64.29	66.86	64.30	64.01	67.25	69.08	66.82	71.97
15	65.33	63.01	63.19	64.01	64.11	64.08	63.61	63.70	64.15	69.41	65.08	68.87
20	63.87	62.99	63.37	64.22	64.55	63.95	62.71	64.01	69.00	71.05	65.92	68.18
25	63.06	65.13	63.31	64.52	65.00	68.04	62.83	64.93	68.32	67.65	64.45	72.77
com	63.06	63.19	63.42	64.23	65.12	63.27	68.40	66.92	68.99	65.82	65.46	70.89

WTR YEAR 1977 MAX 62.64 Apr. 24, 1977 MIN 72.83 Sept. 29, 1977

GROUND-WATER LEVELS

581

ROOSEVELT COUNTY

Portales Valley

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 4	40.73
Aug. 16	well being pumped

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 8	96.82
Aug. 16	100.22

SANDOVAL COUNTY

352235106282401. Local number, 13N.4E.12.112.

LOCATION.--Lat 35°22'35", long 106°28'24", Hydrologic Unit 13020201.

Owner: John Bowers.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 12 in (0.31 m), depth 50 ft (15.2 m), cased.

DATUM.--Altitude of land-surface datum is 5,130 ft (1,553 m). Measuring point: Top of casing, 0.50 ft (0.15 m) above land-surface datum.

PERIOD OF RECORD.--1976

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.24 ft (6.78 m) below land-surface datum, Aug. 15, 1977; lowest, 25.94 ft (7.91 m) below land-surface datum, Jan. 17, 1977.

WATER YEAR, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 17	25.94
Aug. 15	22.24

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, 133.83 ft (40.52 m) below land-surface datum, Aug. 30, 1976.

WATER YEAR, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 19	122.05
Sept. 23	154.49 (well pumped recently)

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, 92.50 ft (28.19 m) below land-surface datum, Aug. 17, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, 55.13 ft (16.80 m) below land-surface datum, Feb. 18, 1949; lowest measured, same as period of record.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 19	91.95
Aug. 31	well being pumped

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), cased.

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, 249.04 ft (75.91 m) below land-surface datum, Aug. 29, 1977; 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 10	249.37
Aug. 29	249.04

SIERRA COUNTY

Hot Springs Area

330715107171901. Local number, 14S.4W.6.3221.

LOCATION.--Lat 33°07'15", long 107°17'19", Hydrologic Unit 13030101.

Owner: City of Truth or Consequences.

AQUIFER.--Santa Fe Group of Quaternary Age.

WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 12 in (0.31 m), depth 442 ft (134 m) cased.

DATUM.--Altitude of land-surface datum is 4,265 ft (1,291 m). Measuring point: Top of casing extension, 1 ft (0.30 m) above former casing, and 1.60 ft (0.48 m) above land-surface datum.

PERIOD OF RECORD.--1976.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.25 ft (2.82 m) below land-surface datum, Feb. 28, 1977; lowest measured, 31.31 ft (9.48 m) below land-surface datum, Aug. 23, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Feb. 28	9.25
Aug. 30	30.59

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, 37.33 ft (11.38 m) below land-surface datum, Sept. 30, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		1976						1977				
5	30.24	30.45	31.30	32.03	.....	33.95	34.65	35.32	35.97	36.54	36.78	36.96
10	30.14	30.58	31.42	.....	.....	34.06	34.76	35.42	36.07	36.62	36.84	37.04
15	30.12	30.72	31.54	.....	.....	34.16	34.87	35.55	36.17	36.71	36.93	37.11
20	30.16	30.87	31.65	.....	.....	34.28	35.02	35.64	36.26	36.80	36.92	37.17
25	30.23	31.02	31.76	.....	.....	34.39	35.12	36.75	36.35	36.88	36.85	37.25
end	30.35	31.18	31.90	.....	33.84	34.53	35.22	36.87	36.45	36.82	36.86	37.33
WTR YEAR 1977	MAX	30.12	Oct. 11-16, 1976		MIN	37.33	Sept. 30, 1977.					

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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, 11.30 ft (3.44 m) below land-surface datum, Apr. 17, 1947; lowest measured, same as period of record.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 28	23.64
Aug. 1	23.14

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, 77.06 ft (23.49 m) below land-surface datum, Aug. 31, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 27	76.54
Aug. 31	77.06

365655105354001. Local number, 1S.73W.19.422.

LOCATION.--Lat 36°56'55", long 105°35'40", Hydrologic Unit 13020101.

Owner: Spring Bros.

AQUIFER.--Santa Fe Group.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in (0.41 m), depth 446 ft (136 m), cased to 446 ft (136 m).

DATUM.--Altitude of land-surface datum is 7,657 ft (2,334 m). Measuring point: Top of casing, 1.18 ft (0.36 m) above land-surface datum.

PERIOD OF RECORD.--July 1955-Aug. 1965, Feb. 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 193.95 ft (59.11 m) below land-surface datum, June 5, 1957; lowest measured, 219.94 ft (67.04 m) below land-surface datum, Aug. 2, 1961.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

(Unable to measure in 1977)

365410105354501. 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, 10 ft (3.1 m) above top of casing, 1 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 (25.84 m) below land-surface datum, Jan. 27, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 27	84.78
Aug. 31	82.19

GROUND-WATER LEVELS

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, 115.60 ft (35.23 m) below land-surface datum, Feb. 4, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 18	102.76
Aug. 10	108.50

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, 113.52 ft (34.60 m) below land-surface datum, Jan. 18, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 18	113.52
Aug. 10	well being pumped

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, 64.76 ft (19.74 m) below land-surface datum, Jan. 18, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 18	64.76
Aug. 10	well being pumped

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, 20.65 ft (6.29 m) below land-surface datum, Aug. 10, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, 5.07 ft (1.55 m) below land-surface datum, May 4, 1949; lowest measured, same as period of record.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 18	10.40
Aug. 10	20.65

TORRANCE COUNTY

Estancia Valley

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 at concrete slab level which is 0.2 ft (0.06 m) above land-surface datum.

REMARKS.--Old CO₂ well.

PERIOD OF RECORD.--Feb. 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 110.28 ft (33.61 m) below land-surface datum, Aug. 19, 1974; lowest measured, 110.37 ft (33.64 m) below land-surface datum, Jan. 18, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 18	110.37
Aug. 10	110.33

345231106043601. Local number, 8N.8E.35.322.

LOCATION.--Lat 34°52'31", long 106°04'36", Hydrologic Unit 13050001.

Owner: A. C. Hibner.

AQUIFER.--Valley Fill(?).

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 16 in (0.41 m), reported depth 228 ft (69.5 m), cased to 110 ft (33.5 m).

DATUM.--Altitude of land-surface datum is 6,240 ft (1,902 m). Measuring point: Top of casing, 0.75 ft (0.23 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 51.08 ft (15.57 m) below land-surface datum, Mar. 25, 1948; lowest measured, 104.49 ft (31.85 m) below land-surface datum, Aug. 10, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water-level measured, 50.12 ft (15.28 m) below land-surface datum, May 28, 1947; lowest measured, same for period of record.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO OCTOBER 1977

DATE	WATER LEVEL
Jan. 19	97.95
Aug. 10	104.49

345900106034301. Local number, 9N.8E.24.334.

LOCATION.--Lat 34°59'00", long 106°30'43", Hydrologic Unit 13050001.

Owner: Valley Land and Irrigation Co.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in (0.41 m), depth unknown.

DATUM.--Altitude of land-surface datum is 6,380 ft (1,944 m). Measuring point: Top of casing south side, 0.50 ft (0.15 m) above land-surface datum.

PERIOD OF RECORD.--Feb. 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 64.67 ft (19.71 m) below land-surface datum, Feb. 23, 1973; lowest measured, 91.37 ft (27.85 m) below land-surface datum, Aug. 12, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 19	70.05
Aug. 10	75.04

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 25	145.89
Sept. 20	145.87

GROUND-WATER LEVELS

UNION COUNTY

Clayton Area

361910103170501. Local number, 24N.36E.17.244.

LOCATION.--Lat 36°19'10", long 103°17'05", Hydrologic Unit 11090103.

Owner: Glen Burrows.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 10 in (0.25 m), depth 231 ft (70.4 m).

DATUM.--Altitude of land-surface datum is 4,707 ft (1,434 m). Measuring point: Top of casing, 1.30 ft (0.40 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.99 ft (27.23 m) below land-surface datum, Jan 8, 1972; lowest measured, 86.10 ft (26.24 m) below land-surface datum, Sept. 20, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water-level measured, 81.38 ft (24.80 m) below land-surface datum, May 8, 1968; lowest, same as period of record.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 26	85.86
Sept. 20	86.10

363005103081001. Local number, 26N.36E.7.142.

LOCATION.--Lat 36°30'05", long 103°08'10", Hydrologic Unit 11090103.

Owner: J. E. Armes.

AQUIFER.--Dakota, Purgatoire, and Morrison Sandstone.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 16 in (0.41 m), depth 770 ft (234 m).

DATUM.--Altitude of land-surface datum is 4,980 ft (1,517 m). Measuring point: Top of 16 in (0.41 m) casing level with concrete base, 1.00 ft (0.30 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 127.41 ft (38.83 m) below land-surface datum, Mar. 17, 1971; lowest measured, 233.26 ft (71.10 m) below land-surface datum, Sept. 20, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 26	169.74
Sept. 20	233.26

Capulin Basin

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 27	34.47
Sept. 22	34.24

364330103015201. Local number, 29N.37E.30.110.

LOCATION.--Lat 36°43'30", long 103°01'52", Hydrologic Unit 11040001.

Owner: F. P. Seneca.

AQUIFER.--Dakota - Purgatoire Formation.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 14 in (0.36 m), depth 332 ft (101 m).

DATUM.--Altitude of land-surface datum is 4,880 ft (1,478 m). Measuring point: Entry port in west side of pump base, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--1976.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 240.20 ft (73.21 m) below land-surface datum, Jan. 27, 1976; lowest measured, 240.20 ft (73.21 m) below land-surface datum, Jan. 27, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest water level measured, 224.55 ft (68.44 m), Mar. 6, 1971; lowest measured 246.80 ft (75.22 m), Feb. 6, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Aug. 20	well being pumped

GROUND-WATER LEVELS

587

VALENCIA 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 17	34.69
Aug. 16	29.87

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 17	28.64
Aug. 16	34.62

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 17	92.63
Aug. 16	98.78

351730107535001. Local number, 12N.11W.9.221.

LOCATION.--Lat 35°17'30", long 107°53'50", Hydrologic Unit 13020207.

Owner: J. Church Co.

AQUIFER.--San Andres Limestone of Permian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 18 in (0.46 m), depth 500 ft (152 m), cased to 500 ft (152 m).

DATUM.--Altitude of land-surface datum is 6,649 ft (2,027 m). Measuring point: Top of casing at low point, 2.22 ft (0.68 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 115.70 ft (35.27 m) below land-surface datum, Feb. 26, 1946; lowest, 193.21 ft (58.89 m) below land-surface datum, June 29, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		1976						1977				
5	134.58	.....	.....	.....	138.94	.....	.....	.....	.....	142.35	.....	161.43
10	135.02	.....	.....	.....	.....	.....	.....	.....	139.53	143.20	.....	160.59
15	135.15	.....	.....	.....	139.19	.....	.....	.....	139.83	144.17	.....	159.87
20	.....	.....	.....	138.67	139.32	.....	.....	.....	141.56	145.55	166.45	159.34
25	.....	.....	.....	138.70	.....	.....	.....	.....	142.47	.....	163.84	159.58
30	.....	.....	.....	138.80	.....	.....	.....	.....	142.57	.....	162.34	159.91
WTR YEAR 1977	MAX	134.43	Oct. 2, 1976		MIN	166.52	Aug. 19, 1977					

GROUND-WATER LEVELS

VALENCIA COUNTY

Grants-Bluewater Area

351650107535001. Local number, 12N.11W.9.424.

LOCATION.--Lat 35°16'50", long 107°53'50", Hydrologic Unit 13020207.

Owner: George Rowley.

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), 16 in (0.41 m) casing to 175 ft (53.3 m), 12 in (0.30 m) casing to 325 ft (99.1 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, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 17	115.15
Aug. 16	122.69

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, 85.83 ft (26.16 m) below land-surface datum, Aug. 3, 1967; 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
Jan. 17	85.88
Aug. 16	86.20

EXPLANATION OF GEOLOGIC UNIT (AQUIFER) CODES (LISTED FROM YOUNGEST TO OLDEST AGE) U-UPPER, M-MIDDLE, L-LOWER:
 000 EXRV-Extrusive Rocks; 110 AVMB-Cenozoic, Quaternary Alluvium, Bolson Deposits and other Surface Deposits;
 110 BLSN-Cenozoic, Quaternary, Bolson Fill; 111 CPLN-Cenozoic, Quaternary, Holocene, Capulin Basalts; 112 ANCH-Cenozoic, Quaternary, Pleistocene, Ancha Formation, Upper Part of Santa Fe Group; 112 SNTR-Cenozoic, Quaternary, Pleistocene Santa Fe Group; 120 CGLM-Cenozoic, Tertiary, Conglomerate of Tertiary Age; 121 GILA-Cenozoic, Tertiary, Pliocene, Gila Conglomerate (Group); 121 TSUQ-Cenozoic, Tertiary, Pliocene, Tesuque Formation, Undifferentiated Unit; 211 CRLM-Mesozoic, U-M Cretaceous, Carlile Shale; 211 DKOT-Mesozoic, U-M Cretaceous, Dakota Sandstone; 211 FRHS-Mesozoic, U-M Cretaceous, Fort Hayes Limestone Member of Niobrara Formation; 211 FRDL-Mesozoic, U-M Cretaceous, Fruitland Formation; 211 NBRR-Mesozoic, M Cretaceous, Niobrara Formation; 211 PCCF-Mesozoic, M Cretaceous, Pictured Cliffs Sandstone; 231 DCKM-Mesozoic, U Triassic, Dockum Group; 310 GLRT-Paleozoic, Permian, Glorieta Sandstone Member of San Andres Formation of Manzano Group; 310 MGNT-Paleozoic, Permian, Magenta Member; 310 SGRC-Paleozoic, Permian, Sangre de Cristo Formation; 310 YESO-Paleozoic, Permian, Yeso Formation, Manzano Group; 312 CLBR-Paleozoic, Permian, Ochoan, Culebra Dolomite Member of Rustler Formation; 312 RSLR-Paleozoic, Permian, Ochoan Rustler Formation; 312 RSLRL-Paleozoic, Permian, Ochoan, Rustler Formation, Unnamed Lower Member; 313 CPTN-Paleozoic, Permian, Guadalupian, Capitan Limestone; 313 DLRM-Paleozoic, Permian, Guadalupian, Delaware Mountain Group; 313 SADR-Paleozoic, Permian, Guadalupian, San Andres Limestone of Manzano Group; 313 SADY-Paleozoic, Permian, Guadalupian, San Andres Limestone and Yeso Formation Undivided; 318 ABO L-Paleozoic, L Permian, Leonardian, ABO Sandstone (Lower Tongue); 325 MDER-Paleozoic, M Pennsylvanian, Desmoinesian, Madera Limestone; 400 PCMB Precambrian Rocks.

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 IDENTIFIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	GEOLOGIC UNIT	DEPTH BELOW LAND SURFACE (FT)	TOTAL DEPTH OF WELL (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)
10N.05E.30.32241 R MCDAN	350300106263101	GW	76-10-01	1230	--	23.00	50	--	--
10N.05E.30.32241 WELL AT	350330106033001	GW	77-06-08	1030	--	--	25	--	--
10N.05E.30.32241A R MCDA	350301106263002	GW	76-11-23	--	--	22.19	60	60	40

LOCAL IDENTIFIER	DATE OF SAMPLE	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	INSTANTANEOUS FLOW RATE (GPM)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (CA+MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG/L)
10N.05E.30.32241 R MCDAN	76-10-01	20	3.3	1180	6.9	16.0	550	91	170	31
10N.05E.30.32241 WELL AT	77-06-08	--	--	880	7.5	24.0	--	--	--	--
10N.05E.30.32241A R MCDA	76-11-23	5	5.0	1230	6.8	16.0	610	19	180	40

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SI02) (MG/L)
10N.05E.30.32241 R MCDAN	76-10-01	40	.7	2.6	560	0	120	36	1.6	25
10N.05E.30.32241 WELL AT	77-06-08	--	--	--	--	--	--	--	--	--
10N.05E.30.32241A R MCDA	76-11-23	37	.7	3.8	726	0	110	25	1.8	30

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRATE PLUS NITRITE (MG/L)	DISSOLVED NITRATE PLUS NITRITE (N) (MG/L)	DISSOLVED ORTHOPHOSPHORUS (P) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED IRON (FE) (UG/L)
10N.05E.30.32241 R MCDAN	76-10-01	702	--	.83	.02	50	10
10N.05E.30.32241 WELL AT	77-06-08	--	1.6	1.6	--	--	--
10N.05E.30.32241A R MCDA	76-11-23	786	--	.14	.04	50	10

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

COLFAX COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	ELEV. OF LAND SURFACE DATUM (FT. ABOVE MSL) (72000)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
28N.26E.12.343	364012104074101	GW	77-05-30	1300	211CRLL	6950.00	2600	6.8	14.0
28N.26E.15.222	364003104091301	GW	77-05-30	1000	211FRHS	7026.00	1650	7.9	16.5
29N.25E.10.322	364542104160701	GW	77-05-26	1000	211NBRR	6570.00	3400	8.5	14.5
29N.26E.01.413	364626104072101	GW	77-05-31	1800	120CGLM	6925.00	340	8.1	13.0
29N.27E.14323	364442104021601	GW	77-05-27	1330	318ABO L	6950.00	420	--	13.0

LOCAL IDENT- I- FIER	DATE OF SAMPLE	HARD- NESS (CA+MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)
28N.26E.12.343	77-05-30	1200	830	310	110	160	2.0	4.4	490	0
28N.26E.15.222	77-05-30	110	0	34	5.6	380	16	2.1	1020	0
29N.25E.10.322	77-05-26	17	0	3.9	1.7	910	97	1.9	1790	110
29N.26E.01.413	77-05-31	140	0	38	9.9	20	.7	2.4	190	0
29N.27E.14323	77-05-27	170	0	40	17	29	1.0	1.1	220	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
28N.26E.12.343	77-05-30	1100	22	.6	24	1980	2.1
28N.26E.15.222	77-05-30	22	30	2.0	21	1000	.71
29N.25E.10.322	77-05-26	190	140	2.4	9.3	2250	.18
29N.26E.01.413	77-05-31	12	3.8	.4	23	215	2.6
29N.27E.14323	77-05-27	28	7.4	.7	22	265	2.5

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)
28N.26E.12.343	77-05-30	.01	300	700	--
28N.26E.15.222	77-05-30	.02	240	40	--
29N.25E.10.322	77-05-26	.06	420	80	--
29N.26E.01.413	77-05-31	.02	30	20	0
29N.27E.14323	77-05-27	.02	60	20	0

LOCAL IDENT- I- FIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)
29N.26E.01.413	364626104072101	GW	77-05-31	1800	4	2	30	<10	2
29N.27E.14323	364442104021601	GW	77-05-27	1330	1	1	60	10	1

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

COLFAX COUNTY--Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)
29N.26E.01.413	77-05-31	10	10	<50	0	40	17	90	20	<100
29N.27E.14323	77-05-27	10	0	<50	0	<10	6	40	20	200

LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
29N.26E.01.413	77-05-31	12	0	0	.0	.0	2	2	50	40
29N.27E.14323	77-05-27	8	0	0	.1	.0	7	6	30	20

DONA ANA COUNTY

LOCAL IDENT- IFIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (FT) (72019)	TOTAL DEPTH OF WELL (FT) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)
19S.04W.12.421A	324014107115701	GW	77-08-29	1315	112SNTF	--	--	--	--
19S.04W.12.421B	324014107115702	GW	77-08-29	1145	112SNTF	--	--	--	--
19S.04W.12.421C	324014107115703	GW	77-08-29	1300	112SNTF	--	--	--	--
19S.04W.12.421D	324014107115704	GW	77-08-29	1220	112SNTF	--	--	--	--
19S.04W.12.421F	324014107115705	GW	77-08-29	1235	112SNTF	--	--	--	--
20S.02E.35.143	323135106423801	GW	76-11-10	1105	112SNTF	259.00	700	--	--
20S.02E.35.244	323126106430001	GW	76-11-22	2045	112SNTF	--	791	--	--
21S.05E.32.222 WSMR T-13	322635106264401	GW	76-12-13	1505	110BLSN	--	--	--	513
		GW	77-06-15	--	110BLSN	--	--	--	--
		GW	77-06-16	1000	110BLSN	--	--	--	--
22S.04E.01.431	322503106290801	GW	77-06-16	--	--	--	--	--	--
22S.04E.02.113, COX RANCH	322536106303901	GW	77-05-10	1230	112SNTF	--	190	--	--
22S.04E.11.224	322434106295001	GW	77-06-15	1425	--	--	--	--	--
		GW	77-06-15	1445	--	--	--	--	--
22S.04E.12.414, WELL, WSMR	322424106290301	GW	77-06-28	1315	--	--	--	--	--
22S.04E.12.434, WELL WSM	322405106290101	GW	77-06-28	1305	--	--	--	--	--
22S.04E.13.241 WELL, WSMR	322347106285801	GW	77-06-28	1300	--	--	--	--	--
22S.04E.13.311	322331106293801	GW	77-06-28	1235	110BLSN	--	--	--	--
		GW	77-08-17	1200	110BLSN	--	534	--	--
22S.04E.13.424	322333106284901	GW	77-06-28	1250	--	--	--	--	--
22S.04E.13.432	322325106290401	GW	77-06-28	1245	--	--	--	--	--
22S.04E.14.133	322339106304301	GW	77-06-16	--	110BLSN	--	--	--	--
22S.04E.16.112, COX RANCH	322402106323701	GW	77-05-10	1200	112SNTF	--	129	--	--
22S.04E.17.424, COX RANCH	322328106325001	GW	77-05-10	1130	112SNTF	--	--	--	--
22S.04E.22.141 COX RANCH	322255106312901	GW	77-05-10	0940	112SNTF	--	39	--	--
22S.04E.22.232, COX RANCH	322258106310401	GW	77-05-10	0945	112SNTF	--	120	--	--
22S.04E.22.232A, CENTER H	322256106310401	GW	77-05-10	1100	112SNTF	--	117	--	--
22S.04E.22.232B, SOUTH HQ	322254106310401	GW	77-05-10	1000	112SNTF	--	129	--	--
22S.04E.22.241A, COX RANC	322256106305601	GW	77-05-10	1030	--	--	--	--	--
22S.04E.24, WSMR, SEEPAGE	322300106280001	GW	77-08-17	1150	--	--	--	--	--
22S.04E.24.112	322310106293401	GW	77-06-28	1220	--	--	--	--	--
		GW	77-08-17	1130	110BLSN	--	500	--	--
		GW	77-08-17	1240	110BLSN	--	500	--	--
22S.04E.24.212A	322309106290201	GW	77-06-28	1020	--	--	--	--	--
22S.05E.05.313 WSMR T-10	321510106274101	GW	76-12-13	1437	110BLSN	--	--	--	513
		GW	77-06-16	0915	110BLSN	--	--	--	--
22S.05E.07.342	322415106281801	GW	76-12-13	1300	110BLSN	--	--	--	444
		GW	77-06-15	--	110BLSN	--	--	--	--
		GW	77-06-15	1135	110BLSN	--	--	--	--
22S.05E.15.221	321401106245201	GW	76-12-14	1010	110BLSN	--	--	--	300

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DONA ANA COUNTY--Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	INSTAN- TANEOUS FLOW RATE (GPM) (00059)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)
19S.04W.12.421A	77-08-29	--	--	6390	7.5	--	--	--	--	--
19S.04W.12.421B	77-08-29	--	--	1350	7.9	19.0	--	--	--	--
19S.04W.12.421C	77-08-29	--	--	7750	7.6	18.0	--	--	--	--
19S.04W.12.421D	77-08-29	--	--	1500	8.0	19.0	--	--	--	--
19S.04W.12.421E	77-08-29	--	--	6200	7.6	20.0	--	--	--	--
20S.02E.35.143	76-11-10	1440	550	1600	7.5	26.0	730	610	170	74
20S.02E.35.244	76-11-22	--	1150	980	7.7	27.0	250	98	49	31
21S.05E.32.222 WSMR T-13	76-12-13	--	--	500	7.8	26.0	180	68	51	13
	77-06-15	--	--	277	8.0	24.5	--	--	--	--
	77-06-16	--	--	505	7.9	25.5	--	--	--	--
22S.04E.01.431	77-06-16	--	--	915	6.5	26.0	340	240	100	23
22S.04E.02.113 COX RANCH	77-05-10	--	1.0	786	7.7	23.0	330	200	81	30
22S.04E.11.224	77-06-15	--	--	679	7.2	26.0	250	140	67	21
	77-06-15	--	--	645	7.3	--	230	130	60	20
22S.04E.12.414 WELL WSMR	77-06-28	--	--	392	7.9	--	--	--	--	--
22S.04E.12.434 WELL WSM	77-06-28	--	--	387	8.0	--	--	--	--	--
22S.04E.13.241 WELL WSMR	77-06-28	--	--	362	7.9	--	--	--	--	--
22S.04E.13.311	77-06-28	--	--	618	7.7	--	--	--	--	--
	77-08-17	--	250	599	7.4	23.0	240	81	67	17
22S.04E.13.424	77-06-28	--	--	354	7.9	--	--	--	--	--
22S.04E.13.432	77-06-28	--	--	373	7.9	--	--	--	--	--
22S.04E.14.133	77-06-16	--	--	440	--	23.5	170	12	49	11
22S.04E.16.112 COX RANCH	77-05-10	--	1.0	579	7.3	21.5	230	97	70	13
22S.04E.17.424 COX RANCH	77-05-10	--	--	394	7.0	22.0	--	--	--	--
22S.04E.22.141 COX RANCH	77-05-10	--	<1.0	350	7.5	23.0	180	49	49	14
22S.04E.22.232 COX RANCH	77-05-10	--	--	321	6.9	20.5	--	--	--	--
22S.04E.22.232A CENTER H	77-05-10	30	1.0	1650	6.7	20.5	--	--	--	--
22S.04E.22.232B SOUTH HQ	77-05-10	--	1.0	342	6.8	22.5	--	--	--	--
22S.04E.22.241A COX RANC	77-05-10	--	--	529	6.9	19.5	--	--	--	--
22S.04E.24.WSMR SEEPAGE	77-08-17	--	--	658	10.8	28.0	180	0	72	.0
22S.04E.24.112	77-06-28	--	--	687	7.4	--	--	--	--	--
	77-08-17	7	500	869	7.4	--	410	250	120	26
	77-08-17	--	500	590	7.4	24.5	240	140	68	16
22S.04E.24.212A	77-06-28	--	--	324	7.1	--	--	--	--	--
22S.05E.05.313 WSMR T-10	76-12-13	--	--	316	8.0	25.5	100	10	29	6.8
	77-06-16	--	--	357	8.0	25.0	--	--	--	--
22S.05E.07.342	76-12-13	--	--	343	7.7	24.5	88	0	29	3.7
	77-06-15	--	--	537	7.2	26.0	110	15	38	4.6
	77-06-15	--	--	350	7.9	24.5	--	--	--	--
22S.05E.15.221	76-12-14	--	--	2510	9.8	24.0	17	0	6.8	.1

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DONA ANA COUNTY--Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)
19S.04W.12.421A	77-08-29	--	--	--	--	--	--	--	--	--
19S.04W.12.421B	77-08-29	--	--	--	--	--	--	--	--	--
19S.04W.12.421C	77-08-29	--	--	--	--	--	--	--	--	--
19S.04W.12.421D	77-08-29	--	--	--	--	--	--	--	--	--
19S.04W.12.421E	77-08-29	--	--	--	--	--	--	--	--	--
20S.02E.35.143	76-11-10	120	1.9	5.9	149	0	740	48	.4	25
20S.02E.35.244	76-11-22	94	2.6	3.9	185	0	260	38	.7	24
21S.05E.32.222 WSMR T-13	76-12-13	32	1.0	3.8	138	0	81	26	.8	37
	77-06-15	--	--	--	--	--	--	--	--	--
	77-06-16	--	--	--	--	--	--	--	--	--
22S.04E.01.431	77-06-16	47	1.1	4.0	130	0	200	82	2.3	18
22S.04E.02.113, COX RANCH	77-05-10	41	1.0	4.5	160	0	160	42	1.5	38
22S.04E.11.224	77-06-15	44	1.2	3.1	140	0	160	39	.8	38
	77-06-15	45	1.3	3.2	130	0	150	37	.7	28
22S.04E.12.414, WELL, WSMR	77-06-28	--	--	--	--	--	--	--	--	--
22S.04E.12.434, WELL WSM	77-06-28	--	--	--	--	--	--	--	--	--
22S.04E.13.241 WELL, WSMR	77-06-28	--	--	--	--	--	--	--	--	--
22S.04E.13.311	77-06-28	--	--	--	--	--	--	--	--	--
	77-08-17	34	1.0	2.6	190	0	98	17	.4	39
22S.04E.13.424	77-06-28	--	--	--	--	--	--	--	--	--
22S.04E.13.432	77-06-28	--	--	--	--	--	--	--	--	--
22S.04E.14.133	77-06-16	28	.9	2.3	190	0	50	16	.7	36
22S.04E.16.112, COX RANCH	77-05-10	34	1.0	2.7	160	0	130	17	1.3	37
22S.04E.17.424, COX RANCH	77-05-10	--	--	--	--	--	--	--	--	--
22S.04E.22.141 COX RANCH	77-05-10	83	2.7	3.9	160	0	41	25	.8	42
22S.04E.22.232, COX RANCH	77-05-10	--	--	--	--	--	--	--	--	--
22S.04E.22.232A, CENTER H	77-05-10	--	--	--	--	--	--	--	--	--
22S.04E.22.232B, SOUTH HQ	77-05-10	--	--	--	--	--	--	--	--	--
22S.04E.22.241A, COX RANC	77-05-10	--	--	--	--	--	--	--	--	--
22S.04E.24, WSMR, SEEPAGE	77-08-17	43	1.4	6.9	72	80	13	18	1.0	54
22S.04E.24.112	77-06-28	--	--	--	--	--	--	--	--	--
	77-08-17	40	.9	3.3	190	0	210	34	.4	43
	77-08-17	28	.8	2.8	120	0	110	22	.4	46
22S.04E.24.212A	77-06-28	--	--	--	--	--	--	--	--	--
22S.05E.05.313 WSMR T-10	76-12-13	23	1.0	2.0	110	0	42	11	.3	33
	77-06-16	--	--	--	--	--	--	--	--	--
22S.05E.07.342	76-12-13	35	1.6	2.0	115	0	43	12	.4	29
	77-06-15	70	2.9	2.9	120	0	120	31	.4	30
	77-06-15	--	--	--	--	--	--	--	--	--
22S.05E.15.221	76-12-14	510	53	6.1	15	45	300	550	.6	9.3

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DONA ANA COUNTY--Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)
19S.04W.12.421A	77-08-29	--	--	--	--	--	--	--
19S.04W.12.421B	77-08-29	--	--	--	--	--	--	--
19S.04W.12.421C	77-08-29	--	--	--	--	--	--	--
19S.04W.12.421D	77-08-29	--	--	--	--	--	--	--
19S.04W.12.421E	77-08-29	--	--	--	--	--	--	--
20S.02E.35.143	76-11-10	--	1270	3.9	.02	--	0	10
20S.02E.35.244	76-11-22	591	598	1.4	.01	260	30	10
21S.05E.32.222 WSMR T-13	76-12-13	--	322	2.0	.02	40	30	20
	77-06-15	--	--	--	--	--	--	--
	77-06-16	--	--	--	--	--	--	--
22S.04E.01.431	77-06-16	--	573	7.3	.04	--	20	60
22S.04E.02.113, COX RANCH	77-05-10	--	534	13	--	--	--	--
22S.04E.11.224	77-06-15	--	461	4.2	.02	--	10	0
	77-06-15	--	416	1.8	.02	--	50	40
22S.04E.12.414, WELL, WSMR	77-06-28	--	--	--	--	--	--	--
22S.04E.12.434, WELL WSM	77-06-28	--	--	--	--	--	--	--
22S.04E.13.241 WELL, WSMR	77-06-28	--	--	--	--	--	--	--
22S.04E.13.311	77-06-28	--	--	--	--	--	--	--
	77-08-17	--	402	7.5	--	--	--	--
22S.04E.13.424	77-06-28	--	--	--	--	--	--	--
22S.04E.13.432	77-06-28	--	--	--	--	--	--	--
22S.04E.14.133	77-06-16	--	288	.30	.04	--	10	0
22S.04E.16.112, COX RANCH	77-05-10	--	405	4.7	--	--	--	--
22S.04E.17.424, COX RANCH	77-05-10	--	--	--	--	--	--	--
22S.04E.22.141 COX RANCH	77-05-10	--	338	.01	--	--	--	--
22S.04E.22.232, COX RANCH	77-05-10	--	--	.59	--	--	--	--
22S.04E.22.232A, CENTER H	77-05-10	--	--	120	--	--	--	--
22S.04E.22.232B SOUTH HQ	77-05-10	--	--	5.6	--	--	--	--
22S.04E.22.241A, COX RANC	77-05-10	--	--	--	--	--	--	--
22S.04E.24. WSMR, SEEPAGE	77-08-17	--	439	26	--	--	--	--
22S.04E.24.112	77-06-28	--	--	--	--	--	--	--
	77-08-17	--	681	25	--	--	--	--
	77-08-17	--	432	18	--	--	--	--
22S.04E.24.212A	77-06-28	--	--	--	--	--	--	--
22S.05E.05.313 WSMR T-10	76-12-13	--	206	.95	.02	20	110	0
	77-06-16	--	--	--	--	--	--	--
22S.05E.07.342	76-12-13	--	218	1.6	.02	30	10	20
	77-06-15	--	367	2.4	.02	--	110	0
	77-06-15	--	--	--	--	--	--	--
22S.05E.15.221	76-12-14	--	1440	.12	.01	130	70	0

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DONA ANA COUNTY--Continued

LOCAL IDENT- IFIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (FT) (72019)	TOTAL DEPTH OF WELL (FT) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)
22S.05E.15.221	321401106245201	GW	77-06-15	1320	110BLSN	--	--	--	--
		GW	77-06-15	1340	110BLSN	--	--	--	--
22S.05E.16.111	322403106263901	GW	76-12-13	1345	110BLSN	--	331	--	326
22S.05E.19.141 WSMR WELL	322301106282601	GW	77-06-28	1340	--	--	--	--	--
22S.05E.19.323	322237106282201	GW	77-06-28	1400	110AVMB	--	--	--	--
22S.05E.20.111	322311106274101	GW	76-12-13	1405	110BLSN	--	--	--	330
		GW	77-06-15	--	110BLSN	--	--	--	--
22S.05E.26.1 WSMR SEWER	322300106220001	GW	77-08-17	1220	--	--	--	--	--
22S.05E.29.412 WSMR T-11	322155106270201	GW	76-12-13	1215	110BLSN	--	--	--	570
		GW	77-06-15	0920	110BLSN	--	--	--	--
22S.05E.33.244	322108106254701	GW	76-12-14	--	110BLSN	--	450	--	400
		GW	77-06-15	1000	110BLSN	--	--	--	--
23S.01E.10.134	321921106500001	GW	77-08-29	1005	110AVMB	--	--	--	--
23S.01E.10.134A	321921106500002	GW	77-08-29	1000	110AVMB	--	--	--	--
23S.01E.26.133A GINTHER	321647106490602	GW	77-06-29	1400	112SNTF	--	--	--	--
23S.01E.35.444 STAHMANN	321528106481401	GW	77-07-01	1130	112SNTF	--	--	--	--
		GW	77-09-16	1400	112SNTF	--	--	--	--
24S.01E.01.111 STAHMANN	321522106480201	GW	77-07-01	1115	--	--	--	--	--
24S.01E.13.221A	321335106472101	GW	77-05-04	1530	112SNTF	--	--	--	--
		GW	77-08-26	1605	112SNTF	113.10	370	370	140
24S.02E.07.231 EBID LOUI	321410106462701	GW	77-04-04	1410	112SNTF	--	--	--	--
		GW	77-08-26	1615	112SNTF	105.90	460	460	170
24S.02E.07.234, LOUISIAN	321412106462601	GW	77-02-16	1130	112SNTF	--	310	310	305
		GW	77-05-04	1415	112SNTF	--	310	310	305
		GW	77-08-27	1046	112SNTF	--	310	310	305
		GW	77-08-30	1100	112SNTF	--	310	310	305
24S.02E.07.234A, LOUISIA	321412106462602	GW	77-02-15	1650	112SNTF	--	310	125	120
		GW	77-05-04	1450	112SNTF	--	310	125	120
		GW	77-08-27	1100	112SNTF	--	310	125	120
		GW	77-08-30	1123	112SNTF	--	310	125	120
24S.02E.07.234B, LOUISIA	321412106462603	GW	77-02-14	1615	112SNTF	--	80	--	75
		GW	77-05-04	1435	112SNTF	--	80	80	75
		GW	77-08-30	1142	112SNTF	--	80	80	75
24S.02E.16.431A	321255106443302	GW	77-06-29	1400	112SNTF	--	--	--	--
24S.02E.17.322	321308106453801	GW	77-05-04	0945	--	--	--	--	--
		GW	77-08-26	1600	112SNTF	115.70	464	464	180
24S.02E.17.414A 300 FT O	321307106452202	GW	77-05-04	1100	--	--	--	--	--
		GW	77-08-29	1156	112SNTF	--	312	297	292
24S.02E.17.414B, FAR NES	321307106452203	GW	77-05-04	1015	112SNTF	--	--	--	--
		GW	77-08-29	1125	112SNTF	--	618	612	607

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DONA ANA COUNTY--Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	INSTAN- TANEOUS FLOW RATE (GPM)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA/MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)
22S.05E.15.221	77-06-15	--	--	2270	8.9	23.0	20	0	6.1	1.1
	77-06-15	--	--	2410	8.3	24.0	--	--	--	--
22S.05E.16.111	76-12-13	--	--	288	8.0	25.0	78	14	25	3.7
22S.05E.19.141 WSMR WELL	77-06-28	--	--	357	8.1	--	--	--	--	--
22S.05E.19.323	77-06-28	--	--	281	8.0	--	--	--	--	--
22S.05E.20.111	76-12-13	--	--	366	7.9	25.0	110	29	35	5.8
	77-06-15	--	--	370	8.1	25.0	--	--	--	--
22S.05E.26.1 WSMR SEWER	77-08-17	--	--	843	6.6	--	160	57	44	11
22S.05E.29.412 WSMR T-11	76-12-13	--	--	305	7.0	26.0	98	17	29	6.2
	77-06-15	--	--	396	7.9	25.5	--	--	--	--
22S.05E.33.244	76-12-14	--	--	688	8.5	24.0	81	61	31	.9
	77-06-15	--	--	707	8.0	--	--	--	--	--
23S.01E.10.134	77-08-29	--	--	1380	8.0	17.5	--	--	--	--
23S.01E.10.134A	77-08-29	--	--	825	8.0	19.0	--	--	--	--
23S.01E.26.133A GINTHER	77-06-29	--	--	780	7.6	17.0	--	--	--	--
23S.01E.35.444 STAHMANN	77-07-01	--	--	609	7.6	17.5	--	--	--	--
	77-09-16	--	--	680	8.3	17.5	--	--	--	--
24S.01E.01.111 STAHMANN	77-07-01	--	--	594	7.7	18.0	--	--	--	--
24S.01E.13.221A	77-05-04	--	--	511	7.8	18.0	--	--	--	--
	77-08-26	--	2080	520	8.1	24.5	160	27	51	7.4
24S.02E.07.231 EBID LOUI	77-04-04	--	--	523	7.8	18.5	--	--	--	--
	77-08-26	--	2240	604	8.0	18.0	200	64	67	8.8
24S.02E.07.234 LOUISIAN	77-02-16	--	--	455	7.9	19.0	140	10	45	7.0
	77-05-04	--	--	500	8.0	19.0	140	12	46	6.9
	77-08-27	--	--	455	8.1	--	140	7	45	6.3
	77-08-30	--	3.0	455	8.0	21.0	150	14	47	6.7
24S.02E.07.234A LOUISIA	77-02-15	--	--	671	7.9	--	160	12	50	8.4
	77-05-04	--	--	881	7.8	19.0	300	130	95	14
	77-08-27	15	--	1010	7.8	19.5	370	190	120	18
	77-08-30	7	3.0	984	7.8	21.5	350	170	110	18
24S.02E.07.234B LOUISIA	77-02-14	--	--	1900	7.3	--	460	240	130	32
	77-05-04	--	--	1890	7.6	20.5	590	300	180	34
	77-08-30	--	2.0	1870	7.7	21.0	660	340	210	33
24S.02E.16.431A	77-06-29	--	--	544	7.5	19.0	--	--	--	--
24S.02E.17.322	77-05-04	--	--	529	7.9	18.5	--	--	--	--
	77-08-26	--	2620	610	8.1	18.5	180	44	56	8.6
24S.02E.17.414A 300 FT O	77-05-04	--	--	479	7.6	19.0	--	--	--	--
	77-08-29	12	4.5	477	7.9	20.0	150	8	47	7.3
24S.02E.17.414B FAR NES	77-05-04	--	--	480	7.6	20.0	--	--	--	--
	77-08-29	53	2.5	494	7.9	21.0	140	12	46	7.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DONA ANA COUNTY--Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)
22S.05E.15.221	77-06-15	120	12	4.7	71	0	62	110	.4	5.3
	77-06-15	--	--	--	--	--	--	--	--	--
22S.05E.16.111	76-12-13	24	1.2	2.4	78	0	42	14	.4	21
22S.05E.19.141 WSMR WELL	77-06-28	--	--	--	--	--	--	--	--	--
22S.05E.19.323	77-06-28	--	--	--	--	--	--	--	--	--
22S.05E.20.111	76-12-13	26	1.1	2.0	100	0	54	16	.3	33
	77-06-15	--	--	--	--	--	--	--	--	--
22S.05E.26.1 WSMR SEWER	77-08-17	86	3.0	11	120	0	150	44	.5	44
22S.05E.29.412 WSMR T-11	76-12-13	23	1.0	2.1	99	0	42	12	.3	25
	77-06-15	--	--	--	--	--	--	--	--	--
22S.05E.33.244	76-12-14	95	4.6	4.5	24	0	99	130	.9	1.5
	77-06-15	--	--	--	--	--	--	--	--	--
23S.01E.10.134	77-08-29	--	--	--	--	--	--	--	--	--
23S.01E.10.134A	77-08-29	--	--	--	--	--	--	--	--	--
23S.01E.26.133A GINTHER	77-06-29	--	--	--	--	--	--	--	--	--
23S.01E.35.444 STAHMANN	77-07-01	--	--	--	--	--	--	--	--	--
	77-09-16	--	--	--	--	--	--	--	--	--
24S.01E.01.111 STAHMANN	77-07-01	--	--	--	--	--	--	--	--	--
24S.01E.13.221A	77-05-04	--	--	--	--	--	--	--	--	--
	77-08-26	46	1.6	3.1	160	0	65	45	.3	25
24S.02E.07.231 ERID LOUI	77-04-04	--	--	--	--	--	--	--	--	--
	77-08-26	45	1.4	3.4	170	0	84	53	.4	23
24S.02E.07.234, LOUISIAN	77-02-16	44	1.6	--	160	0	46	33	--	--
	77-05-04	40	1.5	--	160	0	48	32	--	--
	77-08-27	39	1.4	3.3	160	0	45	30	.4	24
	77-08-30	39	1.4	3.3	160	0	47	43	.4	24
24S.02E.07.234A, LOUISIA	77-02-15	79	2.7	--	180	0	100	62	--	--
	77-05-04	68	1.7	--	200	0	160	85	--	--
	77-08-27	69	1.6	4.8	220	0	170	110	.3	25
	77-08-30	75	1.7	4.8	220	0	200	100	.1	6.3
24S.02E.07.234B, LOUISIA	77-02-14	280	5.7	--	270	0	560	160	--	--
	77-05-04	220	3.9	--	350	0	550	180	--	--
	77-08-30	200	3.4	8.0	390	0	530	150	.3	31
24S.02E.16.431A	77-06-29	--	--	--	--	--	--	--	--	--
24S.02E.17.322	77-05-04	--	--	--	--	--	--	--	--	--
	77-08-26	44	1.4	3.0	160	0	66	43	.3	24
24S.02E.17.414A 300 FT O	77-05-04	--	--	--	--	--	--	--	--	--
	77-08-29	41	1.5	3.0	170	0	45	34	.3	24
24S.02E.17.414B, FAR NES	77-05-04	--	--	--	--	--	--	--	--	--
	77-08-29	44	1.6	2.9	160	0	57	44	.3	23

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DONA ANA COUNTY--Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)
22S.05E.16.221	77-06-15	--	345	.09	.01	--	30	0
	77-06-15	--	--	--	--	--	--	--
22S.05E.16.111	76-12-13	--	176	1.1	.01	30	20	10
22S.05E.19.141 WSMR WELL	77-06-28	--	--	--	--	--	--	--
22S.05E.19.323	77-06-28	--	--	--	--	--	--	--
22S.05E.20.111	76-12-13	--	233	2.7	.02	20	20	10
	77-06-15	--	--	--	--	--	--	--
22S.05E.26.1 WSMR SEWER	77-08-17	--	484	7.7	--	--	--	--
22S.05E.29.412 WSMR T-11	76-12-13	--	190	.41	.01	20	20	90
	77-06-15	--	--	--	--	--	--	--
22S.05E.33.244	76-12-14	--	375	.01	.00	40	10	30
	77-06-15	--	--	--	--	--	--	--
23S.01E.10.134	77-08-29	--	--	--	--	--	--	--
23S.01E.10.134A	77-08-29	--	--	--	--	--	--	--
23S.01E.26.133A GINTHER	77-06-29	--	--	--	--	--	--	--
23S.01E.35.444 STAHMANN	77-07-01	--	--	--	--	--	--	--
	77-09-16	--	--	--	--	--	--	--
24S.01E.01.111 STAHMANN	77-07-01	--	--	--	--	--	--	--
24S.01E.13.221A	77-05-04	--	--	--	--	--	--	--
	77-08-26	--	322	.06	--	--	--	--
24S.02E.07.231 ERID LOUI	77-04-04	--	--	--	--	--	--	--
	77-08-26	--	369	.02	--	--	--	--
24S.02E.07.234, LOUISIAN	77-02-16	--	--	--	--	--	--	--
	77-05-04	--	--	--	--	--	--	--
	77-08-27	--	272	.05	--	--	--	--
	77-08-30	--	289	.04	--	--	--	--
24S.02E.07.234A, LOUISIA	77-02-15	--	--	--	--	--	--	--
	77-05-04	--	--	--	--	--	--	--
	77-08-27	--	626	.11	--	--	--	--
	77-08-30	--	623	.03	--	--	--	--
24S.02E.07.234B, LOUISIA	77-02-14	--	--	--	--	--	--	--
	77-05-04	--	--	--	--	--	--	--
	77-08-30	--	1350	.01	--	--	--	--
24S.02E.16.431A	77-06-29	--	--	--	--	--	--	--
24S.02E.17.322	77-05-04	--	--	--	--	--	--	--
	77-08-26	--	324	.11	--	--	--	--
24S.02E.17.414A 300 FT O	77-05-04	--	--	--	--	--	--	--
	77-08-29	--	286	.06	--	--	--	--
24S.02E.17.414B, FAR NES	77-05-04	--	--	--	--	--	--	--
	77-08-29	--	303	.01	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DONA ANA COUNTY--Continued

LOCAL IDENT- IFIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (FT) (72019)	TOTAL DEPTH OF WELL (FT) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)
24S.02E.17.423A, BIG WEL	321304106451402	GW	77-05-04	0925	112SNTF	--	--	--	--
		GW	77-08-26	1545	112SNTF	134.00	686	686	280
24S.02E.17.423A, OBS WEL	321304106451502	GW	77-05-04	1140	112SNTF	--	35	35	30
24S.02E.17.423R 615 FT 0	321304106451503	GW	77-05-04	1255	--	--	--	--	--
		GW	77-08-29	1350	112SNTF	--	610	596	591
24S.02E.17.423C 306 FT 0	321304106451404	GW	77-08-29	1423	112SNTF	--	310	307	302
24S.02E.17.423C 310 FT 0	321304106451504	GW	77-02-14	1515	112SNTF	--	310	307	302
		GW	77-05-04	1200	112SNTF	--	310	307	307
		GW	77-08-27	0929	112SNTF	--	310	307	302
		GW	77-08-29	1423	112SNTF	--	310	307	302
24S.02E.17.423D 121 FT 0	321304106451405	GW	77-08-27	0948	112SNTF	--	121	118	113
		GW	77-08-29	1504	112SNTF	--	121	118	113
24S.02E.17.423D, 121 FT	321304106451505	GW	77-02-14	1220	112SNTF	--	121	118	113
		GW	77-05-04	1245	112SNTF	--	121	118	113
24S.02E.17.423E 35 FT 0B	321304106451406	GW	77-08-29	1517	112SNTF	--	35	35	30
24S.02E.18.244 SUTHERLIN	321312106461101	GW	77-06-29	1400	112SNTF	--	--	--	--
24S.02E.21.123	321239106444501	GW	77-05-04	1005	112SNTF	--	--	--	--
		GW	77-08-26	1550	112SNTF	92.00	480	480	165
24S.02E.26.134	321137106424501	GW	77-06-29	1400	112SNTF	--	--	--	--
24S.02E.36.313	321030106415501	GW	77-07-01	1230	112SNTF	--	--	--	--
26S.02E.12.421	320336106411101	GW	77-08-30	1445	112SNTF	--	--	--	--
26S.02E.12.421A	320336106411102	GW	77-08-30	1415	112SNTF	--	--	--	--
26S.02E.12.421B	320336106411103	GW	77-08-30	1500	112SNTF	--	--	--	--
26S.02E.12.421C	320336106411104	GW	77-08-30	1355	112SNTF	--	--	--	--
26S.02E.12.421D	320336106411105	GW	77-08-30	1345	112SNTF	--	--	--	--
26S.03E.03.344	320405106373101	GW	77-08-30	1150	112SNTF	--	--	--	--
26S.03E.03.344A	320405106373102	GW	77-08-30	1140	112SNTF	--	--	--	--
26S.03E.03.344B	320405106373103	GW	77-08-30	1035	112SNTF	--	--	--	--
26S.03E.03.344C	320405106373104	GW	77-08-30	1100	112SNTF	--	--	--	--
26S.03E.03.344D	320405106373105	GW	77-08-30	1115	112SNTF	--	--	--	--
26S.03E.06.442	320414106395801	GW	77-07-01	1430	112SNTF	--	--	--	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DONA ANA COUNTY--Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	INSTAN- TANEOUS FLOW RATE (GPM) (00059)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)
24S.02E.17.423A, BIG WEL	77-05-04	--	--	468	7.7	19.0	--	--	--	--
	77-08-26	--	3010	472	7.8	19.0	150	16	47	7.2
24S.02E.17.423A, OBS WEL	77-05-04	20	5.0	839	7.6	18.0	--	--	--	--
24S.02E.17.423B 615 FT O	77-05-04	--	--	489	7.6	18.0	--	--	--	--
	77-08-29	--	2.0	473	7.8	22.0	140	13	46	7.2
24S.02E.17.423C 306 FT O	77-08-29	--	4.5	473	7.7	19.0	150	15	50	7.2
24S.02E.17.423C 310 FT O	77-02-14	--	--	468	7.7	18.5	150	13	49	7.4
	77-05-04	--	--	477	7.8	18.0	160	15	50	7.3
	77-08-27	--	--	478	7.8	20.0	150	11	48	7.5
	77-08-29	--	4.5	473	7.7	19.0	150	15	50	7.2
24S.02E.17.423D 121 FT O	77-08-27	--	--	1160	7.7	20.5	420	250	130	23
	77-08-29	--	2.0	1160	7.7	20.5	440	260	140	22
24S.02E.17.423D, 121 FT	77-02-14	--	--	1180	7.8	--	430	230	130	26
	77-05-04	--	--	1200	7.8	18.5	430	210	130	26
24S.02E.17.423E 35 FT OB	77-08-29	--	--	810	7.9	26.0	220	64	70	11
24S.02E.18.244 SUTHERLIN	77-06-29	--	--	1880	7.5	19.0	--	--	--	--
24S.02E.21.123	77-05-04	--	--	709	7.8	19.0	--	--	--	--
	77-08-26	--	2750	700	7.9	19.0	240	88	78	12
24S.02E.26.134	77-06-29	--	--	845	7.5	19.5	--	--	--	--
24S.02E.36.313	77-07-01	--	--	1110	7.5	20.0	--	--	--	--
26S.02E.12.421	77-08-30	--	--	1030	7.8	20.0	--	--	--	--
26S.02E.12.421A	77-08-30	--	--	1070	8.0	20.0	--	--	--	--
26S.02E.12.421B	77-08-30	--	--	1040	8.1	23.5	--	--	--	--
26S.02E.12.421C	77-08-30	--	--	871	7.9	20.0	--	--	--	--
26S.02E.12.421D	77-08-30	--	--	741	8.1	20.5	--	--	--	--
26S.03E.03.344	77-08-30	--	--	5500	8.4	22.0	--	--	--	--
26S.03E.03.344A	77-08-30	--	--	4500	7.9	20.5	--	--	--	--
26S.03E.03.344B	77-08-30	--	--	4000	7.4	19.0	--	--	--	--
26S.03E.03.344C	77-08-30	--	--	3200	7.4	20.0	--	--	--	--
26S.03E.03.344D	77-08-30	--	--	2500	7.4	21.5	--	--	--	--
26S.03E.06.442	77-07-01	--	--	820	7.6	22.0	--	--	--	--

DONA ANA COUNTY--Continued

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QUALITY OF GROUND WATER
WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DONA ANA COUNTY--Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)
24S.02E.17.423A, BIG WEL	77-05-04	--	--	--	--	--	--	--
	77-08-26	--	290	.08	--	--	--	--
24S.02E.17.423A, OBS WEL	77-05-04	--	--	--	--	--	--	--
24S.02E.17.423B 615 FT O	77-05-04	--	--	--	--	--	--	--
	77-08-29	--	288	.04	--	--	--	--
24S.02E.17.423C 306 FT O	77-08-29	--	293	.24	--	--	--	--
24S.02E.17.423C 310 FT O	77-02-14	--	--	--	--	--	--	--
	77-05-04	--	--	--	--	--	--	--
	77-08-27	--	293	.16	--	--	--	--
	77-08-29	--	293	.24	--	--	--	--
24S.02E.17.423D 121 FT O	77-08-27	--	721	.09	--	--	--	--
	77-08-29	--	719	.04	--	--	--	--
24S.02E.17.423D, 121 FT	77-02-14	--	--	--	--	--	--	--
	77-05-04	--	--	--	--	--	--	--
24S.02E.17.423E 35 FT OB	77-08-29	--	509	.13	--	--	--	--
24S.02E.18.244 SUTHERLIN	77-06-29	--	--	--	--	--	--	--
24S.02E.21.123	77-05-04	--	--	--	--	--	--	--
	77-08-26	--	429	.15	--	--	--	--
24S.02E.26.134	77-06-29	--	--	--	--	--	--	--
24S.02E.36.313	77-07-01	--	--	--	--	--	--	--
26S.02E.12.421	77-08-30	--	--	--	--	--	--	--
26S.02E.12.421A	77-08-30	--	--	--	--	--	--	--
26S.02E.12.421B	77-08-30	--	--	--	--	--	--	--
26S.02E.12.421C	77-08-30	--	--	--	--	--	--	--
26S.02E.12.421D	77-08-30	--	--	--	--	--	--	--
26S.03E.03.344	77-08-30	--	--	--	--	--	--	--
26S.03E.03.344A	77-08-30	--	--	--	--	--	--	--
26S.03E.03.344B	77-08-30	--	--	--	--	--	--	--
26S.03E.03.344C	77-08-30	--	--	--	--	--	--	--
26S.03E.03.344D	77-08-30	--	--	--	--	--	--	--
26S.03E.06.442	77-07-01	--	--	--	--	--	--	--

LOCAL IDENT- I- FIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
20S.02E.35.244	323126106430001	GW	76-11-22	2045	0	0	260	0	0

LOCAL IDENT- I- FIER	DATE OF SAMPLE	HEXA- VALENT CHRO- MIUM (CR6) (UG/L) (01032)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
20S.02E.35.244	76-11-22	0	1	30	0	10	.0	3	0	20

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

EDDY COUNTY

LOCAL IDENT- IFIER	STATION	NUMBER	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (FT) (72019)	TOTAL DEPTH OF WELL (FT) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)
23S.31E.04.3134 P-17	321557103472302		GW	77-05-10	1615	312CLBR	--	734	585	557
22S.30E.24.3334 P-14	322215103502701		GW	77-02-24	1155	312RSLRL	419.00	1545	700	676
22S.30E.24.3334 P-14	322215103502702		GW	77-03-14	1500	312CLBR	--	1545	601	573
22S.31E.31.3331 P-15	322031103492802		GW	77-05-10	1700	312CLBR	--	624	437	409
22S.31E.11.123 AEC 8	322345103450201		GW	77-09-20	1500	313DLRM	--	4882	4860	4844
			GW	77-09-22	1455	313DLRM	--	--	4827	4821
			GW	77-09-27	1507	313DLRM	--	--	4827	4821
22S.31E.11.1241 AEC 8	322347103450201		GW	77-08-22	1513	313DLRM	--	4880	4860	4844
22S.31E.26.4431 P-18	322121103405502		GW	77-05-10	1430	312CLBR	--	1131	937	911
22S.31E.29.1232 H-2A	322205103480701		GW	77-02-22	1000	310MGNT	--	563	563	511
22S.31E.29.1232 H-2B	322205103480702		GW	77-02-22	1330	312CLBR	350.00	661	661	611
22S.31E.29.1232 H-2C	322205103480703		GW	77-02-23	0830	312RSLRL	--	795	5795	743
22S.31E.29.1232 H-2C	322205103480704		GW	77-03-16	1600	312CLBR	--	--	652	624
22S.31E.29.2213 H-1	322204103474001		GW	77-02-23	1019	312RSLRL	--	850	827	803
22S.31E.29.2213 H-1	322204103474002		GW	77-03-17	1100	312CLBR	--	850	703	675
22S.31E.29.2213 H-1	322204103474003		GW	77-05-10	1100	310MGNT	340.50	850	588	560
22S.31E.29.4224 H-3	322136103473002		GW	77-02-23	1130	312RSLRL	--	897	837	813
			GW	77-03-17	1230	312CLBR	--	897	703	675
22S.31E.29.4224 H-3	322136103473001		GW	77-03-17	1230	312RSLR	--	--	--	--
22S.31E.29.4224 H-3	322136103473003		GW	77-05-10	1300	310MGNT	--	897	592	564
23S.25E.01.310 CARLSBAD	322048104211901		GW	77-06-16	1415	313CPTN	--	930	--	--
23S.25E.01.330 CARLSBAD	321939104212501		GW	77-06-16	1458	313CPTN	--	590	--	--
23S.25E.01.440 CARLSBAD	321942104203401		GW	77-06-16	1400	313CPTN	--	727	--	--
23S.25E.02.340 CARLSBAD	322035104214401		GW	77-06-16	1518	313CPTN	--	730	--	--
23S.25E.02.430 CARLSBAD	322035104215001		GW	77-06-16	1508	313CPTN	--	678	--	--
23S.25E.12.120 CARLSBAD	321950104205301		GW	77-06-16	1441	313CPTN	--	758	--	--
23S.25E.12.210 CARLSBAD	321929104204501		GW	77-06-16	1428	313CPTN	--	878	--	--
23S.30E.34.2111ERDA10,IN	321605103520201		GW	77-09-29	1830	313DLRM	--	4431	4431	4140
LOCAL IDENT- IFIER	DATE OF SAMPLE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE MSL) (72000)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	INSTAN- TANEOUS FLOW RATE (GPM) (00059)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)
23S.31E.04.3134 P-17	77-05-10	3339.50	--	--	169000	7.4	22.5	11000	11000	1700
22S.30E.24.3334 P-14	77-02-24	3358.00	98	2.4	300000	7.2	24.5	6400	6200	570
22S.31E.24.3334 P-14	77-03-14	3358.00	60	12	69300	6.0	21.5	11000	11000	3100
22S.30E.31.3331 P-15	77-05-10	3309.70	--	--	36000	10.2	21.5	2200	2100	770
22S.31E.11.123 AEC 8	77-09-20	--	--	--	158000	6.2	31.0	10000	10000	3000
	77-09-22	--	--	--	181000	6.0	30.0	35000	35000	10000
	77-09-27	--	--	--	181000	6.3	26.0	--	--	--
22S.31E.11.1241 AEC 8	77-08-22	3533.00	189	--	195000	6.4	32.0	19000	19000	5500
22S.31E.26.4431 P-18	77-05-10	3478.70	--	--	255000	7.2	24.5	80000	80000	5600
22S.31E.29.1232 H-2A	77-02-22	3376.99	85	--	15200	8.6	22.0	2700	2700	820
22S.31E.29.1232 H-2B	77-02-22	3376.99	125	3.2	12300	8.4	21.5	2400	2300	690
22S.31E.29.1232 H-2C	77-02-23	3376.99	--	--	156000	5.9	20.5	130000	130000	9200
22S.31E.29.1232 H-2C	77-03-16	3376.99	180	3.0	28000	8.1	20.5	2200	2100	680
22S.31E.29.2213 H-1	77-02-23	3402.99	--	10	169000	7.9	21.0	160000	160000	13000
22S.31E.29.2213 H-1	77-03-17	3402.99	15	12	166500	7.3	22.5	9500	9400	820
22S.31E.29.2213 H-1	77-05-10	3402.99	--	--	33000	7.2	22.0	4400	4300	1000
22S.31E.29.4224 H-3	77-02-23	3388.99	--	--	169000	7.6	21.5	150000	150000	18000
	77-03-17	3388.99	15	3.0	67900	7.4	21.5	6500	6400	1500
22S.31E.29.4224 H-3	77-03-17	--	--	--	--	--	--	--	--	--
22S.31E.29.4224 H-3	77-05-10	3388.99	--	--	50000	8.0	22.5	5000	4900	1200
23S.25E.01.310 CARLSBAD	77-06-16	3480.00	--	1690	790	7.1	22.0	310	95	74
23S.25E.01.330 CARLSBAD	77-06-16	3500.00	--	1770	750	7.2	22.0	350	130	82
23S.25E.01.440 CARLSBAD	77-06-16	3500.00	--	1900	610	7.1	22.0	370	140	85
23S.25E.02.340 CARLSBAD	77-06-16	3522.00	--	2090	540	7.2	23.0	310	85	70
23S.25E.02.430 CARLSBAD	77-06-16	3500.00	--	2080	690	7.2	22.0	340	110	78
23S.25E.12.120 CARLSBAD	77-06-16	3520.00	--	2560	525	7.2	22.0	300	78	69
23S.25E.12.210 CARLSBAD	77-06-16	3500.00	--	2280	595	7.2	22.0	340	120	81
23S.30E.34.2111ERDA10,IN	77-09-29	--	--	--	212000	7.7	26.0	19000	19000	5300

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

EDDY COUNTY--Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	TOTAL SUL- FIDE (S) (MG/L) (00745)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
23S.31E.04.3134 P-17	77-05-10	1600	30000	125	120	77	0	--	5000	54000
22S.30E.24.3334 P-14	77-02-24	1200	120000	655	1300	222	0	--	10000	180000
22S.30E.24.3334 P-14	77-03-14	760	7600	32	600	357	0	--	1400	20000
22S.31E.31.3331 P-15	77-05-10	63	6900	64	1700	63	24	--	3200	11000
22S.31E.11.123 AEC 8	77-09-20	660	51000	220	250	32	0	.5	760	89000
	77-09-22	2500	55000	127	860	420	0	.0	240	120000
	77-09-27	--	--	--	--	--	--	--	--	--
22S.31E.11.1241 AEC 8	77-08-22	1300	27000	85	590	33	0	.8	350	53000
22S.31E.26.4431 P-18	77-05-10	16000	9200	14	6200	310	0	--	980	80000
22S.31E.29.1232 H-2A	77-02-22	170	2700	22	81	74	0	--	2400	4100
22S.31E.29.1232 H-2B	77-02-22	160	2100	19	91	59	5	--	3000	2800
22S.31E.29.1232 H-2C	77-02-23	25000	66000	81	9100	199	0	--	1300	200000
22S.31E.29.1232 H-2C	77-03-16	120	3600	33	120	62	0	--	3200	4700
22S.31E.29.2213 H-1	77-02-23	30000	56000	62	17000	675	0	--	520	210000
22S.31E.29.2213 H-1	77-03-17	1800	29000	130	5600	100	0	--	11000	49000
22S.31E.29.2213 H-1	77-05-10	460	6200	41	840	93	0	--	3600	10000
22S.31E.29.4224 H-3	77-02-23	25000	59000	67	14000	467	0	--	370	210000
	77-03-17	670	19000	103	630	115	0	--	5700	29600
22S.31E.29.4224 H-3	77-03-17	--	--	--	--	--	--	--	--	29600
22S.31E.29.4224 H-3	77-05-10	480	9300	57	250	51	0	--	3400	15000
23S.25E.01.310 CARLSBAD	77-06-16	30	67	1.7	2.4	260	0	--	77	100
23S.25E.01.330 CARLSBAD	77-06-16	36	41	.9	1.8	270	0	--	120	54
23S.25E.01.440 CARLSBAD	77-06-16	37	41	.9	1.9	270	0	--	130	54
23S.25E.02.340 CARLSBAD	77-06-16	32	7.9	.2	1.0	270	0	--	72	8.5
23S.25E.02.430 CARLSBAD	77-06-16	34	32	.8	1.6	270	0	--	100	45
23S.25E.12.120 CARLSBAD	77-06-16	31	7.0	.2	.9	270	0	--	68	7.5
23S.25E.12.210 CARLSBAD	77-06-16	33	14	.3	1.1	270	0	--	99	22
23S.30E.34.2111ERDA10,IN	77-09-29	1300	89000	284	720	110	0	.2	2400	150000
LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTH0. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
23S.31E.04.3134 P-17	77-05-10	1.5	1.0	92500	.06	.11	1700	1200	3000	--
22S.30E.24.3334 P-14	77-02-24	--	2.0	313000	.34	.08	1700	2100	3400	--
22S.30E.24.3334 P-14	77-03-14	.9	33	33700	.01	.02	700	17000	500	--
22S.31E.31.3331 P-15	77-05-10	1.2	1.6	23700	.04	.03	4700	100	20	--
22S.31E.11.123 AEC 8	77-09-20	1.0	9.4	145000	.33	.00	17000	40000	18000	--
	77-09-22	1.2	3.6	189000	.11	.05	53000	23000	14000	--
	77-09-27	--	--	--	--	--	--	--	--	--
22S.31E.11.1241 AEC 8	77-08-22	.3	1.2	87800	.10	.16	18000	100	18000	--
22S.31E.26.4431 P-18	77-05-10	1.2	1.0	118000	.81	.40	100000	540	4500	--
22S.31E.29.1232 H-2A	77-02-22	--	6.0	10300	.04	.01	220	60	45	--
22S.31E.29.1232 H-2B	77-02-22	2.0	1.7	8890	.01	.03	9500	20	200	--
22S.31E.29.1232 H-2C	77-02-23	--	2.0	311000	1.1	.00	150000	2500	78000	--
22S.31E.29.1232 H-2C	77-03-16	1.6	3.5	12500	.16	.00	10000	110	140	--
22S.31E.29.2213 H-1	77-02-23	--	.0	327000	.29	.00	110000	1500	52000	--
22S.31E.29.2213 H-1	77-03-17	.8	.6	97300	.03	.00	18000	790	2800	--
22S.31E.29.2213 H-1	77-05-10	2.0	1.7	22200	.04	.03	3300	220	950	21
22S.31E.29.4224 H-3	77-02-23	--	1.0	327000	.77	.00	1900	1500	3800	--
	77-03-17	.5	1.2	57200	.07	.00	20000	50	120	--
22S.31E.29.4224 H-3	77-03-17	--	--	--	--	--	--	--	--	--
22S.31E.29.4224 H-3	77-05-10	1.8	6.4	29700	.08	.04	13000	40	220	--
23S.25E.01.310 CARLSBAD	77-06-16	.3	13	498	1.3	.00	--	10	4	--
23S.25E.01.330 CARLSBAD	77-06-16	.4	14	487	1.0	.01	--	0	0	--
23S.25E.01.440 CARLSBAD	77-06-16	.4	14	501	1.1	.01	--	0	0	--
23S.25E.02.340 CARLSBAD	77-06-16	.4	13	343	1.1	.01	--	0	0	--
23S.25E.02.430 CARLSBAD	77-06-16	.4	14	442	1.0	.02	--	0	4	--
23S.25E.12.120 CARLSBAD	77-06-16	.4	12	333	.95	.00	--	10	4	--
23S.25E.12.210 CARLSBAD	77-06-16	.4	13	401	1.1	.01	--	10	4	--
23S.30E.34.2111ERDA10,IN	77-09-29	.3	3.4	249000	3.1	.00	20000	1500	2100	--

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

EDDY COUNTY--Continued

LOCAL IDENT- I- FIER	STATION	NUMBER	SITE	DATE OF SAMPLE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CO) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CO) (UG/L) (01025)
23S.31E.04.3134 P-17	321557103472302		GW	77-05-10	1615	2	0	1700	90	1
22S.30E.24.3334 P-14	322215103502701		GW	77-02-24	1155	1	1	1700	5	5
22S.30E.24.3334 P-14	322215103502702		GW	77-03-14	1500	4	2	700	40	1
22S.31E.31.3331 P-15	322031103492802		GW	77-05-10	1700	5	0	4700	30	0
22S.31E.11.123 AEC 8	322345103450201		GW	77-09-20	1500	1	0	17000	150	5
			GW	77-09-22	1455	2	1	53000	210	3
22S.31E.11.1241 AEC 8	322347103450201		GW	77-08-22	1513	12	1	18000	130	1
22S.31E.26.4431 P-18	322121103405502		GW	77-05-10	1430	0	0	100000	160	2
22S.31E.29.1232 H-2A	322205103480701		GW	77-02-22	1000	2	2	220	2	0
22S.31E.29.1232 H-2B	322205103480702		GW	77-02-22	1330	1	0	9500	20	0
22S.31E.29.1232 H-2C	322205103480703		GW	77-02-23	0830	1	0	150000	1	1
22S.31E.29.1232 H-2C	322205103480704		GW	77-03-16	1600	2	0	10000	40	14
22S.31E.29.2213 H-1	322204103474001		GW	77-02-23	1019	7	0	110000	--	1
22S.31E.29.2213 H-1	322204103474002		GW	77-03-17	1100	0	0	18000	90	2
22S.31E.29.2213 H-1	322204103474003		GW	77-05-10	1100	21	0	3300	50	1
22S.31E.29.4224 H-3	322136103473002		GW	77-02-23	1130	8	0	1900	--	12
			GW	77-03-17	1230	14	0	20000	60	2
22S.31E.29.4224 H-3	322136103473003		GW	77-05-10	1300	7	1	13000	40	1
23S.30E.34.2111ERDA10, IN	321605103520201		GW	77-09-29	1830	2	0	20000	220	3

LOCAL IDENT- I- FIER	DATE OF SAMPLE	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)
23S.31E.04.3134 P-17	77-05-10	100	100	400	0	660	250	67000	1200	1100
22S.30E.24.3334 P-14	77-02-24	<50	<50	5	2	6000	5000	30000	2100	14000
22S.30E.24.3334 P-14	77-03-14	0	0	200	3	100	4	19000	17000	200
22S.31E.31.3331 P-15	77-05-10	80	80	100	0	1400	190	16000	100	1100
22S.31E.11.123 AEC 8	77-09-20	60	80	1000	0	170	4	96000	40000	1100
	77-09-22	80	90	1500	0	480	19	73000	23000	2000
22S.31E.11.1241 AEC 8	77-08-22	170	60	750	1	250	3	210000	100	1500
22S.31E.26.4431 P-18	77-05-10	180	130	850	0	1100	330	48000	540	2100
22S.31E.29.1232 H-2A	77-02-22	<50	<50	10	2	25	0	6800	60	200
22S.31E.29.1232 H-2B	77-02-22	130	10	150	1	220	1	110000	20	800
22S.31E.29.1232 H-2C	77-02-23	<50	<50	15	4	2400	1600	75000	2500	2800
22S.31E.29.1232 H-2C	77-03-16	0	0	100	0	32000	420	180000	110	40000
22S.31E.29.2213 H-1	77-02-23	<50	<50	5	2	190000	500	130000	1500	320000
22S.31E.29.2213 H-1	77-03-17	0	0	500	0	8400	1500	71000	790	13000
22S.31E.29.2213 H-1	77-05-10	600	100	350	0	27000	3	660000	220	27000
22S.31E.29.4224 H-3	77-02-23	<50	<50	20	4	190000	16000	140000	1500	340000
	77-03-17	0	0	<50	0	12000	1200	84000	50	17000
22S.31E.29.4224 H-3	77-05-10	100	100	150	0	2200	150	43000	40	2200
23S.30E.34.2111ERDA10, IN	77-09-29	120	80	<50	0	260	0	22000	1500	2000

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

EDDY COUNTY--Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
23S.31E.04.3134 P-17	77-05-10	6	4000	3000	.1	.0	1	1	1700	400
22S.30E.24.3334 P-14	77-02-24	14000	3400	3400	.0	.0	1	0	4100	3000
22S.30E.24.3334 P-14	77-03-14	8	560	500	.1	.0	1	1	120	120
22S.31E.31.3331 P-15	77-05-10	10	190	20	.0	.0	0	0	400	400
22S.31E.11.123 AEC 8	77-09-20	30	17000	18000	.0	.0	0	0	540	500
	77-09-22	40	15000	14000	.0	.0	0	0	10000	12000
22S.31E.11.1241 AEC 8	77-08-22	2	18000	18000	.0	.0	0	0	2600	140
22S.31E.26.4431 P-18	77-05-10	2100	44000	4500	.0	.0	0	0	6300	6200
22S.31E.29.1232 H-2A	77-02-22	2	110	<5	.0	.0	1	1	1600	60
22S.31E.29.1232 H-2B	77-02-22	1	1700	200	.5	.0	2	0	1700	20
22S.31E.29.1232 H-2C	77-02-23	2800	110000	78000	.0	.0	0	0	30000	29000
22S.31E.29.1232 H-2C	77-03-16	38	2900	140	.1	.0	2	1	3100	30
22S.31E.29.2213 H-1	77-02-23	15000	52000	52000	.0	.0	0	0	22000	190
22S.31E.29.2213 H-1	77-03-17	150	4000	2800	.0	.0	1	1	900	140
22S.31E.29.2213 H-1	77-05-10	0	9600	950	.1	.0	1	0	3800	400
22S.31E.29.4224 H-3	77-02-23	29000	30000	3800	.0	.0	1	1	22000	210
	77-03-17	12	1000	120	.0	.0	2	1	1000	90
22S.31E.29.4224 H-3	77-05-10	6	600	220	.0	.0	7	6	400	400
23S.30E.34.2111ERDA10.IN	77-09-29	51	3400	2100	.0	.0	0	0	480	440

LOCAL IDENT- IFIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDED GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDED GROSS BETA AS CS-137 (PC/L) (03516)
23S.31E.04.3134 P-17	321557103472302	GW	77-05-10	1615	<1	2900	<.4	1300	<.4
22S.30E.24.3334 P-14	322215103502701	GW	77-02-24	1155	62	<3700	6.3	<2000	2.3
22S.30E.24.3334 P-14	322215103502702	GW	77-03-14	1500	9	<390	<.4	790	<.4
22S.31E.31.3331 P-15	322031103492802	GW	77-05-10	1700	<1	2000	<.4	1900	<.4
22S.31E.11.123 AEC 8	322345103450201	GW	77-09-20	1500	25	2900	1.4	790	<.4
		GW	77-09-22	1455	13	<3200	10	1600	4.2
		GW	77-09-27	1507	28	<2300	<.5	1300	.5
22S.31E.11.1241 AEC 8	322347103450201	GW	77-08-22	1513	22	<1900	<.4	<360	<.4
22S.31E.26.4431 P-18	322121103405502	GW	77-05-10	1430	<1	<4800	<.4	7700	.5
22S.31E.29.1232 H-2A	322205103480701	GW	77-02-22	1000	120	<160	12	69	2.6
22S.31E.29.1232 H-2B	322205103480702	GW	77-02-22	1330	3200	330	380	120	110
22S.31E.29.1232 H-2C	322205103480703	GW	77-02-23	0830	1000	<5000	190	8400	91
22S.31E.29.1232 H-2C	322205103480704	GW	77-03-16	1600	2	360	<.4	230	<.4
22S.31E.29.2213 H-1	322204103474001	GW	77-02-23	1019	10000	<6300	290	16000	160
22S.31E.29.2213 H-1	322204103474002	GW	77-03-17	1100	9	2100	<.4	6000	1.0
22S.31E.29.2213 H-1	322204103474003	GW	77-05-10	1100	<1	<400	<.4	940	<.4
22S.31E.29.4224 H-3	322136103473002	GW	77-02-23	1130	1200	<6000	68	12000	26
		GW	77-03-17	1230	9	<880	<.4	850	<.4
22S.31E.29.4224 H-3	322136103473003	GW	77-05-10	1300	<1	550	<.4	330	<.4
23S.30E.34.2111ERDA10.IN	321605103520201	GW	77-09-29	1830	79	<3100	250	950	56

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

EDDY COUNTY--Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80050)	SUS- PENED GROSS BETA AS SR90 /Y90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)	DIS- SOLVED URANIUM (U) (UG/L) (80020)
23S.31E.04.3134 P-17	77-05-10	1000	<.4	84	--	.10
22S.30E.24.3334 P-14	77-02-24	<1600	1.9	15	--	1.3
22S.30E.24.3334 P-14	77-03-14	620	<.4	68	--	<.01
22S.31E.31.3331 P-15	77-05-10	1600	<.4	23	2.3	--
22S.31E.11.123 AEC 8	77-09-20	630	<.4	6.0	--	.04
	77-09-22	1300	3.7	280	--	<.01
	77-09-27	1100	.4	420	--	<.01
22S.31E.11.1241 AEC 8	77-08-22	<290	<.4	12	--	.04
22S.31E.26.4431 P-18	77-05-10	6100	.5	190	--	.33
22S.31E.29.1232 H-2A	77-02-22	55	2.0	6.1	--	.80
22S.31E.29.1232 H-2B	77-02-22	97	88	4.6	4.2	--
22S.31E.29.1232 H-2C	77-02-23	6700	76	4.8	--	2.4
22S.31E.29.1232 H-2C	77-03-16	180	<.4	19	3.8	--
22S.31E.29.2213 H-1	77-02-23	12000	120	64	--	.02
22S.31E.29.2213 H-1	77-03-17	4900	.1	78	--	.10
22S.31E.29.2213 H-1	77-05-10	790	<.4	170	--	.60
22S.31E.29.4224 H-3	77-02-23	9600	21	51	--	.06
	77-03-17	710	<.4	57	--	.09
22S.31E.29.4224 H-3	77-05-10	260	<.4	44	4.1	--
23S.30E.34.2111ERDA10,IN	77-09-29	830	44	5.5	--	.26

GRANT COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (FT) (72019)	TOTAL DEPTH OF WELL (FT) (72008)	INSTAN- TANEOUS FLOW RATE (GPM) (00059)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)
19S.14W.06.414 ANDERSON	324034108194801		GW	76-10-02	1100	121GILA	500.00	900	300	294

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
19S.14W.06.414 ANDERSON	76-10-02	6.9	21.0	120	0	37	5.5	15	.6	2.2

LOCAL IDENT- I- FIER	DATE OF SAMPLE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
19S.14W.06.414 ANDERSON	76-10-02	162	0	7.5	5.5	.4	39	211	200	1.7

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)
19S.14W.06.414 ANDERSON	76-10-02	.25	30	10	0

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

GRANT COUNTY--Continued

LOCAL IDENT- IFIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
19S.14W.06.414 ANDERSON	324034108194801	GW	76-10-02	1100	1	0	30	0	0

LOCAL IDENT- IFIER	DATE OF SAMPLE	HEXA- VALENT CHRO- MIUM (CR6) (UG/L) (01032)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
19S.14W.06.414 ANDERSON	76-10-02	0	4	10	2	0	.0	1	0	10

MCKINLEY COUNTY

LOCAL IDENT- IFIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (FT) (72019)	TOTAL DEPTH OF WELL (FT) (72008)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)
16N.17W.25.113 WELL 16K-	353534108355201	GW	76-10-06	1500	110AVMB	35.40	90	2300	7.6
17N.14W.03.432 PIONEER	354342108184001	GW	77-01-08	1555	--	--	1154	1350	8.2

LOCAL IDENT- IFIER	DATE OF SAMPLE	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)
16N.17W.25.113 WELL 16K-	76-10-06	16.0	630	87	170	51	280	4.8	3.7	668
17N.14W.03.432 PIONEER	77-01-08	20.0	66	0	17	5.7	270	14	2.8	228

LOCAL IDENT- IFIER	DATE OF SAMPLE	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
16N.17W.25.113 WELL 16K-	76-10-06	0	520	31	.5	13	1430	7.1
17N.14W.03.432 PIONEER	77-01-08	0	450	7.9	.8	10	877	--

LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
16N.17W.25.113 WELL 16K-	76-10-06	.05	180	20	--
17N.14W.03.432 PIONEER	77-01-08	--	160	30	.6

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MCKINLEY COUNTY--Continued

LOCAL IDENT- I- FIER	STATION	NUMBEN	SITE	DATE OF SAMPLE	TIME	TOTAL ALUM- INUM (AL) (UG/L) (01105)	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)
16N.17W.25.113 WELL 16K-	353534108355201		GW	76-10-06	1500	--	1	--	--	180
17N.14W.03.432 PIONEER	354342108184001		GW	77-01-08	1555	10	0	0	200	160

LOCAL IDENT- I- FIER	DATE OF SAMPLE	TOTAL CAD- MIUM (CD) (UG/L) (01027)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	TOTAL COBALT (CU) (UG/L) (01037)	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)
16N.17W.25.113 WELL 16K-	76-10-06	--	--	--	--	--	20	--	--	--
17N.14W.03.432 PIONEER	77-01-08	<10	0	<50	<10	310	30	<100	60	60

LOCAL IDENT- I- FIER	DATE OF SAMPLE	TOTAL MAN- GANESE (MN) (UG/L) (01055)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL MOLYB- DENUM (MO) (UG/L) (01062)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL STRON- TIUM (SH) (UG/L) (01082)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)
16N.17W.25.113 WELL 16K-	76-10-06	--	.2	--	0	0	--	--
17N.14W.03.432 PIONEER	77-01-08	100	.0	0	0	--	660	.0

LOCAL IDENT- I- FIER	STATION	NUMBEN	SITE	DATE OF SAMPLE	TIME	TOTAL NON- FIL- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS (UG/L) (80030)	SUS- PENDE GROSS ALPHA AS (UG/L) (80040)	DIS- SOLVED GROSS BETA AS (PC/L) (03515)	SUS- PENDE GROSS BETA AS (PC/L) (03516)
16N.17W.25.113 WELL 16K-	353534108355201		GW	76-10-06	1500	2	<18	1.3	<4.4	1.3
17N.14W.03.432 PIONEER	354342108184001		GW	77-01-08	1555	--	--	--	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED GROSS BETA AS SR90 (PC/L) (80050)	SUS- PENDE GROSS BETA AS SR90 (PC/L) (80060)	DIS- SOLVED GROSS RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED GROSS NATURAL URANIUM (U) (UG/L) (22703)
16N.17W.25.113 WELL 16K-	76-10-06	<3.6	1.2	.52	2.1
17N.14W.03.432 PIONEER	77-01-08	--	--	--	<.4

SAN JUAN COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBEN	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (FT) (72019)	TOTAL DEPTH OF WELL (FT) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)
22N.10W.04.133 DH6K KIMB	361008107543901		GW	77-08-18	1600	211FRLD	68.30	290	--	--
22N.10W.07.211 DH3K KIMB	360941107561601		GW	77-08-16	1300	211FRLD	27.82	58	--	--
22N.10W.10.341 DH8K KIMB	360857107531001		GW	77-08-18	1750	211FRLD	16.17	59	--	--
22N.10W.17.422 DH4K KIMB	360823107544001		GW	77-08-17	1220	211FRLD	115.41	190	--	--
22N.10W.18.211 DH2K KIMB	360849107561801		GW	77-08-17	1430	211FRLD	86.80	205	--	--
22N.10W.18.411 DH1K KIMB	360822107561601		GW	77-08-18	1015	211PCCF	75.77	285	--	--
23N.12W.07.200 TL7-2 COA	361446108090801		GW	76-10-19	1400	211FRLD	75.00	150	150	75
			GW	77-03-02	1200	211FRLD	--	150	--	--
23N.12W.08.100 TL8-1 OB	361446108083701		GW	76-10-19	1500	211FRLD	5.00	67	67	5.0
			GW	77-03-03	1050	211FRLD	--	67	--	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SAN JUAN COUNTY--Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE MSL) (72000)	SPE- CIFIC CON- DUCT- ANCE (MICHO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)
22N.10W.04.133 DH6K KIMB	77-08-18	6280.00	12700	7.8	16.0	--	--	100	0	14
22N.10W.07.211 DH3K KIMB	77-08-16	6190.00	18000	12.3	21.0	--	--	510	510	200
22N.10W.10.341 DH8K KIMB	77-08-18	6285.00	17000	12.4	19.0	--	--	830	510	320
22N.10W.17.422 DH4K KIMB	77-08-17	6330.00	3000	9.8	18.0	--	--	6	0	1.9
22N.10W.18.211 DH2K KIMB	77-08-17	6290.00	4500	8.3	17.0	--	--	27	0	7.2
22N.10W.18.411 DH1K KIMB	77-08-18	6245.00	3250	9.1	18.0	--	--	9	0	2.5
23N.12W.07.200 TL7-2 COA	76-10-19	--	7200	7.9	21.0	190	270	94	0	25
	77-03-02	--	6500	8.3	12.0	170	220	86	0	23
23N.12W.08.100 TL8-1 OB	76-10-19	--	13000	7.5	14.5	75	170	930	270	320
	77-03-03	--	12250	7.8	12.0	--	--	830	390	280

LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	HY- DROX- IDE (OH) (MG/L) (71830)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
22N.10W.04.133 DH6K KIMB	77-08-18	16	3000	130	13	510	0	0	75	4300
22N.10W.07.211 DH3K KIMB	77-08-16	.1	2500	49	98	0	0	800	38	2700
22N.10W.10.341 DH8K KIMB	77-08-18	.1	1200	18	470	0	190	1200	24	120
22N.10W.17.422 DH4K KIMB	77-08-17	.4	660	114	9.7	300	330	0	460	110
22N.10W.18.211 DH2K KIMB	77-08-17	2.0	980	83	5.5	1360	98	0	120	500
22N.10W.18.411 DH1K KIMB	77-08-18	.7	730	105	4.0	660	300	--	370	110
23N.12W.07.200 TL7-2 COA	76-10-19	7.6	1900	85	11	1370	0	--	2500	390
	77-03-02	6.9	1900	89	13	1340	0	--	2300	450
23N.12W.08.100 TL8-1 OB	76-10-19	31	3500	50	17	801	0	--	7100	63
	77-03-03	32	3600	54	14	940	0	--	7900	66

LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L) (70301)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)
22N.10W.04.133 DH6K KIMB	77-08-18	1.0	23	--	7710	--	--	--	2.5	--
22N.10W.07.211 DH3K KIMB	77-08-16	1.2	2.6	--	6350	--	--	--	.23	--
22N.10W.10.341 DH8K KIMB	77-08-18	1.0	.4	--	3550	--	--	--	.17	--
22N.10W.17.422 DH4K KIMB	77-08-17	1.7	24	--	1750	--	--	--	.14	--
22N.10W.18.211 DH2K KIMB	77-08-17	2.3	8.6	--	2400	--	--	--	1.1	--
22N.10W.18.411 DH1K KIMB	77-08-18	4.2	17	--	1870	--	--	--	1.6	--
23N.12W.07.200 TL7-2 COA	76-10-19	1.0	7.8	5740	5520	--	--	.27	.03	1.3
	77-03-02	1.5	9.9	5500	5370	.06	--	.08	.06	2.0
23N.12W.08.100 TL8-1 OB	76-10-19	.4	6.9	11500	11500	10	.52	12	11	2.9
	77-03-03	.5	8.8	--	12200	--	--	--	14	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SAN JUAN COUNTY--Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	TOTAL ORGANIC NITRO- GEN (N) (00605)	TOTAL NITRO- GEN (N) (00600)	TOTAL PHOS- PHORUS (P) (00665)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (00671)	DIS- SOLVED BORON (B) (01020)	DIS- SOLVED IRON (FE) (01046)	DIS- SOLVED MANGANESE (MN) (01056)	TOTAL ORGANIC CARBON (C) (00680)
22N.10W.04.133 DH6K KIMB	77-08-18	--	--	--	.01	620	20	20	--
22N.10W.07.211 DH3K KIMB	77-08-16	--	--	--	.01	30	20	0	--
22N.10W.10.341 DH8K KIMB	77-08-18	--	--	--	.00	4	10	20	--
22N.10W.17.422 DH4K KIMB	77-08-17	--	--	--	.20	410	90	20	--
22N.10W.18.211 DH2K KIMB	77-08-17	--	--	--	.02	540	20	0	--
22N.10W.18.411 DH1K KIMB	77-08-18	--	--	--	.15	480	260	0	--
23N.12W.07.200 TL7-2 COA	76-10-19	2.2	3.8	.16	.00	--	--	--	87
	77-03-02	.80	2.9	.26	.05	--	--	--	23
23N.12W.08.100 TL8-1 OB	76-10-19	1.2	16	.13	.00	--	--	--	50
	77-03-03	--	--	--	.04	610	40	--	--

LOCAL IDENT- I- FIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CADMIUM (CD) (UG/L) (01025)	DIS- SOLVED CHROMIUM (CR) (UG/L) (01030)
22N.10W.04.133 DH6K KIMB	361008107543901	GW	77-08-18	1600	1	800	620	1	10
22N.10W.07.211 DH3K KIMB	360941107561601	GW	77-08-16	1300	0	700	30	1	80
22N.10W.10.341 DH8K KIMB	360857107531001	GW	77-08-18	1750	0	3000	4	0	0
22N.10W.17.422 DH4K KIMB	360823107544001	GW	77-08-17	1220	6	0	410	0	0
22N.10W.18.211 DH2K KIMB	360849107561801	GW	77-08-17	1430	4	0	540	1	0
22N.10W.18.411 DH1K KIMB	360822107561601	GW	77-08-18	1015	28	100	480	1	10
23N.12W.07.200 TL7-2 COA	361446108090801	GW	76-10-19	1400	2	--	--	--	--
		GW	77-03-02	1200	0	--	--	--	--
23N.12W.08.100 TL8-1 OB	361446108083701	GW	76-10-19	1500	1	--	--	--	--
		GW	77-03-03	1050	--	--	610	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)
22N.10W.04.133 DH6K KIMB	77-08-18	0	1	20	--	5	230
22N.10W.07.211 DH3K KIMB	77-08-16	0	6	20	--	4	230
22N.10W.10.341 DH8K KIMB	77-08-18	0	2	10	--	14	1700
22N.10W.17.422 DH4K KIMB	77-08-17	0	2	90	--	5	80
22N.10W.18.211 DH2K KIMB	77-08-17	0	7	20	--	4	90
22N.10W.18.411 DH1K KIMB	77-08-18	1	11	260	--	3	70
23N.12W.07.200 TL7-2 COA	76-10-19	--	--	--	200	43	--
	77-03-02	--	--	--	100	6	160
23N.12W.08.100 TL8-1 OB	76-10-19	--	--	--	300	4	--
	77-03-03	--	--	40	--	--	330

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED SELENIUM (SE) (UG/L) (01145)	DIS- SOLVED STRONTIUM (SR) (UG/L) (01080)
22N.10W.04.133 DH6K KIMB	77-08-18	20	--	0	2600
22N.10W.07.211 DH3K KIMB	77-08-16	0	--	9	9400
22N.10W.10.341 DH8K KIMB	77-08-18	20	--	1	23000
22N.10W.17.422 DH4K KIMB	77-08-17	20	--	0	80
22N.10W.18.211 DH2K KIMB	77-08-17	0	--	2	390
22N.10W.18.411 DH1K KIMB	77-08-18	0	--	2	170
23N.12W.07.200 TL7-2 COA	76-10-19	--	.0	1	--
	77-03-02	--	.4	0	--
23N.12W.08.100 TL8-1 OB	76-10-19	--	.3	2	--
	77-03-03	--	--	--	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SAN JUAN COUNTY--Continued

LOCAL IDENT- I- FIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	TOTAL NON- FILT- HABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDEO GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDEO GROSS BETA AS CS-137 (PC/L) (03516)
22N.10W.04.133 DH6K KIMB	361008107543901	GW	77-08-18	1600	--	--	--	--	--
22N.10W.07.211 DH3K KIMB	360941107561601	GW	77-08-16	1300	--	--	--	--	--
22N.10W.10.341 DH8K KIMB	360857107531001	GW	77-08-18	1750	--	--	--	--	--
22N.10W.17.422 DH4K KIMB	360823107544001	GW	77-08-17	1220	--	--	--	--	--
22N.10W.18.211 DH2K KIMB	360849107561801	GW	77-08-17	1430	--	--	--	--	--
22N.10W.18.411 DH1K KIMB	360822107561601	GW	77-08-18	1015	--	--	--	--	--
23N.12W.07.200 TL7-2 COA	361446108090801	GW	76-10-19	1400	220	<73	57	21	20
		GW	77-03-02	1200	390	<58	83	<16	28
23N.12W.08.100 TL8-1 OB	361446108083701	GW	76-10-19	1500	90	310	11	<30	5.1

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80050)	SUS- PENDEO GROSS BETA AS SR90 /Y90 (PC/L) (80060)	DIS- SOLVED RA-226 (PLAN- CHET COUNT) (PC/L) (09510)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)	DIS- SOLVED URANIUM (U) (UG/L) (80020)
22N.10W.04.133 DH6K KIMB	77-08-18	--	--	2.1	--	.9	--
22N.10W.07.211 DH3K KIMB	77-08-16	--	--	.7	--	<.4	--
22N.10W.10.341 DH8K KIMB	77-08-18	--	--	14	--	<.4	--
22N.10W.17.422 DH4K KIMB	77-08-17	--	--	.1	--	1.1	--
22N.10W.18.211 DH2K KIMB	77-08-17	--	--	.5	--	2.4	--
22N.10W.18.411 DH1K KIMB	77-08-18	--	--	.2	--	3.2	--
23N.12W.07.200 TL7-2 COA	76-10-19	19	17	--	.24	.4	--
	77-03-02	<14	23	--	.12	--	.20
23N.12W.08.100 TL8-1 OB	76-10-19	<26	4.4	--	.34	2.5	--

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SAN MIGUEL COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA, MG) (MG/L) (00900)
12N.12E.07.4243 HUDDLEST	351639105420001		GW	77-08-18	1400	3105SRC	1060	7.7	13.0	590
LOCAL IDENT- I- FIER	DATE OF SAMPLE	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
12N.12E.07.4243 HUDDLEST	77-08-18	380	130	65	21	.4	2.4	260	0	380
LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
12N.12E.07.4243 HUDDLEST	77-08-18	5.6	.4	18	751	.03	.02	60	10	.0

SANTA FE COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (FT) (72019)	TOTAL DEPTH OF WELL (FT) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)
TRICK WELL CAJA DEL RIO	354438106093301		GW	77-07-18	1730	112SNTF	--	--	--	--
10N.07E.07.323 DAN BACKS	350610106143101		GW	77-08-22	1500	325MDER	--	--	--	--
10N.07E.21.112 MERLIN HOP	350458106122201		GW	77-08-22	1330	325MDER	--	--	--	--
10N.08E.20.2241 WILLIAM	350454106061201		GW	77-08-17	1200	110BLSN	--	--	--	--
10N.09E.24.332 LEWIS ONE	3504181055563201		GW	77-08-17	1300	310GLRT	--	--	--	--
10N.09E.29.1334 R.E. CRO	350344106004601		GW	77-08-17	1400	110BLSN	--	--	--	--
11N.07E.20.11411A ENTRAN	351008106132502		GW	77-06-23	1400	318ABO L	--	--	--	--
11N.07E.22.11134 CEDAR GR	351010106112501		GW	77-03-09	1600	325MDER	--	610	--	--
11N.09E.28.4213 LARRY DE	3508501055585801		GW	77-07-21	1300	110BLSN	--	210	--	--
11N.10E.22.422 MARSHAL R	350948105512101		GW	77-08-22	1445	313SADR	--	--	--	--
11N.10E.32.1424 JAYMAR R	350815105535801		GW	77-08-16	1430	313SADR	--	--	--	--
11N.11E.09.1332 WHITE LA	351140105470001		GW	77-08-24	1245	231DCKM	--	--	--	--
12N.07E.30.1134 GOLDEN I	351428106142201		GW	77-08-25	1400	400PCMB	--	--	--	--
13N.11E.34.4423 HUDDLEST	351824105451301		GW	77-08-18	1300	313SADY	--	--	--	--
15N. 9E.33.3444	352846105593001		GW	77-03-30	1300	112ANCH	--	--	--	--
15N.08E.02.21223 WELL NO	353355106033101		GW	77-02-14	1500	121TSUQ	--	--	--	--
15N.10E.33.443 EXTENDED	352845105524501		GW	77-03-30	1615	110AVMB	--	--	--	--
16N.08E.20.3234 LALO SAL	353556106071901		GW	77-04-18	1500	112ANCH	--	--	--	--
16N.08E.26.43123 VALLE V	353501106033101		GW	77-06-14	1430	112ANCH	--	--	--	--
16N.08E.32.3413 PUB WELL	353406106071101		GW	77-02-14	1615	000EXRV	--	163	125	65
17N.08E.05.323 700 FT WE	354352106071401		GW	77-07-18	1230	112SNTF	--	--	--	--
17N.08E.25.32431 RICHARD	354019106024001		GW	77-04-26	1315	121TSUQ	369.13	440	--	--
17N.09E.32.32142 AGUA FR	353933106004101		GW	77-03-08	1215	112SNTF	--	110	--	--
17N.10E.09.32244A HYDE P	354300105530502		GW	77-07-06	1530	325MDER	--	560	--	--
18N.09E.31.14121 ERIC SL	354503106014701		GW	77-07-18	1500	121TSUQ	--	--	--	--
18N.10E.05.2113 RIO EN M	354931105540501		GW	77-07-28	1730	110AVMB	--	--	--	--
18N.10E.07 VISTA REDONDA	354832105544901		GW	77-07-28	1930	121TSUQ	--	--	--	--
19N.09E.21.34343 STATE H	355120105595201		GW	77-04-18	1315	121TSUQ	--	--	--	--
20N.09E.01.223 CHIMAYO P	355954105555601		GW	77-07-27	1430	110AVMB	--	--	--	--
20N.09E.01.4444 A J TRUJ	355911105554301		GW	77-03-09	1557	110AVMB	37.00	--	--	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SANTA FE COUNTY--Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	INSTAN- TANEOUS FLOW RATE (GPM) (00059)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)
TRICK WELL CAJA DEL RIO	77-07-18	--	--	590	7.0	23.0	180	0	66	4.3
10N.07E.07.323,DAN BACKS	77-08-22	--	--	650	7.0	--	300	0	82	22
10N.07E.21.112MERLIN HOP	77-08-22	--	--	1320	6.4	--	5	0	1.7	.3
10N.08E.20.2241 WILLIAM	77-08-17	--	--	540	7.0	--	250	0	65	22
10N.09E.24.332 LEWIS ONE	77-08-17	--	--	2170	7.1	--	640	500	190	41
10N.09E.29.1334 R.E. CRO	77-08-17	--	--	2700	7.0	--	980	830	260	80
11N.07E.20.11411A ENTRAN	77-06-23	--	--	495	7.7	17.5	120	0	23	14
11N.07E.22.11134CEDAR GR	77-03-09	--	--	960	8.1	--	76	0	18	7.5
11N.09E.28.4213 LARRY DE	77-07-21	--	--	616	7.5	16.0	180	14	45	16
11N.10E.22.422 MARSHAL R	77-08-22	--	--	2530	7.1	17.0	1400	1300	400	86
11N.10E.32.1424 JAYMAR R	77-08-16	--	--	627	7.8	--	200	0	47	21
11N.11E.09.1332 WHITE LA	77-08-24	--	--	770	7.7	13.0	180	5	43	17
12N.07E.30.1134 GOLDEN I	77-08-25	--	--	641	7.5	--	300	130	89	18
13N.11E.34.4423 HUDDLEST	77-08-18	--	--	2900	6.7	--	1900	1700	540	130
15N. 9E.33.3444	77-03-30	--	--	430	7.7	--	170	29	51	9.8
15N.08E.02.21223 WELL NO	77-02-14	--	167	280	7.6	16.5	110	6	37	4.5
15N.10E.33.443 EXTENDED	77-03-30	--	--	600	7.4	--	270	76	87	12
16N.08E.20.3234 LALO SAL	77-04-18	--	--	215	7.5	16.5	89	0	29	4.0
16N.08E.26.43123 VALLE V	77-06-14	--	--	250	7.7	--	87	0	30	2.9
16N.08E.32.3413 PUB WELL	77-02-14	120	--	510	7.4	15.0	130	0	32	11
17N.08E.05.323 700 FT WE	77-07-18	--	--	629	7.2	22.0	190	0	64	7.2
17N.08E.25.32431 RICHARD	77-04-26	--	--	310	7.6	16.0	130	12	42	5.4
17N.09E.32.32142 AGUA FR	77-03-08	--	--	360	7.1	13.5	140	31	49	5.0
17N.10E.09.32244A HYDE P	77-07-06	--	--	544	7.3	14.5	250	0	57	25
18N.09E.31.14121 ERIC SL	77-07-18	--	--	360	7.5	--	140	0	46	5.8
18N.10E.05.2113 RIO EN M	77-07-28	--	--	340	7.6	17.5	170	1	50	9.6
18N.10E.07 VISTA REDONDA	77-07-28	--	--	420	7.6	15.5	68	0	24	2.0
19N.09E.21.34343 STATE H	77-04-18	--	--	520	7.3	15.5	180	0	58	9.3
20N.09E.01.223 CHIMAYO P	77-07-27	--	--	600	7.1	14.0	280	0	92	12
20N.09E.01.4444 A J TRUJ	77-03-09	10	--	280	7.0	10.5	110	0	39	3.1

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SANTA FE COUNTY--Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)
TRICK WELL CAJA DEL RIO	77-07-18	62	2.0	5.5	350	0	30	3.8	.2	45
10N.07E.07.323,DAN BACKS	77-08-22	19	.5	2.7	390	0	6.8	8.6	.8	10
10N.07E.21.112MERLIN HOP	77-08-22	360	67	.7	870	0	32	20	.2	18
10N.08E.20.2241 WILLIAM	77-08-17	14	.4	3.0	310	0	16	6.1	.8	23
10N.09E.24.332 LEWIS ONE	77-08-17	260	4.5	5.7	180	0	680	250	1.9	21
10N.09E.29.1334 R.E. CRO	77-08-17	200	2.8	5.6	180	0	750	300	.6	21
11N.07E.20.11411A ENTRAN	77-06-23	78	3.2	1.4	280	0	33	3.9	.5	22
11N.07E.22.11134CEDAR GR	77-03-09	210	11	2.2	582	0	46	12	6.2	11
11N.09E.28.4213 LARRY DE	77-07-21	55	1.8	2.3	200	0	120	13	1.4	25
11N.10E.22.422 MARSHAL R	77-08-22	110	1.3	3.6	120	0	1200	180	.7	16
11N.10E.32.1424 JAYMAR R	77-08-16	59	1.8	3.4	250	0	72	24	1.1	20
11N.11E.09.1332 WHITE LA	77-08-24	100	3.3	1.6	210	0	97	72	1.3	17
12N.07E.30.1134 GOLOEN I	77-08-25	19	.5	.9	200	0	52	41	.7	25
13N.11E.34.4423 HUDDLEST	77-08-18	28	.3	4.8	210	0	1800	16	1.5	11
15N. 9E.33.3444	77-03-30	25	.8	1.6	169	0	33	17	.5	24
15N.08E.02.21223 WELL NO	77-02-14	16	.7	1.4	128	0	30	6.5	.3	22
15N.10E.33.443 EXTENDED	77-03-30	19	.5	1.2	233	0	86	26	.8	15
16N.08E.20.3234 LALO SAL	77-04-18	8.4	.4	1.1	110	0	10	3.3	.2	23
16N.08E.26.43123 VALLE V	77-06-14	21	1.0	1.7	130	0	13	2.9	.3	25
16N.08E.32.3413 PUB WELL	77-02-14	67	2.6	4.0	243	0	67	5.4	.6	28
17N.08E.05.323 700 FT WE	77-07-18	67	2.1	5.4	390	0	12	4.2	.2	37
17N.08E.25.32431 RICHARD	77-04-26	12	.5	2.8	140	0	14	2.6	.2	19
17N.09E.32.32142 AGUA FR	77-03-08	7.4	.3	.9	137	0	20	9.5	.3	13
17N.10E.09.32244A HYDE P	77-07-06	23	.6	2.2	300	0	31	16	.6	19
18N.09E.31.14121 ERIC SL	77-07-18	20	.7	2.6	170	0	14	7.1	.2	23
18N.10E.05.2113 RIO EN M	77-07-28	10	.3	1.8	200	0	7.3	4.1	.5	23
18N.10E.07 VISTA REDONDA	77-07-28	73	3.8	2.5	220	0	34	6.0	.3	20
19N.09E.21.34343 STATE H	77-04-18	41	1.3	6.1	240	0	49	18	.8	50
20N.09E.01.223 CHIMAYO P	77-07-27	18	.5	3.0	370	0	14	7.4	.3	15
20N.09E.01.4444 A J TRUJ	77-03-09	11	.5	1.2	144	0	14	6.5	.8	13

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SANTA FE COUNTY-- Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
TRICK WELL CAJA DEL RIO	77-07-18	--	394	1.1	.02	60	30	--	.9
10N.07E.07.323 DAN BACKS	77-08-22	--	345	.12	.01	130	10	--	--
10N.07E.21.112 MERLIN HOP	77-08-22	--	870	1.7	.04	40	10	--	.8
10N.08E.20.2241 WILLIAM	77-08-17	--	310	1.7	.01	60	10	--	--
10N.09E.24.332 LEWIS ONE	77-08-17	--	1540	.91	.02	330	70	--	--
10N.09E.29.1334 R.E. CRO	77-08-17	--	1720	2.3	.02	150	10	--	--
11N.07E.20.11411A ENTRAN	77-06-23	304	315	.29	.01	80	10	4	.1
11N.07E.22.11134 CEDAR GR	77-03-09	593	601	.18	.02	190	10	0	.0
11N.09E.2R.4213 LARRY DE	77-07-21	--	387	2.3	.01	210	20	--	.0
11N.10E.22.422 MARSHAL R	77-08-22	--	2060	.05	.02	90	10	--	--
11N.10E.32.1424 JAYMAR R	77-08-16	--	416	10	.02	560	10	--	.4
11N.11E.09.1332 WHITE LA	77-08-24	441	458	.98	.03	350	60	10	.4
12N.07E.30.1134 GOLDEN I	77-08-25	--	351	1.4	.03	30	10	--	--
13N.11E.34.4423 HUDDLEST	77-08-18	--	2640	.09	.02	200	20	--	.5
15N. 9E.33.3444	77-03-30	--	280	7.8	.03	50	20	--	5.9
15N.08E.02.21223 WELL NO	77-02-14	180	185	.85	.03	20	10	10	.1
15N.10E.33.443 EXTENDED	77-03-30	374	369	.71	.02	40	20	10	1.1
16N.08E.20.3234 LALO SAL	77-04-18	--	140	1.5	.04	10	10	--	.2
16N.08E.26.43123 VALLE V	77-06-14	167	165	.83	.01	50	0	0	--
16N.08E.32.3413 PUB WELL	77-02-14	335	336	.08	.05	140	30	100	.2
17N.08E.05.323 700 FT WE	77-07-18	--	401	2.6	.02	80	20	--	.1
17N.08E.25.32431 RICHARD	77-04-26	--	193	5.9	.02	40	20	--	.2
17N.09E.32.32142 AGUA FR	77-03-08	191	192	4.4	.06	20	0	0	.4
17N.10E.09.32244A HYDE P	77-07-06	310	323	.30	.01	50	10	0	1.0
18N.09E.31.14121 ERIC SL	77-07-18	--	229	6.0	.01	40	10	--	.8
18N.10E.05.2113 RIO EN M	77-07-28	200	209	.89	.06	20	10	4	--
18N.10E.07 VISTA REDONDA	77-07-28	264	274	.76	.03	60	100	0	--
19N.09E.21.34343 STATE H	77-04-18	--	354	.71	.04	50	30	--	2.7
20N.09E.01.223 CHIMAYO P	77-07-27	337	345	.03	.02	30	220	4	--
20N.09E.01.4444 A J TRUJ	77-03-09	--	161	.38	.05	20	20	--	.8

LOCAL IDENT- IFIER	STATION NUMBER	SITE	DATE OF SAMPLE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
11N.07E.20.11411A ENTRAN	351008106132502	GW	77-06-23	1400	0	0	80	0	0
11N.07E.22.11134 CEDAR GR	351010106112501	GW	77-03-09	1600	6	0	190	0	0
11N.11E.09.1332 WHITE LA	351140105470001	GW	77-08-24	1245	5	400	350	0	0
15N.08E.02.21223 WELL NO	353355106033101	GW	77-02-14	1500	4	200	20	0	0
15N.10E.33.443 EXTENDED	352845105524501	GW	77-03-30	1615	0	0	40	2	0
16N.08E.26.43123 VALLE V	353501106033101	GW	77-06-14	1430	3	0	50	0	0
16N.08E.32.3413 PUB WELL	353406106071101	GW	77-02-14	1615	5	0	140	0	0
17N.09E.32.32142 AGUA FR	353933106004101	GW	77-03-08	1215	0	100	20	0	0
17N.10E.09.32244A HYDE P	354300105530502	GW	77-07-06	1530	1	100	50	0	0
18N.10E.05.2113 RIO EN M	354931105540501	GW	77-07-28	1730	3	400	20	0	0
18N.10E.07 VISTA REDONDA	354832105544901	GW	77-07-28	1930	1	200	60	0	0
20N.09E.01.223 CHIMAYO P	355954105555601	GW	77-07-27	1430	1	700	30	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SANTA FE COUNTY--Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	HEXA- VALENT CHRO- MIUM (CR6) (UG/L) (01032)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
11N.07E.20.11411A ENTRAN	77-06-23	0	2	10	1	4	.0	2	0	30
11N.07E.22.11134CEDAR GR	77-03-09	0	4	10	10	0	.0	1	0	180
11N.11E.09.1332 WHITE LA	77-08-24	0	0	60	0	10	.0	1	0	190
15N.08E.02.21223 WELL NO	77-02-14	0	1	10	2	10	.8	1	0	10
15N.10E.33.443 EXTENDED	77-03-30	0	20	20	3	10	.0	1	0	3500
16N.08E.26.43123 VALLE V	77-06-14	0	10	0	2	0	.1	0	0	20
16N.08E.32.3413 PUB WELL	77-02-14	0	1	30	3	100	.8	0	0	20
17N.09E.32.32142 AGUA FR	77-03-08	0	2	0	1	0	.0	1	0	10
17N.10E.09.32244A HYDE P	77-07-06	0	8	10	3	0	.0	2	0	270
18N.10E.05.2113 RIO EN M	77-07-28	0	1	10	0	4	.0	0	0	40
18N.10E.07 VISTA REDONDA	77-07-28	1	0	100	0	0	.0	0	0	300
20N.09E.01.223 CHIMAYO P	77-07-27	0	0	220	0	4	.0	1	0	20

TORRANCE COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (CA,MG) (MG/L) (00900)
09N.11E.06.3144 STATE HW	350149105485701		GW	77-04-20	1350	310YESO	805	7.5	15.5	--
			GW	77-04-20	1400	310YESO	805	7.5	15.5	360

LOCAL IDENT- I- FIER	DATE OF SAMPLE	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
09N.11E.06.3144 STATE HW	77-04-20	--	--	--	--	--	--	--	--	--
	77-04-20	230	90	32	38	.9	2.5	160	0	230

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTH0. PHOS- PHORUS (P) (MG/L) (00671)
09N.11E.06.3144 STATE HW	77-04-20	--	--	--	--	--	12	--
	77-04-20	12	.7	21	577	558	12	.01

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
09N.11E.06.3144 STATE HW	77-04-20	--	--	--	--
	77-04-20	110	30	10	1.3

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

TORRANCE COUNTY--Continued

LOCAL IDENT- I- FIER	STATION	NUMBER	SITE	DATE OF SAMPLE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
09N.11E.06.3144 STATE HW	350149105485701		GW	77-04-20	1400	2	0	110	0	0

LOCAL IDENT- I- FIER	DATE OF SAMPLE	HEXA- VALENT CHRO- MIUM (CR6) (UG/L) (01032)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
09N.11E.06.3144 STATE HW	77-04-20	0	2	30	0	10	.0	5	0	10

UNION COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	ELEV. OF LAND SURFACE DATUM (FT. ABOVE MSL) (72000)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
29N.28E.12.113 BENNET SP	364604103550110		SP	77-05-31	1600	111CPLN	--	420	8.0	12.0
29N.28E.17.413	364442103584901		GW	77-05-31	1200	111CPLN	6830.00	700	--	15.5
30N.28E.13.344 WELL UNIO	364946103543601		GW	77-06-21	1600	111CPLN	--	315	5.8	17.0
30N.28E.14.411 WELL UNIO	365009103553101		GW	77-06-21	1730	211DKOT	--	440	5.6	13.0

LOCAL IDENT- I- FIER	DATE OF SAMPLE	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)
29N.28E.12.113 BENNET SP	77-05-31	170	0	36	20	26	.9	4.2	210	0
29N.28E.17.413	77-05-31	240	19	42	33	47	1.3	6.7	270	--
30N.28E.13.344 WELL UNIO	77-06-21	150	0	35	14	24	.9	5.4	190	0
30N.28E.14.411 WELL UNIO	77-06-21	150	0	36	14	23	.8	5.1	200	0

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
29N.28E.12.113 BENNET SP	77-05-31	29	10	.8	28	273	3.5
29N.28E.17.413	77-05-31	79	22	.7	28	405	3.0
30N.28E.13.344 WELL UNIO	77-06-21	19	6.0	.4	28	233	1.7
30N.28E.14.411 WELL UNIO	77-06-21	20	6.1	.4	27	240	2.2

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)
29N.28E.12.113 BENNET SP	77-05-31	.03	40	20	0
29N.28E.17.413	77-05-31	.02	70	40	10
30N.28E.13.344 WELL UNIO	77-06-21	.04	40	20	0
30N.28E.14.411 WELL UNIO	77-06-21	.04	40	40	0

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

UNION COUNTY--Continued

LOCAL IDENT- IFIER	STATION	NUMBER	SITE	DATE OF SAMPLE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)
29N.28E.12.113 BENNET SP	364604	103550110	SP	77-05-31	1600	4	4	40	<10	1
29N.28E.17.413	364442	103584901	GW	77-05-31	1200	4	4	70	10	1
30N.28E.13.344 WELL UNIO	364946	103543601	GW	77-06-21	1600	3	3	40	<10	1
30N.28E.14.411 WELL UNIO	365009	103553101	GW	77-06-21	1730	3	3	40	<10	1

LOCAL IDENT- IFIER	DATE OF SAMPLE	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)
29N.28E.12.113 BENNET SP	77-05-31	0	0	<50	0	<10	8	30	20	<100
29N.28E.17.413	77-05-31	10	10	<50	0	70	24	750	40	200
30N.28E.13.344 WELL UNIO	77-06-21	0	0	<50	0	20	2	20	20	<100
30N.28E.14.411 WELL UNIO	77-06-21	20	10	<50	0	40	11	120	40	<100

LOCAL IDENT- IFIER	DATE OF SAMPLE	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
29N.28E.12.113 BENNET SP	77-05-31	8	0	0	.1	.0	3	2	10	10
29N.28E.17.413	77-05-31	5	10	10	.0	.0	8	8	280	150
30N.28E.13.344 WELL UNIO	77-06-21	3	0	0	.0	.0	4	4	20	20
30N.28E.14.411 WELL UNIO	77-06-21	12	0	0	.0	.0	2	2	140	100

VALENCIA COUNTY

LOCAL IDENT- IFIER	STATION	NUMBER	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (FT) (72019)	TOTAL DEPTH OF WELL (FT) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)
07N.02E.23.212 165FOOT W	344932	106415101	GW	77-08-03	1400	--	6.00	165	--	--
07N.02E.23.212A 40FOOT W	344932	106415102	GW	77-08-03	1400	--	7.50	40	--	--
07N.02E.28.333	345006	106423001	GW	76-11-15	1230	--	7.00	177	175	165
09N.06W.02.1234 76-7 WE	350232	107263701	GW	77-01-27	0840	110AVMB	--	170	--	--
09N.06W.05.2221 76-6 WE	350240	107291201	GW	77-01-25	0815	110AVMB	--	120	--	--
10N.08W.26.3411 76-8 WE	350344	107391901	GW	77-01-19	0745	110AVMB	--	135	--	--
10N.08W.28.3143B MCCART	350349	107413401	GW	77-01-21	0800	110AVMB	--	--	--	--

LOCAL IDENT- IFIER	DATE OF SAMPLE	ELEV. OF LAND SURFACE DATUM (FT) ABOVE MSL) (72000)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	INSTAN- TANEOUS FLOW RATE (GPM) (00059)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)
07N.02E.23.212 165FOOT W	77-08-03	--	--	--	295	8.2	110	3	29	9.0
07N.02E.23.212A 40FOOT W	77-08-03	--	--	--	295	7.6	620	370	200	30
07N.02E.28.333	76-11-15	--	60	10	583	7.8	240	150	67	18
09N.06W.02.1234 76-7 WE	77-01-27	5890.00	--	--	2900	7.6	700	360	130	91
09N.06W.05.2221 76-6 WE	77-01-25	5930.00	--	--	2400	7.8	510	160	81	75
10N.08W.26.3411 76-8 WE	77-01-19	6145.00	--	--	4000	7.7	1500	1200	300	170
10N.08W.28.3143B MCCART	77-01-21	6180.00	--	--	1300	7.8	310	33	68	34

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

VALENCIA COUNTY--Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)
07N.02E.23.212 165FOOT W	77-08-03	20	.8	5.5	130	0	38	11	.4	45
07N.02E.23.212A 40FOOT W	77-08-03	98	1.7	8.5	310	0	330	200	.2	33
07N.02E.28.333	76-11-15	22	.6	5.3	112	0	150	45	.3	32
09N.06W.02.1234	76-7 WE 77-01-27	410	6.7	6.4	418	0	970	220	1.1	25
09N.06W.05.2221	76-6 WE 77-01-25	400	7.7	8.3	424	0	790	170	1.5	32
10N.08W.26.3411	76-8 WE 77-01-19	460	5.3	8.8	361	0	1700	290	1.0	30
10N.08W.28.3143B	MCCART 77-01-21	170	4.2	4.6	337	0	370	43	.7	19

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)
07N.02E.23.212 165FOOT W	77-08-03	222	--	--	--	--	--
07N.02E.23.212A 40FOOT W	77-08-03	1050	--	--	--	--	--
07N.02E.28.333	76-11-15	395	--	.11	--	--	.00
09N.06W.02.1234	76-7 WE 77-01-27	2060	.54	.57	.64	.04	.04
09N.06W.05.2221	76-6 WE 77-01-25	1770	.41	.43	.43	.07	.06
10N.08W.26.3411	76-8 WE 77-01-19	3140	.44	.45	.47	.05	.05
10N.08W.28.3143B	MCCART 77-01-21	877	.23	.25	.23	.03	.02

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
07N.02E.23.212 165FOOT W	77-08-03	50	90	--	--
07N.02E.23.212A 40FOOT W	77-08-03	160	10	--	--
07N.02E.28.333	76-11-15	--	30	10	--
09N.06W.02.1234	76-7 WE 77-01-27	470	10	--	1.1
09N.06W.05.2221	76-6 WE 77-01-25	470	10	--	.9
10N.08W.26.3411	76-8 WE 77-01-19	380	10	--	.9
10N.08W.28.3143B	MCCART 77-01-21	200	10	--	.7

LOCAL IDENT- I- FIER	STATION	NUMBER	SITE	DATE OF SAMPLE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL CAD- MIUM (CD) (UG/L) (01027)
09N.06W.02.1234	76-7 WE	350232107263701	GW	77-01-27	0840	2	0	490	470	10
09N.06W.05.2221	76-6 WE	350240107291201	GW	77-01-25	0815	3	0	480	470	10
10N.08W.26.3411	76-8 WE	350344107391901	GW	77-01-19	0745	0	0	390	380	10
10N.08W.28.3143B	MCCART	350349107413401	GW	77-01-21	0800	1	0	230	200	10

LOCAL IDENT- I- FIER	DATE OF SAMPLE	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	TOTAL COBALT (CO) (UG/L) (01037)	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL MAN- GANESE (MN) (UG/L) (01055)
09N.06W.02.1234	76-7 WE 77-01-27	0	<50	70	6300	10	<100	260	250	350
09N.06W.05.2221	76-6 WE 77-01-25	0	<50	10	1900	10	<100	390	370	110
10N.08W.26.3411	76-8 WE 77-01-19	0	<50	<10	590	10	<100	380	360	320
10N.08W.28.3143B	MCCART 77-01-21	0	<50	<10	1300	10	<100	90	90	390

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

VALENCIA COUNTY--Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	TOTAL MERCURY (HG) (71900)	TOTAL MOLYB- DENUM (MO) (01062)	TOTAL SELE- NIUM (SE) (01147)	TOTAL SILVER (AG) (01077)	TOTAL STRON- TIUM (SR) (01082)	DIS- SOLVED VANA- DIUM (V) (01085)
09N.06W.02.1234 76-7 WE	77-01-27	.1	4	3	<10	2800	2.9
09N.06W.05.2221 76-6 WE	77-01-25	.1	7	2	<10	1800	3.6
10N.08W.26.3411 76-8 WE	77-01-19	.1	5	1	<10	5000	2.1
10N.08W.28.3143B MCCART	77-01-21	.0	5	0	<10	2600	.0

LOCAL IDENT- I- FIER	STATION	NUMBER	SITE	DATE OF SAMPLE	TIME	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDE GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDE GROSS BETA AS CS-137 (PC/L) (03516)
09N.06W.02.1234 76-7 WE	350232107263701		GW	77-01-27	0840	42	<32	2.4	10	2.6
09N.06W.05.2221 76-6 WE	350240107291201		GW	77-01-25	0815	420	<30	12	8.1	12
10N.08W.26.3411 76-8 WE	350344107391901		GW	77-01-19	0745	<1	<46	<.4	<14	.4
10N.08W.28.3143B MCCART	350349107413401		GW	77-01-21	0800	<1	<10	<.4	7.3	<.4

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DIS- SOLVED GROSS BETA AS SR90 (PC/L) (80050)	SUS- PENDE GROSS BETA AS SR90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)	DIS- SOLVED URANIUM (U) (UG/L) (80020)
09N.06W.02.1234 76-7 WE	77-01-27	8.2	2.1	.19	7.2	--
09N.06W.05.2221 76-6 WE	77-01-25	6.5	10	.09	7.9	--
10N.08W.26.3411 76-8 WE	77-01-19	<12	<.4	.15	5.5	--
10N.08W.28.3143B MCCART	77-01-21	5.8	<.4	.06	--	.30

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FACTORS FOR CONVERTING U.S. CUSTOMARY UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the U.S. customary units published herein to the International System of Units (SI). Subsequent reports will contain both the U.S. customary and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

Multiply U.S. customary units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons