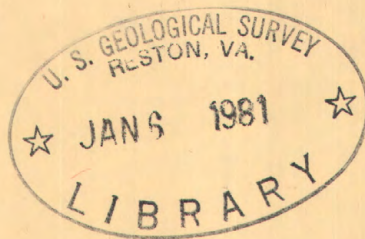


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Water Resources Data for New Mexico

Part 2. Water Quality Records



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

CALENDAR FOR WATER YEAR 1971

OCTOBER 1970

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER 1970

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

DECEMBER 1970

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

JANUARY 1971

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

FEBRUARY 1971

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

MARCH 1971

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL 1971

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

MAY 1971

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

JUNE 1971

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

JULY 1971

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

AUGUST 1971

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

SEPTEMBER 1971

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

1971

**Water Resources Data
for
New Mexico**

Part 2. Water Quality Records



**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

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

Prepared in cooperation with

New Mexico Office of the State Engineer
New Mexico Interstate Stream Commission
New Mexico Institute of Mining and Technology
Pecos River Commission
Environmental Protection Agency
Bureau of Reclamation, U.S. Department of the
Interior
Soil Conservation Service, U.S. Department of
Agriculture
Corps of Engineers, U.S. Army

Streamflow records for New Mexico are contained
in the companion volume to this report. It is
entitled: Water Resources Data for New Mexico,
1971, Part 1. Surface Water Records

Copies of this report may be obtained from the
District Chief, Water Resources Division
U.S. Geological Survey
P.O. Box 4369
Albuquerque, New Mexico 87106

1974

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WATER RESOURCES DATA FOR NEW MEXICO, 1971

Part 2. Water-Quality Records

INTRODUCTION

Water-resources investigations of the U.S. Geological Survey include the collection of water-quality data on the chemical and physical characteristics of surface- and ground-water supplies of the Nation. These data for the 1971 water year and 1971 calendar year for the quality of surface and selected ground waters in New Mexico are presented in this report. Prior reports were published on a water year basis. Subsequent reports will be published on a calendar year basis. These data represent the New Mexico portion of the National Water Data System. Data for a few water-quality stations in bordering States are also included. These data were collected by the Water Resources Division of the U.S. Geological Survey under the direction of W. E. Hale, New Mexico District Chief.

New Mexico District personnel who contributed significantly to the collection and organization of the data in this report were: Kim Ong, supervisory chemist; Jack D. Dewey, supervisory hydraulic engineer; Richard L. Lepp, biologist; Joseph E. O'Neill, chemist; David E. Funderburg, engineering technician; Bruce M. Delaney, engineering technician; Trancito Diaz, engineering technician; Robert M. McBreen, physical science technician, Emilio Pargas, engineering aid and Linda V. Beal, card punch operator. Appreciation is expressed to numerous other District personnel and individuals outside the District who helped with this report, but whose names are not listed for practical reasons.

Water-quality information is presented for chemical quality, water temperatures, and fluvial sediment. Chemical quality includes concentrations of individual dissolved constituents and certain properties or characteristics such as hardness, sodium adsorption ratio, specific conductance, and pH. Water-temperature data represent once-daily observations except for stations where a continuous temperature recorder furnishes information from which daily maximums and minimums are obtained. Fluvial-sediment information is given for suspended-sediment discharges and concentrations, total sediment discharges, and for particle size distribution of suspended sediment and bed material.

The Geological Survey, beginning with the 1941 water year, has published an annual series of water-supply papers, "Quality of Surface Waters of the United States," which contained the chemical-quality, temperature, and sediment data of the water. Each volume covered an area whose boundaries coincided with those of certain natural drainage areas. The records for New Mexico are contained in Parts 7, 8, and 9 of the water-supply paper series. (See table 4, p. 17.) These publications are available in most public libraries. Beginning with the 1964 water year, water-quality records for surface and ground water have been released by the Geological Survey on a state boundary basis. This report is one of such reports and is primarily for local and immediate use, and its distribution is limited. Records in this report will be published later in Geological Survey water-supply papers.

Prior to the 1968 water year, data for chemical constituents and concentration of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967 the U.S. Geological Survey began to use the metric system; data for chemical constituents and concentrations of suspended sediment are now reported in milligrams per liter (mg/l) or micrograms per liter (ug/l) and water temperatures are given in degrees Celsius (centigrade, °C). In waters with a density of 1.000 grams per milliliter (g/ml), parts per million and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/ml, values in milligrams per liter may be converted to parts per million by dividing by the density. (See section in this report on "Collection and Examination of Data" for further information.)

COOPERATION

Data in this report were obtained as part of the Federal program of the U.S. Geological Survey or in cooperation with the following State, Interstate, or Federal Agencies:

New Mexico State Engineer, S. E. Reynolds.

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

New Mexico Institute of Mining and Technology, S. A. Colgate, president.

Pecos River Commission, John W. Odell succeeded by H. M. Babcock, federal representative and chairman, Robert E. Pritchett succeeded by J. B. Walker, commissioner for New Mexico, Mr. R. B. McGowen, commissioner for Texas.

Environmental Protection Agency (formerly Federal Water Pollution Control Administration and Federal Water Quality Administration).
Bureau of Reclamation, U.S. Department of the Interior.
Corps of Engineers, U.S. Army.
Soil Conservation Service, U.S. Department of Agriculture.

DEFINITION OF TERMS

Terms related to water-quality and hydrologic data, as used in this report are defined as follows:

Acre-foot (AC-FT, ac-ft) is a 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.

Bed material is the shifting portion of fragmented alluvial material of which the streambed is composed.

Benthic organisms are aquatic bottom-dwelling organisms which include such animals as sponges, oysters, insects, snails, clams, and worms.

Biochemical oxygen demand (BOD) is the amount of oxygen required by bacteria while stabilizing decomposable organic matter under aerobic conditions.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.983471 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inches from 1 square mile.

Chemical oxygen demand (COD) indicates the quantity of oxidizable compounds present in water and varies with water compositions, temperature, period of contact, and other factors.

Coliform organisms are a group of bacteria used as an indicator of the sanitary quality of the water. The number of coliform colonies per 100 milliliters is determined by the immediate or delayed incubation membrane filter method.

Composite-period is the time interval in which samples collected during that period are combined into a single composite sample. The chemical analysis and other measurements made on the composite sample are assumed to be representative of the entire period. The composite periods in this report vary from one day to one month and are based upon changes in the specific conductances of daily samples and/or changes in daily discharges. In this report "sampling period" and "composite period" are used interchangeably.

Cubic foot per second (CFS, cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

Discharge is the volume of water (or more broadly, total fluids), that passes a given point within a given period of time.

Mean discharge is the arithmetic average of individual discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time. If this discharge is reported instead of the daily mean, the heading of the discharge column in the tables is "Discharge (cfs)."

Discharge-weighted average, (see weighted average).

Drainage area of a stream at a specified location is that area, measured in horizontal plane, enclosed by topographic divides from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point.

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 body of impounded surface water together with all tributary surface stream and bodies of impounded surface water.

Gage height 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 gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those sites where a continuous record of discharge is computed.

Hardness of water is a physical-chemical characteristic attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

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

Milliequivalents per liter (ME/L, me/l) is a unit for expressing chemical equivalent concentrations of ions or constituents in solution. Concentrations in milligrams per liter are converted to milliequivalents per liter by multiplying by the appropriate factors in table 1, page 6. The factors are reciprocals of equivalent weights and are calculated by dividing the valences by the atomic or formula weights. The term "milliequivalents" is a contraction of the more precise term "milligram equivalents."

Milligrams per liter (MG/L, mg/l) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the weight of solute per unit volume of water. Milligrams per liter may be converted to parts per million (ppm) by dividing by the density in grams per milliliter. Concentration of suspended sediment also is expressed in mg/l, and is based on the weight of sediment per liter of water-sediment mixture. Sediment concentrations may be converted to parts per million by using the factors in table 2, page 6.

Partial-record station is a particular site where limited streamflow 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 either by 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) (Guy, 1969). Fall diameter of a particle is the diameter of a quartz sphere that would fall in water at the same rate as the particle under the same settling conditions.

Particle-size classification, used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

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

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis (Guy, 1969).

Table 1.--Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter

<u>Ion</u>	<u>Multi- ply by</u>	<u>Ion</u>	<u>Multi- ply by</u>
Aluminum (Al^{+3}) *....	0.11119	Iodide (I^{-1})	0.00788
Ammonia as NH_4^{+1} ....	.05544	Iron (Fe^{+3}) *.....	.05372
Barium (Ba^{+2}) .....	.01456	Lead (Pb^{+2}) *.....	.00965
Bicarbonate (HCO_3^{-1})..	.01639	Lithium (Li^{+1}) *....	.14411
Bromide (Br^{-1}) .....	.01251	Magnesium (Mg^{+2}) ...	.08226
Calcium (Ca^{+2}) .....	.04990	Manganese (Mn^{+2}) *..	.03640
Carbonate (CO_3^{-2}) ...	.03333	Nickel (Ni^{+2}) *.....	.03406
Chloride (Cl^{-1}) .....	.02821	Nitrate (NO_3^{-1}) ....	.01613
Chromium (Cr^{+6}) *....	.11539	Nitrite (NO_2^{-1}) ....	.02174
Cobalt (Co^{+2}) *.....	.03394	Phosphate (PO_4^{-3}) ..	.03159
Copper (Cu^{+2}) *.....	.03148	Potassium (K^{+1}) ....	.02557
Cyanide (CN^{-1}) .....	.03844	Sodium (Na^{+1}) .....	.04350
Fluoride (F^{-1}) .....	.05264	Strontium (Sr^{+2}) *..	.02283
Hydrogen (H^{+1}) .....	.99209	Sulfate (SO_4^{-2}) ....	.02082
Hydroxide (OH^{-1}) ....	.05880	Zinc (Zn^{+2}) *.....	.03060

*Concentrations given in micrograms per liter in this report; multiply concentration by factor and divide results by 1,000.

Table 2.--Factors for conversion of sediment concentration in milligrams per liter to parts per million*

(All values calculated to three significant figures)

<u>Range of concentration in 1000 mg/l</u>	<u>Di- vide by</u>	<u>Range of concentration in 1000 mg/l</u>	<u>Di- vide by</u>	<u>Range of concentration in 1000 mg/l</u>	<u>Di- vide by</u>	<u>Range of concentration in 1000 mg/l</u>	<u>Di- vide by</u>
0 - 8	1.00	201-217	1.13	411-424	1.26	619-634	1.39
8.05- 24	1.01	218-232	1.14	427-440	1.27	636-650	1.40
24.2 - 40	1.02	234-248	1.15	443-457	1.28	652-666	1.41
40.5 - 56	1.03	250-264	1.16	460-473	1.29	668-682	1.42
56.5 - 72	1.04	266-280	1.17	476-489	1.30	684-698	1.43
72.5 - 88	1.05	282-297	1.18	492-506	1.31	700-715	1.44
88.5 -104	1.06	299-313	1.19	508-522	1.32	717-730	1.45
105 -120	1.07	315-329	1.20	524-538	1.33	732-747	1.46
121 -136	1.08	331-345	1.21	540-554	1.34	749-762	1.47
137 -152	1.09	347-361	1.22	556-570	1.35	765-780	1.48
153 -169	1.10	363-378	1.23	572-585	1.36	782-796	1.49
170 -185	1.11	380-393	1.24	587-602	1.37	798-810	1.50
186 -200	1.12	395-409	1.25	604-617	1.38		

*Based on water density of 1.000 g/ml and a specific gravity of sediment of 2.65.

Sediment is solid material that originates mostly from disintegrated rocks and is transformed 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 discharge 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 by volume, that is discharged in a given time. It is computed by multiplying discharge times concentration in mg/l times 0.0027.

Total sediment discharge or total sediment load is the sum of the suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry weight or volume, that is discharged during a given time (Colby and Hubbell, 1961).

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

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

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 and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content in the water. Commonly, the amount of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos per cm at 25°C). This relation is not constant from stream to stream or from aquifer to aquifer, and it may even vary in the same source with changes in the composition of the water. The terms "specific conductance" and "conductivity" are used interchangeably in this report.

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." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Thermograph is a temperature sensing device that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" implies the use of a thermograph or other automatic temperature recording device.

Time-weighted average concentration in this report is computed by multiplying the number of days in individual composite periods by the concentration for the corresponding periods and dividing the sum of these products by the total number of days. An annual time-weighted average concentration represents the composition of the water that would be contained in a vessel or reservoir that had received equal volumes of water from the sampled stream for each day of the year. (See composite period, weighted average.)

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

Tons per day is the quantity of a substance in a solution or suspension that passes a stream section during a 24-hour day. When tons per day are computed from instantaneous discharges and concentrations it is assumed that these values are representative of the 24-hour period.

Weighted average concentration is synonymous to discharge-weighted average concentration in this report. It is computed by multiplying the total discharge for a composite period by the concentration for the corresponding period and dividing the sum of these products by the sum of the discharges. An annual discharge-weighted average concentration represents the composition of the water that would be contained in a reservoir that had received all the water that flowed from the sampled stream during the year. (See composite period, time-weighted average.)

SPECIAL NETWORKS AND PROGRAMS

Some of the stations for which data are published in this report are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

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.

Irrigation network stations are water-quality stations located at or near certain streamflow gaging stations west of the main stem of the Mississippi River. Data collected at these stations are used to evaluate the chemical quality of surface waters used for irrigation and the changes resulting from the drainage of irrigated lands. Prior to water year 1966, the data for these stations were published in the annual water-supply paper series, "Quality of Surface Water for Irrigation, Western States."

Pesticide program is a network of regularly sampled water-quality stations where additional monthly samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

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 coliform bacteria are collected at all these stations. Data for trace elements, radiochemicals, and pesticides are collected at some of these stations.

DOWNSTREAM ORDER AND STATION NUMBERS

Stations are listed in downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of water-quality stations in the front of this report the rank of tributaries is indicated by indentation, each indentation representing one rank.

As an added means of identification, each water-quality station, gaging 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 and continuous-record stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the 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 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 basins), and Part 09 (Colorado River basin). All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

Miscellaneous surface water sites which have not been assigned an eight-digit downstream number are identified by using the latitudes and longitudes of the sites as station numbers.

LOCAL IDENTIFIER AND STATION NUMBER FOR WELLS AND SPRINGS

Wells and springs in this report are identified by local identifiers derived from a system used by the U.S. Geological Survey for numbering wells and springs in New Mexico. The local identifier is based on the system of public land 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, as illustrated on page 11. 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 Figure 1.

Wells and springs in this report are also identified by a station number which is essentially the latitude and the longitude locating the well or the spring. This station number is the principal identifier or wells and springs in the Water Resources Division's National Data System.

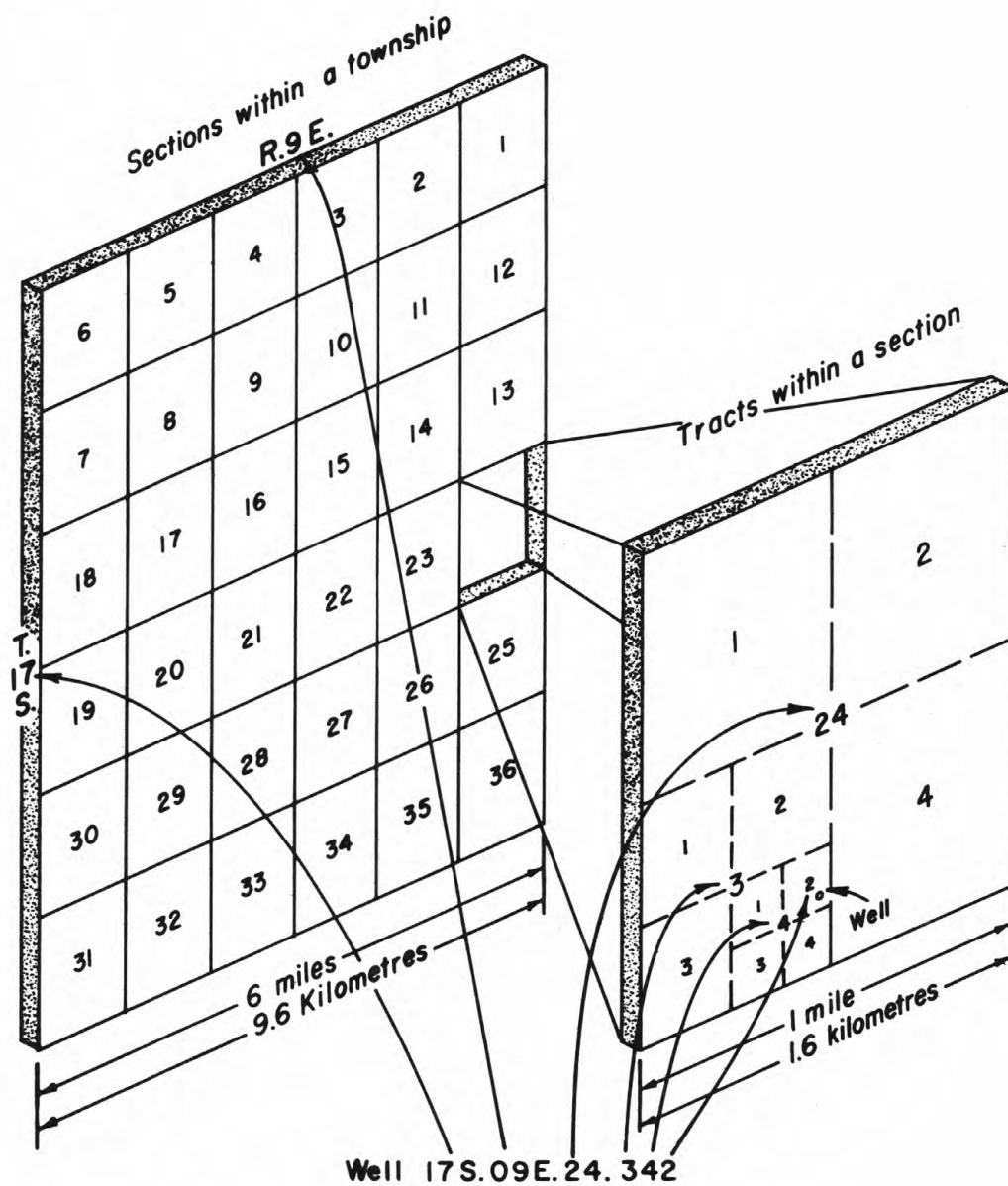


Figure 1.--System of numbering wells and springs in New Mexico.

COLLECTION AND EXAMINATION OF DATA

Water samples for analyses and water-quality field measurements usually are collected at or near points on streams where gaging stations are maintained by the U.S. Geological Survey for measurement of water discharge. Discharge records for streams in New Mexico have been released in the report "Water Resources Data for New Mexico, 1970, Part 1. Surface Water Records." Most of these records are used in conjunction with the computations of the chemical constituents and sediment loads in this report.

Data on the quality of surface water were collected daily at some stations and less frequently at other stations; the locations of the stations are shown on the map on page 13, Figure 2.

The data in this report includes a description of the sampling station and tabulations of the samples analyzed. The description of the sampling station gives the location, drainage area, periods of record for the various water-quality data, extremes of the pertinent data, and general remarks, in a format similar to that used for stream-flow gaging stations. For miscellaneous surface-water sites no descriptive statements are given. For ground-water sampling stations, no descriptive statements are given either. However, the well number, depth of well, date of sampling, and other pertinent data if available are given in the tables containing the chemical analyses of ground water.

Solutes

The methods of collecting and analyzing water samples for determining the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman (1970). 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 the mixing of the stream. Some must be sampled at several verticals across the channel to determine accurately the solute load.

The daily chemical-quality data in this report generally represent discharge-weighted composites for one- to thirty-day periods; the composite periods are selected on the basis of changes in the specific conductance of the daily samples and fluctuation of water discharge.

Ground-water quality at a site generally does not change significantly during short periods of time. Changes in quality with time often are shown satisfactorily by analysis of samples taken seasonally or annually.

Temperature

Water temperatures are measured at most of the water-quality stations. For daily stations, the water temperatures are taken at about the same time each day. Water samples are collected at the same time. The water temperature records listed under "Records Available" of some station headings are for daily water temperature records. Large streams have a 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 continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day and the monthly averages. To convert temperatures between degrees Celsius (°C) and degrees Fahrenheit (°F), see table 3, below.

Table 3.--Temperature conversion table, degrees
Fahrenheit (°F) and degrees Celsius (°C)*
(Temperature reported to nearest 0.5°C)

°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
32	0.0	50	10.0	68	20.0	86	30.0	104	40.0
33	.5	51	10.5	69	20.5	87	30.5	105	40.5
34	1.0	52	11.0	70	21.0	88	31.0	106	41.0
35	1.5	53	11.5	71	21.5	89	31.5	107	41.5
36	2.0	54	12.0	72	22.0	90	32.0	108	42.0
37	3.0	55	13.0	73	23.0	91	33.0	109	43.0
38	3.5	56	13.5	74	23.5	92	33.5	110	43.5
39	4.0	57	14.0	75	24.0	93	34.0	111	44.0
40	4.5	58	14.5	76	24.5	94	34.5	112	44.5
41	5.0	59	15.0	77	25.0	95	35.0	113	45.0
42	5.5	60	15.5	78	25.5	96	35.5	114	45.5
43	6.0	61	16.0	79	26.0	97	36.0	115	46.0
44	6.5	62	16.5	80	26.5	98	36.5	116	46.5
45	7.0	63	17.0	81	27.0	99	37.0	117	47.0
46	8.0	64	18.0	82	28.0	100	38.0	118	48.0
47	8.5	65	18.5	83	28.5	101	38.5	119	48.5
48	9.0	66	19.0	84	29.0	102	39.0	120	49.0
49	9.5	67	19.5	85	29.5	103	39.5	121	49.5

$$^{\circ}\text{C} = 5/9 (^{\circ}\text{F} - 32^{\circ}) \text{ or } ^{\circ}\text{F} = 9/5 (^{\circ}\text{C}) + 32^{\circ}.$$

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 section.

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 sub-divided 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 sub-divided 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 periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

Biology

The biological analyses in this report were performed on samples of aquatic benthic (bottom-dwelling) organisms collected by use of a square-foot surber sampler or artificial substrate. The surber sampler is a one-foot square frame with a conical net attached. The frame is implanted firmly on the bottom of a shallow stream, usually in a riffle zone. The stones, rocks, and gravels within the square frame are scrubbed and washed to dislodge any organisms which are then carried by the current into the collection net. An artificial substrate is made by suspending a basket of rocks into a stream. After a specified period, usually six weeks to two months, the basket is removed from the stream, and any organisms are collected from the rocks.

At least three sections within a stream cross section are sampled in an attempt to obtain a representative sample. The presence or absence of certain organisms in the benthic zone may be used as an indicator of the water-quality conditions within the stream.

PARAMETER CODES

The five-digit codes shown in parentheses in the column headings of some 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.

WATER-SUPPLY PAPERS

Table 4, below, shows the annual series of Water-Supply Papers that give information on quality of surface waters in New Mexico. Data for the Lower Mississippi River basin are given in Part 7; for the Western Gulf of Mexico basins in Part 8; and for the Colorado River basin in Part 9.

Table 4.--Water-supply paper numbers and parts containing quality of surface water for New Mexico

<u>Report year</u>	<u>Parts 1-14</u>	<u>Parts 7-8</u>	<u>Parts 9-14</u>	<u>Irri- gation A</u>
1941.....	942	----	----	----
1942.....	950	----	----	----
1943.....	970	----	----	----
1944.....	1022	----	----	----
1945.....	1030	----	----	----
1946.....	1050	----	----	----
1947.....	1102	----	----	----
1948.....	----	1133	1133	----
1949.....	----	1163	1163	----
1950.....	----	1188	1189	----
1951.....	----	1199	1200	1264
1952.....	----	1252	1253	1362
1953.....	----	1292	1293	1380
1954.....	----	1352	1353	1430
1955.....	----	1402	1403	1465
1956.....	----	1452	1453	1485
1957.....	----	1522	1523	1524
1958.....	----	1573	1574	1575
1959.....	----	1644	1645	1699
1960.....	----	1744	1745	1746
1961.....	----	1884	1885	1886
1962.....	----	1944	1945	1946
1963.....	----	1950	1951	1952
1964.....	----	1957	1958	1967
1965.....	----	1964	1965	1968
1966.....	----	1994	1995	----
1967.....	----	2014	2015	----
1968.....	----	2096, B2097	2098	----
1969.....	----	B2146, 2147	B2148	----
1970.....	----	B2156, 2157	B2158	----
1971.....	----	B2166, 2167	B2168	-----

A "Quality of Surface Waters for Irrigation, Western States."

B In preparation. These reports contain Parts 7, 8 or 9. Parts 10 to 14 in these or other reports.

SELECTED REFERENCES

- Brown, E., Skougstad, M. W., and Fishman, M. J., 1970, Methods for collection and analysis of water samples for dissolved minerals and gases: U.S. Geol. Survey Techniques of Water Resources Inv. Manual, Book 5, Chap. A1, 160 p.
- Clarke, F. W., 1924, The composition of the river and lake waters of the United States: U.S. Geol. Survey Prof. Paper 135, 199 p.
- Colby, B. R., 1963, Fluvial sediments--a summary of source, transportation, deposition, and measurement of sediment discharge: U.S. Geol. Survey Bull. 1181-A, 47 p.
- Colby, B. R., and Hubbell, D. W., 1961, Simplified methods for computing total sediment discharge with the modified Einstein procedure: U.S. Geol. Survey Water-Supply Paper 1593, 17 p.
- Guy, H. P., 1969, Laboratory theory and methods for sediment analyses: U.S. Geol. Survey Techniques of Water Resources Inv. Manual, Book 5, Chap. C1, 58 p.
- Hale, W. E., Reiland, L. J., and Beverage, J. P., 1965, Characteristics of the water supply in New Mexico, New Mexico State Engineer Tech. Rept. 31, 131 p.
- Hem, J. D., 1952, Quality of water Conchas Reservoir, New Mexico, 1939-49: U.S. Geol. Survey Water-Supply Paper 1110-C, 127 p.
- 1970, Study and interpretation of the chemical characteristics of natural water: U.S. Geol. Survey Water-Supply Paper 1473, second ed., 363 p.
- Lane, E. W., and others, 1947, Report of subcommittee on sediment terminology: Am. Geophys. Union Trans., v. 28, no. 6, p. 936-938.
- Langbein, W. B., and Iseri, K. T., 1960, General introduction and hydrologic definitions: U.S. Geol. Survey Water-Supply Paper 1541-A, 29 p.
- McGuinness, C. L., 1963, The role of ground water in the national water situations: U.S. Geol. Survey Water-Supply Paper 1800, 1, 121 p.
- Meinzer, O. E., 1923a, The occurrence of ground water in the United States: U.S. Geol. Survey Water-Supply Paper 489, 321 p.
- 1923b, Outline of ground-water hydrology, with definitions: U.S. Geol. Survey Water-Supply Paper 494, 71 p.

Ong, K., and Hale, W. E., 1967, Water quality standards, appendix A., Figures and tables summarizing quality of water data at selected sampling stations, New Mexico Water Quality Control Commission, 280 p.

Scofield, C. S., 1938, Quality of water of the Rio Grande basin above Fort Quitman, Texas: U.S. Geol. Survey Water-Supply Paper 839, 294 p.

Stabler, H., 1911, Some stream waters of the western United States: U.S. Geol. Survey Water-Supply Paper 274, 188 p.

U.S. Inter-Agency Committee on Water Resources, Subcommittee on Sedimentation, A study of methods used in measurement and analysis of sediment loads in streams. Published by the St. Anthony Falls Hydraulic Laboratory, Minneapolis, Minn.

———1957, The development and calibration of visual accumulation tube: Rept. 11.

———1957, Some fundamentals of particle size analysis: Rept. 12.

———1959, Federal Inter-agency sedimentation instruments and reports: Rept. AA.

———1961, The single stage samples for suspended sediment: Rept. 13.

———1963, Determinations of fluvial sediment discharge: Rept. 14.

ARKANSAS RIVER BASIN

07153500 DRY CIMARRON RIVER NEAR GUY, N. MEX.

LOCATION.--Lat 36°59'15", long 103°25'25", in SE¼ sec.21, T.32 N., R.33 E., Union County, at gaging station 1.5 miles upstream from Baker damsite, 1.7 miles northwest of Valley, 3.0 miles upstream from Travesser Creek, 12 miles north of Guy, and 26 miles northwest of Kenton, Okla.

DRAINAGE AREA.--545 sq mi.

PERIOD OF RECORD.--Chemical analyses: September 1969 to December 1971.
Sediment records: April 1963 to June 1968.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (000600)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- ASSIUM (K) (MG/L) (00935)	DIS- SOLVED BICAR- BONATE (CO3) (MG/L) (00440)	DIS- SOLVED CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
OCT., 1970											
13...	1505	1.8	8.5	--	72	68	140	4.4	230	0	500
NOV.											
09...	1245	1.9	12	--	91	68	130	4.4	289	0	500
DEC.											
08...	1430	2.0	14	--	80	88	110	4.2	258	0	500
JAN., 1971											
12...	1230	9.3	24	--	120	79	130	5.1	374	0	520
FEB.											
03...	1010	2.3	14	--	96	67	120	4.4	296	0	490
MAR.											
08...	1345	2.9	16	--	73	73	120	4.2	257	0	500
APR.											
28...	1625	1.3	8.3	30	72	72	130	4.9	240	0	490
MAY											
13...	1300	3.3	18	--	72	42	80	7.1	241	0	320
JUNE											
08...	1035	.40	16	--	80	60	130	5.7	271	0	450
JULY											
12...	1600	.06	22	--	80	64	120	5.5	255	0	500
AUG.											
17...	1615	1.4	15	--	75	60	110	5.6	206	0	500
SEP.											
10...	1215	.74	15	--	80	63	130	4.7	246	0	520
OCT.											
01...	1340	1.0	12	20	74	64	130	4.9	227	0	540
18...	1255	14	12	10	81	53	96	6.9	222	0	430
NOV.											
11...	1340	1.9	8.5	--	83	66	140	6.2	275	0	520
DEC.											
06...	1430	2.1	16	--	96	69	140	5.4	274	0	510
21...	1315	2.0	--	--	--	--	--	--	--	--	--

DATE	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)	DIS- SOLVED FLUOR- IDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE NITRATE (N) (MG/L) (00631)	DIS- SOLVED SOLIDS PLUS CONSTI- TUENTS (MG/L) (70301)	MAN- D- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BOD (B) (MG/L) (01020)
OCT., 1970											
13...	22	.7	1.3	930	460	271	2.8	1310	7.8	15.0	30
NOV.											
09...	22	.6	2.1	970	510	273	2.5	1360	7.8	12.0	--
DEC.											
08...	22	.7	2.1	955	560	350	2.0	1350	7.9	6.0	--
JAN., 1971											
12...	25	.6	4.6	1100	620	313	2.3	1590	7.8	.0	--
FEB.											
03...	24	.9	.20	970	520	277	2.3	1350	8.1	3.0	--
MAR.											
08...	23	.4	1.4	942	480	270	2.4	1370	8.0	15.0	--
APR.											
28...	27	.5	.10	924	480	280	2.6	1410	8.1	23.0	230
MAY											
13...	15	.5	.91	677	350	150	1.9	913	8.1	26.0	--
JUNE											
08...	21	.6	.03	897	450	220	2.7	1260	8.1	23.0	--
JULY											
12...	23	.7	.10	941	460	250	2.4	1340	7.9	32.0	--
AUG.											
17...	23	.5	.11	891	430	270	2.3	1240	8.1	30.0	--
SEP.											
10...	19	.6	.00	953	460	260	2.6	1340	8.2	25.0	--
OCT.											
01...	22	.5	.17	960	450	260	2.7	1380	8.2	20.0	200
18...	21	.4	2.2	819	420	240	2.0	1200	7.5	12.0	160
NOV.											
11...	25	.4	.75	988	480	250	2.8	1390	7.5	13.0	--
DEC.											
06...	25	.6	2.4	1010	520	300	2.7	1430	8.0	8.0	--
21...	--	--	--	--	--	--	--	568	--	3.0	--

ARKANSAS RIVER BASIN

21

07199000 CANADIAN RIVER NEAR HEBRON, N. MEX.

LOCATION.--Lat 36°47'14", long 104°27'42", Colfax County, in Maxwell Grant at gaging station, on highway bridge on U.S. Highways 64 and 85, 3.1 miles north of Hebron, 5.0 miles upstream from Chicorica Creek, and 8.0 miles south of Raton.

DRAINAGE AREA.--229 sq mi.

PERIOD OF RECORD.--Chemical analyses: February 1966 to December 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (000660)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L) (00933)	DIS- SOLVED POTAS- SIUM (K) (MG/L) (00935)
OCT., 1970									
13...	1645	.08	8.9	--	152	63	--	167	--
NOV.									
10...	0815	2.1	10	--	65	29	87	--	2.3
JAN., 1971									
12...	1600	2.8	10	--	87	26	72	--	2.5
FEB.									
03...	1530	2.8	14	--	87	29	88	--	2.8
MAR.									
09...	0955	4.3	9.9	--	87	31	85	--	2.3
APR.									
02...	1000	.40	8.9	30	120	63	130	--	2.8
29...	1020	.19	9.6	--	160	79	180	--	3.2
MAY									
13...	1035	.15	11	--	160	82	190	--	4.0
JUNE									
07...	1440	.08	12	--	190	97	240	--	6.1
JULY									
13...	0945	.05	12	--	220	110	250	--	5.7
AUG.									
03...	0925	.06	12	--	230	94	230	--	5.9
SEP.									
09...	1615	.02	13	--	280	120	280	--	6.3
OCT.									
01...	1120	.10	9.2	0	210	73	190	--	5.9
19...	1000	.07	11	0	230	100	260	--	4.6
NOV.									
11...	0900	.14	10	--	190	96	250	--	5.4
DEC.									
07...	1100	.16	10	--	190	97	230	--	4.9

DATE	BICAR- BONATE (HC03) (MG/L) (00440)	CAR- BONATE (C03) (MG/L) (00445)	DIS- SOLVED SULFATE (S04) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (N03) (MG/L) (71851)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHU. PHOS- PHORUS (P) (MG/L) (00671)
OCT., 1970									
13...	239	0	762	8.5	.4	.05	.20	--	--
NOV.									
10...	237	0	250	8.0	.5	--	--	1.2	--
JAN., 1971									
12...	230	0	250	11	.4	--	--	1.6	.91
FEB.									
03...	230	0	310	9.9	--	--	--	.10	--
MAR.									
09...	245	0	310	9.9	.3	--	--	1.2	--
APR.									
02...	259	0	580	11	.3	--	--	.30	--
29...	289	0	790	18	.3	--	--	.00	--
MAY									
13...	254	0	860	14	.3	--	--	.00	--
JUNE									
07...	239	0	1100	17	.4	--	--	.00	--
JULY									
13...	259	0	1300	19	.4	--	--	.02	--
AUG.									
03...	257	0	1200	14	.4	--	--	.07	--
SEP.									
09...	214	0	1600	13	.4	--	--	.08	--
OCT.									
01...	239	0	1000	12	.4	--	--	.34	--
19...	143	0	1300	17	.4	--	--	.04	--
NOV.									
11...	261	0	1200	17	.2	--	--	.06	--
DEC.									
07...	282	0	--	22	.2	--	--	.08	--

ARKANSAS RIVER BASIN

07199000 CANADIAN RIVER NEAR HEBRON, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED SOLIDS (8) (01020)
UCT., 1970								
13...	1280	640	444	2.9	1690	8.0	12.0	--
NOV.								
10...	570	280	86	2.3	863	7.7	1.0	--
JAN., 1971								
12...	580	320	131	1.7	911	7.8	.0	--
FEB.								
03...	650	340	151	2.1	949	7.9	8.0	--
MAR.								
09...	661	340	140	2.0	974	8.0	5.0	--
APR.								
02...	1050	560	350	2.4	1480	7.9	3.0	40
29...	1380	720	480	2.9	1890	7.9	18.0	--
MAY								
13...	1450	740	530	3.0	1860	7.9	19.0	--
JUNE								
07...	1780	870	680	3.5	2220	7.8	26.0	--
JULY								
13...	2040	1000	790	3.4	2500	7.6	22.0	--
AUG.								
03...	1910	960	750	3.2	2310	7.3	19.0	--
SEP.								
09...	2420	1200	1000	3.5	2970	7.8	25.0	--
OCT.								
01...	1620	820	630	2.9	2070	8.0	13.0	50
19...	1990	990	870	3.6	2570	7.7	2.0	70
NOV.								
11...	1900	870	660	3.7	2380	7.7	2.0	--
DEC.								
07...	--	870	640	3.4	2300	7.7	.0	--

ARKANSAS RIVER BASIN

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07202000 CHICORICA CREEK NEAR HEBRON, N. MEX.

LOCATION.--Lat 36°46'13", long 104°23'45", in SW 1/4 sec. 4, T.29 N., R.24 E., Colfax County, at gaging station 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 miles south of Raton.

DRAINAGE AREA.--381 sq mi.

PERIOD OF RECORD.--Chemical analyses: February 1966 to December 1971.
Sediment records: October 1949 to September 1950.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (K) (MG/L) (00933)	DIS- SOLVED POTAS- SIUM (K) (MG/L) (00935)
UCL., 1970									
13...	1550	2.7	4.0	--	190	122	--	254	--
NOV.									
10...	0750	E3.0	6.0	--	160	110	240	--	4.8
DEC.									
09...	0940	E2.8	7.7	--	130	120	200	--	3.5
JAN., 1971									
13...	0820	E2.5	14	--	200	120	240	--	6.7
FEB.									
03...	1445	4.3	9.7	--	160	99	210	--	5.4
MAR.									
09...	0900	E1.8	11	--	160	100	250	--	7.1
APR.									
02...	0910	E1.2	10	20	91	56	110	--	3.1
29...	0905	.67	7.8	--	150	100	190	--	3.8
JUNE									
07...	1515	1.8	12	--	110	62	130	--	3.7
JULY									
13...	0930	E.40	9.7	--	160	120	160	--	4.2
SEP.									
09...	1655	E2.0	3.7	--	180	130	280	--	5.0
OCT.									
19...	0825	E3.0	7.6	10	170	110	270	--	5.9
NOV.									
11...	1000	1.8	6.9	--	160	110	210	--	5.1
DEC.									
07...	0925	E2.0	11	0	190	110	240	--	6.7
22...	0900	E1.3	12	--	200	120	250	--	8.2

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 NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (N) (MG/L) (71851)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)
UCL., 1970									
13...	253	10	1200	36	.5	.41	1.8	--	--
NOV.									
10...	296	0	980	34	.5	--	--	2.0	--
DEC.									
09...	262	0	980	22	.6	--	--	.12	--
JAN., 1971									
13...	371	0	1100	45	.6	--	--	4.6	2.3
FEB.									
03...	288	0	930	35	.9	--	--	.20	--
MAR.									
09...	294	0	980	40	.4	--	--	1.7	--
APR.									
02...	258	0	430	12	.2	--	--	.20	--
29...	285	0	880	19	.7	--	--	.10	--
JUNE									
07...	273	0	540	12	.4	--	--	.00	--
JULY									
13...	278	0	1000	20	.5	--	--	.25	--
SEP.									
09...	298	0	1300	37	.6	--	--	.01	--
OCT.									
19...	315	0	1200	48	.5	--	--	3.5	--
NOV.									
11...	284	0	970	35	.4	--	--	.26	--
DEC.									
07...	342	0	1100	41	.5	--	--	3.7	--
22...	351	0	1200	47	.5	--	--	5.6	--

E Estimated.

ARKANSAS RIVER BASIN

07202000 CHICORICA CREEK NEAR HEBRON, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	CIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00400)	NON- CAN- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SURP- TION RATIO (00931)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (8) (UG/L) (01020)
OCT., 1970								
13...	1940	975	751	3.5	2500	8.5	10.0	--
NOV.								
10...	1700	830	587	3.6	2190	7.5	1.0	--
DEC.								
09...	1590	820	600	3.0	1800	7.8	.0	--
JAN., 1971								
13...	1900	1000	696	3.3	2550	8.1	.0	--
FEB.								
03...	1600	800	564	3.2	2050	7.9	2.0	--
MAR.								
09...	1700	810	570	3.8	2200	7.6	2.0	--
APR.								
02...	840	460	250	2.2	1200	8.1	8.0	50
29...	1490	790	560	2.9	2000	8.0	9.5	--
JUNE								
07...	1000	530	310	2.5	1360	7.9	22.0	--
JULY								
13...	1610	890	670	2.3	2020	7.6	18.0	--
SEP.								
09...	2080	980	740	3.9	2630	8.2	23.0	--
OCT.								
19...	1980	880	620	4.0	2540	7.8	1.0	170
NOV.								
11...	1640	850	620	3.1	2160	8.1	3.0	--
DEC.								
07...	1880	930	650	3.4	2450	7.5	.0	140
22...	2040	990	710	3.5	2600	7.2	.0	--

ARKANSAS RIVER BASIN

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07203000 VERMEJO RIVER NEAR DAWSON, N. MEX.

LOCATION.--Lat 36°40'50", long 104°47'08", Colfax County, in Maxwell Grant, at gaging station, 1.3 miles north of Dawson, and 2.3 miles upstream from Rail Canyon.

DRAINAGE AREA.--301 sq mi.

PERIOD OF RECORD.--Chemical analyses: January 1945 to October 1950, March 1964 to December 1971.
Sediment records: January 1949 to September 1951.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED CHLORIDE (CFS) (000600)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POTAS- SIUM (K) (MG/L) (00935)
OCT., 1970								
14...	1010	6.3	8.0	0	53	17	23	2.1
NOV.								
10...	1035	9.5	10	--	56	13	30	2.2
DEC.								
09...	1230	16	11	--	53	14	23	1.9
JAN., 1971								
13...	1015	1.6	11	--	68	16	34	2.3
FEB.								
04...	1000	8.8	9.9	--	61	15	34	2.1
MAR.								
09...	1140	17	11	--	57	14	33	2.7
APR.								
02...	1110	1.3	9.6	10	59	15	33	2.3
29...	1345	1.9	7.3	40	57	15	34	2.0
JULY								
13...	1115	3.0	11	10	64	17	36	3.0
SEP.								
09...	1445	5.7	8.0	20	60	16	29	2.7
OCT.								
01...	1000	16	9.3	0	49	12	31	3.0
19...	1010	6.9	10	0	65	17	32	2.3

DATE	BICAR- BONATE (HCO ₃) (MG/L) (00440)	CAR- BONATE (CO ₃) (MG/L) (00445)	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)	DIS- SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUORIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00610)	DIS- SOLVED NITRATE (NO ₃) (MG/L) (71051)	DIS- SOLVED NITRATE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)
OCT., 1970									
14...	199	4	72	4.9	.7	.99	4.4	--	--
NOV.									
10...	202	0	90	4.5	.8	--	--	.20	--
DEC.									
09...	186	0	86	4.0	.8	--	--	.27	--
JAN., 1971									
13...	220	18	100	10	.7	--	--	.70	1.0
FEB.									
04...	218	0	100	7.7	.6	--	--	.10	--
MAR.									
09...	188	0	100	4.8	.5	--	--	.20	--
APR.									
02...	208	0	110	7.1	.6	--	--	.30	--
29...	185	0	100	6.4	.7	--	--	.10	--
JULY									
13...	213	0	130	5.9	.8	--	--	.15	--
SEP.									
09...	194	0	120	2.9	.7	--	--	.16	--
OCT.									
01...	177	0	100	4.4	.6	--	--	.40	--
19...	213	0	130	6.8	.6	--	--	.33	--

ARKANSAS RIVER BASIN

07203000 VERMEJO RIVER NEAR DAWSON, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (00900)	NUM- CAN- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SURP- TION RATIO (00931)	SPE- CIFIC CLIN- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
OCT., 1970								
14...	287	202	32	.7	487	8.4	7.0	80
NOV.								
10...	310	190	24	.9	493	7.7	1.0	--
DEC.								
09...	286	190	37	.7	457	7.9	4.0	--
JAN., 1971								
13...	374	240	30	1.0	567	8.7	2.0	--
FEB.								
04...	340	210	31	1.0	548	8.1	.0	--
MAR.								
09...	316	200	46	1.0	512	8.3	6.0	--
APR.								
02...	340	210	39	1.0	553	8.2	12.0	0
29...	314	200	48	1.0	530	8.3	14.0	20
JULY								
13...	373	230	55	1.0	570	7.7	25.0	40
SEP.								
09...	335	220	57	.9	534	7.9	23.0	40
OCT.								
01...	298	170	27	1.0	467	7.8	12.0	20
19...	370	230	58	.9	569	8.1	5.0	30

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED COBALT (CO) (UG/L) (01035)
SEP., 1971										
09...	1445	11	0	120	<2	<5	40	<70	<5	<5

DATE	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED GALLIUM (GA) (UG/L) (01120)	DIS- SOLVED GER- MANIUM (GE) (UG/L) (01125)	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)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MOLYB- DENIUM (MO) (UG/L) (01060)
SEP., 1971										
09...	3	<2	<7	20	11	<5	<10	7	.2	1

DATE	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED TIN (SN) (UG/L) (01100)	DIS- SOLVED TI- TANIUM (TI) (UG/L) (01150)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED ZIR- CONIUM (ZR) (UG/L) (01160)
SEP., 1971									
09...	<5	<1	2	770	<7	<5	<5.0	<320	<15

07211500 CANADIAN RIVER NEAR TAYLOR SPRINGS, N. MEX.
(Surveillance network station)

LOCATION.--Lat 36°17'49", long 104°29'36", in NW¼SE¼ sec.21, T.24 N., R.23 E., Colfax County, at gaging station at head of gorge, 2.0 miles south of Taylor Springs, 2.2 miles downstream from Cimarron River, and 2.4 miles upstream from Chico Creek, and 7.1 miles southeast of Springer.

DRAINAGE AREA.--2,850 sq mi.

PERIOD OF RECORD.--Chemical analyses: June 1966 to December 1971.
Sediment records: August 1969 to December 1971.

REMARKS.--Bacteria and aquatic biology analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CF8) (00060)	DIS- SOLVED SILICA (SI02) (00955)	DIS- SOLVED IRON (FE) (01046)	DIS- SOLVED CAL- CIUM (CA) (00915)	DIS- SOLVED MAG- NESIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (00930)	DIS- SOLVED POT- ASSIUM (K) (00935)	BICAR- BONATE (HCO3) (00440)	CAN- BONATE (CO3) (00445)	DIS- SOLVED SULFATE (SO4) (00945)
UCT., 1970											
05...	1430	6.4	5.4	0	265	132	229	4.6	213	0	1440
NOV.											
02...	1630	21	6.2	10	220	116	198	3.7	230	0	1200
DEC.											
09...	1600	21	7.2	50	265	145	222	3.7	240	0	1420
JAN., 1971											
13...	1545	18	11	--	290	140	210	4.4	274	0	1400
FEB.											
03...	1500	28	8.0	--	260	150	220	4.5	265	0	1400
MAR.											
16...	1730	15	5.9	--	290	160	250	4.4	248	0	1600
APR.											
06...	1630	11	6.3	20	310	200	280	5.0	230	0	1700
MAY											
04...	0830	5.4	5.3	--	290	180	310	5.1	236	0	1800
JUNE											
07...	1135	3.7	3.1	--	290	180	290	6.6	220	0	1600
JULY											
06...	1120	2.2	4.3	--	300	190	300	4.8	191	0	1900
AUG.											
03...	1205	15	12	--	220	120	200	6.2	243	0	1200
SEP.											
08...	1600	3.5	9.8	--	270	140	240	3.9	238	0	1400
OCT.											
05...	1215	17	5.9	20	270	140	220	3.9	238	0	1500
NOV.											
02...	1500	54	8.1	--	230	140	260	5.1	218	0	1500
DEC.											
08...	1445	7.4	6.7	--	280	150	200	3.9	293	0	1500

DATE	DIS- SOLVED CHLO- RIDE (CL) (00940)	DIS- SOLVED FLUO- RIDE (F) (00950)	DIS- SOLVED NITRATE (N) (00618)	DIS- SOLVED NITRATE (N) (00618)	DIS- SOLVED NITRATE (N) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (00608)	ORGANIC NITRO- GEN (N) (00605)	TOTAL NITRO- GEN (N) (00600)	TOTAL PHOS- PHORUS (P) (00665)
UCT., 1970										
05...	58	.6	.02	.10	.00	--	.02	.60	.64	.03
NOV.										
02...	44	.5	.00	.00	--	--	--	--	--	--
DEC.										
09...	46	.6	.02	.10	--	--	--	--	--	--
JAN., 1971										
13...	60	.7	--	.90	--	.90	--	--	--	--
FEB.										
03...	42	.7	--	--	--	.00	--	--	--	--
MAR.										
16...	56	.3	--	--	--	.20	--	--	--	--
APR.										
06...	160	.5	.00	--	.00	.00	.10	--	--	.03
MAY										
04...	84	.8	--	--	--	.00	--	--	--	--
JUNE										
07...	75	.6	--	--	--	.05	--	--	--	--
JULY										
06...	91	.6	--	--	--	.03	--	--	--	--
AUG.										
03...	44	.6	--	--	--	.09	--	--	--	--
SEP.										
08...	86	.8	--	--	--	1.1	--	--	--	--
OCT.										
05...	48	.5	.00	.00	.07	.07	.17	.12	.29	.11
NOV.										
02...	39	.5	--	--	--	.08	--	--	--	--
DEC.										
08...	54	.5	--	--	--	.12	--	--	--	--

ARKANSAS RIVER BASIN

07211500 CANADIAN RIVER NEAR TAYLOR SPRINGS, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (REST- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
OCT., 1970										
05...	--	2430	2240	1210	1040	2.9	2720	8.0	14.5	230
NOV.										
02...	--	2090	1900	1120	932	2.6	2420	8.0	7.0	--
DEC.										
09...	--	2430	2230	1240	1043	2.7	2630	7.9	7.0	--
JAN., 1971										
13...	1.1	2420	2300	1300	1080	2.5	2850	7.9	.0	--
FEB.										
03...	--	2270	2200	1300	1080	2.7	2350	7.9	8.0	--
MAR.										
16...	.01	2600	2490	1400	1200	2.9	3040	8.0	12.0	--
APR.										
06...	.00	2930	2780	1600	1400	3.0	3270	7.9	16.5	170
MAY										
04...	.08	2880	2790	1500	1300	3.5	3220	7.6	15.5	--
JUNE										
07...	.02	2900	2750	1500	1300	3.3	3180	7.8	19.0	--
JULY										
06...	.01	3020	2880	1500	1400	3.3	3270	7.2	24.0	--
AUG.										
03...	.02	2000	1920	1000	840	2.7	2340	8.0	23.5	--
SEP.										
08...	.03	2180	2270	1300	1100	3.0	2900	7.5	26.0	--
OCT.										
05...	.02	2720	2310	1300	1100	2.7	2800	8.0	17.5	170
NOV.										
02...	.02	2520	2300	1200	960	3.3	2810	7.8	8.0	--
DEC.										
08...	.09	2200	2340	1300	1100	2.4	2870	8.0	.0	--

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970							
05 A.	1435	--	7	<4	--	<13	.5
AUG., 1971							
03...	1205	0	--	--	.1	2	--

A Water quality data supplied by Environmental Protection Agency.

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970							
05...	1430	6.4	2990	8.0	14.5	19.0	5
NOV.							
02...	1630	21	2390	8.4	7.0	8.5	3
DEC.							
09...	1600	21	2600	8.1	7.0	11.0	3
JAN., 1971							
13...	1545	18	2900	8.0	.0	8.5	5
FEB.							
03...	1500	28	2600	8.3	8.0	14.0	5
MAR.							
16...	1730	15	3050	8.5	12.0	10.0	10
APR.							
06...	1630	11	3250	8.5	16.5	12.0	4
MAY							
04...	0830	5.4	--	8.5	15.5	17.0	3
JUNE							
07...	1135	3.7	3200	8.3	19.0	25.5	15
JULY							
06...	1120	2.2	3450	8.3	24.0	31.0	10
AUG.							
03...	1205	15	2590	8.3	23.5	28.0	10
SEP.							
08...	1600	3.5	2800	8.2	26.0	27.0	5
OCT.							
05...	1215	17	2860	8.6	17.5	28.5	5
NOV.							
02...	1500	54	2710	8.0	8.0	12.0	20
DEC.							
08...	1445	7.4	2850	8.3	.0	-5	3

07211500 CANADIAN RIVER NEAR TAYLOR SPRINGS, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SULVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND LEVEL (MG/L) (00355)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCUCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970							
05...	2	8.2	11	1.4	<10	<10	20
NOV.							
02...	15	7.0	2	.8	<10	<10	<10
DEC.							
09...	11	8.7	8	.8	500	190	<10
JAN., 1971							
13...	8	9.4	13	2.7	1500	300	40
FEB.							
03...	70	10.5	3	.8	--	--	--
MAR.							
16...	6	9.4	5	1.5	<10	<10	<10
APR.							
06...	3	8.7	3	1.3	<10	10	<10
MAY							
04...	4	8.0	3	.9	<10	<10	<10
JUNE							
07...	5	8.4	7	1.6	--	--	--
JULY							
06...	6	8.2	5	.8	10	<10	30
AUG.							
03...	85	7.2	9	2.2	320	48	4
SEP.							
08...	25	6.0	11	.9	--	--	--
OCT.							
05...	30	8.7	4	.6	10	10	<10
NOV.							
02...	45	10.0	5	.5	--	--	--
DEC.							
08...	40	11.2	7	1.3	--	--	--

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: April 6, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Diptera: Chironomidae larvae, 218

Ephemeroptera: Baetidae; Traverella Sp., 1

Nematomorpha: (horsehair worm), 1

Date: June 7, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Diptera: Chironomidae larvae, 17

Simuliidae; Simulium sp., 9 pupae, 1 larvaEphemeroptera: Baetidae; Traverella, 1.

Date: July 7, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Diptera: Chironomidae, larvae 31

Simuliidae, 5 pupae, 3 larvae

Ephemeroptera: Baetidae; Traverella sp., 1

Hemiptera: Naucoridae, 1

Annelida: Oligochaeta; Lumbriculidae 2

Date: September 8, 1971

Method of sampling: Surber (3 square feet)

No macroinvertebrates in sample

PESTICIDE ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	ALDRIN (UG/L) (39330)	CHLOR- DANE (UG/L) (39350)	DDD (UG/L) (39360)	DDE (UG/L) (39365)	DDT (UG/L) (39370)	DI- AZINON (UG/L) (39570)	DI- ELDRIN (UG/L) (39380)	ENDRIN (UG/L) (39390)	HEPTA- CHLOR (UG/L) (39410)
OCT., 1970										
05...	1430	.00	.0	.00	.00	.00	.00	.00	.00	.00
MAY, 1971										
04...	0830	.00	.0	.00	.00	.00	.00	.00	.00	.00
JUNE										
07...	1135	.00	.0	.00	.00	.00	.00	.00	.00	.00
JULY										
06...	1120	.00	.0	.00	.00	.00	--	.00	.00	.00
SEP.										
08...	1600	.00	.0	.00	.00	.00	--	.00	.00	.00

ARKANSAS RIVER BASIN

07211500 CANADIAN RIVER NEAR TAYLOR SPRINGS, N. MEX.--Continued

PESTICIDE ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	HEPTA- CHLOR EPOXIDE (UG/L) (39420)	LINDANE (UG/L) (39340)	MALA- THION (UG/L) (39530)	METHYL PARA- THION (UG/L) (39600)	PARA- THION (UG/L) (39540)	TOX- APHENE (UG/L) (39400)	2,4-D (UG/L) (39730)	2,4,5-T (UG/L) (39740)	SILVEX (UG/L) (39760)
OCT., 1970									
05...	.00	.00	.00	.00	.00	.0	.00	.00	.00
MAY, 1971									
04...	.00	.00	.00	.00	.00	.0	.00	.00	.00
JUNE									
07...	.00	.00	.00	.00	.00	--	.69	.00	.00
JULY									
06...	.00	.00	--	--	--	--	--	--	--
SEP.									
08...	.00	.00	--	--	--	--	.00	.00	.00

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDI- MENT (UG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)
OCT., 1970					
05...	1430	14.5	6.4	20	.35
NOV.					
02...	1630	7.0	21	55	3.1
JAN., 1971					
13...	1545	.0	18	579	28
FEB.					
03...	1500	8.0	28	216	17
MAR.					
16...	1730	12.0	15	7	.28
APR.					
06...	1630	16.5	11	1	.03
MAY					
04...	0830	15.5	5.4	13	.19
JUNE					
07...	1135	19.0	3.7	44	.44
JULY					
08...	1120	24.0	2.2	36	.21
AUG.					
03...	1205	23.5	15	150	6.1
SEP.					
08...	1600	26.0	3.5	45	.43
OCT.					
05...	1215	17.5	17	106	5.0
NOV.					
02...	1500	8.0	54	146	21
DEC.					
08...	1445	.0	7.4	91	2.1

07223300 CONCHAS CANAL BELOW CONCHAS DAM, N. MEX.

LOCATION.--Lat 35°22'35", long 104°10'03", San Miguel County, in Pablo Montoya Grant, at gaging station, at upstream end of tunnel transition section, 1.0 mile downstream from headgates in Conchas Dam, and 21.5 miles north of Newkirk.

PERIOD OF RECORD.--Chemical analyses: April 1964 to December 1971.

REMARKS.--No flow during most of each winter.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	CAR- BONATE (CO ₃) (MG/L) (00445)	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00944)
OCT., 1970												
23...	1200	E,15	6,0	--	72	30	55	4,5	165	0	270	16
NOV.												
25...	0845	E,20	7,0	--	62	35	73	4,7	186	0	300	18
DEC.												
22...	1245	,84	8,0	--	91	29	60	5,2	163	0	290	16
JAN., 1971												
22...	1030	E,50	6,7	--	75	30	69	4,9	170	0	300	24
FEB.												
12...	0945	E,10	5,3	--	76	32	78	5,4	174	0	320	19
MAR.												
19...	1035	E,08	7,0	--	100	41	110	8,0	201	0	420	25
APR.												
07...	1515	353	7,6	10	88	32	66	6,3	172	0	300	18
MAY												
12...	0840	300	7,3	--	79	33	72	4,7	193	0	310	15
JUNE												
09...	1130	163	7,0	10	81	35	67	4,6	191	0	320	18
JULY												
09...	1515	233	7,0	--	81	35	72	4,3	180	0	320	18
AUG.												
27...	1540	277	7,2	--	77	34	68	4,4	173	0	340	14
SEP.												
24...	1600	87	7,5	--	77	34	69	4,4	166	0	320	17
OCT.												
15...	1400	E3,5	7,5	0	76	35	70	4,7	166	0	330	20
DEC.												
01...	1000	E,70	6,5	--	75	36	78	5,7	165	0	320	19

DATE	DIS- SOLVED FLUOR- IDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE NESS (MG/L) (00902)	SODIUM AD- SURP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
OCT., 1970											
23...	,6	,20	--	540	300	165	1,4	842	7,7	15,0	0
NOV.											
25...	,8	,10	--	610	350	197	1,7	910	7,7	9,0	0
DEC.											
22...	,5	,00	,05	590	350	200	1,4	873	8,0	5,0	--
JAN., 1971											
22...	,8	,00	--	590	310	171	1,7	864	8,0	6,0	--
FEB.											
12...	,8	,10	--	620	320	177	1,9	941	8,0	6,0	--
MAR.											
19...	,4	,00	--	810	420	260	2,3	1150	8,2	2,0	--
APR.											
07...	,3	,00	--	603	350	210	1,5	909	8,2	10,0	90
MAY											
12...	,5	,31	--	618	330	170	1,7	896	7,9	12,0	--
JUNE											
09...	,5	,03	--	627	350	190	1,6	906	8,1	18,0	90
JULY											
09...	,5	,06	--	627	350	200	1,7	903	7,6	26,0	--
AUG.											
27...	,5	,00	--	630	330	190	1,6	930	7,9	24,0	--
SEP.											
24...	,5	,08	--	611	330	200	1,6	929	7,9	18,0	--
OCT.											
15...	,6	,30	--	627	330	200	1,7	920	7,9	18,0	80
DEC.											
01...	,4	,02	--	622	340	200	1,9	923	8,0	9,0	--

E Estimated.

ARKANSAS RIVER BASIN

07226800 UTE RESERVOIR NEAR LOGAN, N. MEX.

LOCATION.--Lat 35°20'35", long 103°26'37", in NW¼ sec.21, T.13 N., R.33 E., Quay County, in Ute Reservoir impounded by Ute Dam on the Canadian River which is 2.5 miles southwest of Logan, and 3.5 miles downstream from Ute Creek.

DRAINAGE AREA.--11,140 sq mi, of which 1,110 sq mi is noncontributing, and 7,400 sq mi is controlled by Conchas Dam (total area downstream from Conchas Dam is 3,731 sq mi).

PERIOD OF RECORD.--Chemical analyses: March 1963 to December 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DEPTH BELOW LAND SURFACE (FT) (72019)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED TAS- SIUM (K) (MG/L) (00935)
------	------	--	---	---	---	---	---	--

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

JAN., 1971								
18...	1012	5.00	--	--	--	--	--	--
18...	1017	10.00	4.0	120	42	19	130	5.3
18...	1022	20.00	--	--	--	--	--	--
APR.								
08...	1035	5.00	--	--	41	17	--	--
08...	1040	10.00	2.8	30	42	17	110	4.4
08...	1045	20.00	--	--	38	19	--	--
JULY								
12...	1140	5.00	--	--	31	13	--	--
12...	1145	15.00	6.5	20	31	13	94	3.7
12...	1150	25.00	--	--	31	13	--	--
OCT.								
05...	0855	5.00	--	--	37	17	--	--
05...	0900	12.00	3.9	20	37	18	110	4.7
05...	0905	25.00	--	--	38	18	--	--

07226530 UTE RESERVOIR AT SITE D (LAT 35°22'20", LONG 103°29'47")

APR., 1971								
08...	1130	5.00	--	--	40	16	--	--
08...	1135	10.00	4.9	120	39	15	98	4.3
08...	1140	20.00	--	--	36	15	--	--
OCT.								
05...	1105	5.00	--	--	34	16	--	--
05...	1110	12.00	5.2	10	34	16	93	4.8
05...	1115	25.00	--	--	35	16	--	--

07226540 UTE RESERVOIR AT SITE E (LAT 35°21'16", LONG 103°29'29")

JAN., 1971								
18...	1105	5.00	--	--	--	--	--	--
18...	1110	20.00	5.1	120	37	14	98	4.9
18...	1115	40.00	--	--	--	--	--	--
APR.								
08...	1220	10.00	--	--	32	15	--	--
08...	1225	20.00	4.9	10	40	16	93	4.5
08...	1230	40.00	--	--	38	16	--	--
JULY								
12...	1305	5.00	--	--	32	15	--	--
12...	1310	25.00	4.3	10	31	14	88	3.9
12...	1315	50.00	--	--	32	14	--	--
OCT.								
05...	1015	5.00	--	--	34	15	--	--
05...	1020	20.00	5.2	10	34	15	94	4.9
05...	1025	40.00	--	--	35	16	--	--

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

JAN., 1971								
18...	1135	5.00	--	--	--	--	--	--
18...	1140	25.00	5.3	120	34	13	94	4.8
18...	1145	50.00	--	--	--	--	--	--
APR.								
08...	1310	5.00	--	--	37	15	--	--
08...	1315	27.50	4.8	110	38	15	97	4.5
08...	1320	55.00	--	--	35	15	--	--
JULY								
12...	1355	5.00	--	--	31	16	--	--
12...	1400	30.00	5.6	70	33	15	91	4.3
12...	1405	60.00	--	--	37	16	--	--
OCT.								
05...	1200	5.00	--	--	35	16	--	--
05...	1205	30.00	5.1	20	34	15	96	4.9
05...	1210	60.00	--	--	34	15	--	--

DATE	TIME	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MERCURY (MG) (UG/L) (71900)
------	------	---	---

07226800 UTE RESERVOIR NEAR LOGAN, N. MEX. (LAT 35°20'35", LONG 103°26'37")

JUNE, 1971			
14 A.	1600	8	3.2

A Other value in milligrams per liter:
Total Phosphorus (P), 0.004

ARKANSAS RIVER BASIN

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07226800 UTE RESERVOIR NEAR LOGAN, N. MEX.--Continued

REMARKS.--Samples for chemical analyses are collected quarterly each year at surface, median, and bottom levels of selected sites. Site locations are as follows: Site A, 0.4 mile upstream from Ute Dam; Site B, 0.6 mile upstream from Ute Dam; Site C, 1.9 miles upstream from Ute Dam; Site D, on the Ute Creek arm, 5.7 miles upstream from Ute Dam; Site E, 3.8 miles upstream from Ute Dam at confluence of Ute Creek and Canadian River arms; Site F, on the Canadian River arm, 9.1 miles upstream from Ute Dam; Site G, on the Ute Creek arm, 6.9 miles upstream from Ute Dam; Site H, on the Canadian River arm, 12.8 miles upstream from Ute Dam. Samples collected during the Spring were selected to determine lead and mercury levels in the Reservoir.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

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 NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)
------	---	--	---	--	---	--	--	---	---

07226510 UTE RESERVOIR AT SITE F--Continued

JAN., 1971									
18...	--	--	162	28	--	--	--	--	--
18...	231	0	150	68	.8	.10	--	--	--
18...	--	--	162	28	--	--	--	--	--
APR.									
08...	243	0	170	30	--	--	.04	--	--
08...	248	0	170	30	.7	.17	.03	--	--
08...	254	0	180	34	--	--	.07	--	--
JULY									
12...	206	0	140	18	--	--	--	--	--
12...	204	0	140	25	.7	2.1	--	--	--
12...	207	0	140	17	--	--	--	--	--
OCT.									
05...	228	0	170	28	--	--	--	--	--
05...	234	0	180	30	.8	.13	--	.01	548
05...	232	0	180	30	--	--	--	--	--

07226530 UTE RESERVOIR AT SITE D--Continued

APR., 1971									
08...	236	0	140	29	--	--	.02	--	--
08...	232	0	150	28	.6	.05	.04	--	--
08...	237	0	160	32	--	--	.04	--	--
OCT.									
05...	217	0	150	30	--	--	--	--	--
05...	217	0	150	28	.8	.12	--	.00	462
05...	219	0	150	28	--	--	--	--	--

07226540 UTE RESERVOIR AT SITE E--Continued

JAN., 1971									
18...	--	--	161	26	--	--	--	--	--
18...	219	0	120	35	.7	.00	--	--	--
18...	--	--	162	26	--	--	--	--	--
APR.									
08...	238	0	140	30	--	--	.02	--	--
08...	234	0	140	29	.6	.04	.01	--	--
08...	225	0	140	29	--	--	.04	--	--
JULY									
12...	218	0	150	19	--	--	--	--	--
12...	215	0	140	18	.7	.06	--	--	--
12...	216	0	140	18	--	--	--	--	--
OCT.									
05...	216	0	150	26	--	--	--	--	--
05...	215	0	150	27	.8	.13	--	.00	486
05...	222	0	150	26	--	--	--	--	--

07226560 UTE RESERVOIR AT SITE B--Continued

JAN., 1971									
18...	--	--	136	25	--	--	--	--	--
18...	207	0	130	39	.7	.00	--	--	--
18...	--	--	138	24	--	--	--	--	--
APR.									
08...	231	0	150	28	--	--	.02	--	--
08...	230	0	140	28	.6	.05	.02	--	--
08...	230	0	170	29	--	--	.02	--	--
JULY									
12...	210	0	150	20	--	--	--	--	--
12...	218	0	150	19	.7	.02	--	--	--
12...	244	0	140	19	--	--	--	--	--
OCT.									
05...	210	4	150	26	--	--	--	--	--
05...	216	0	150	26	.8	.10	--	.00	468
05...	216	0	150	27	--	--	--	--	--

ARKANSAS RIVER BASIN

07226800 UTE RESERVOIR NEAR LOGAN, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (R) (01020)
07226510 UTE RESERVOIR AT SITE F--Continued								
JAN., 1971								
18...	--	--	--	--	748	--	5.0	--
18...	530	180	0	4.2	756	8.3	5.0	210
18...	--	--	--	--	749	--	6.0	--
APR.								
08...	--	170	0	--	808	8.2	15.0	--
08...	500	170	0	3.6	824	8.2	14.0	20
08...	--	170	0	--	846	8.2	14.0	--
JULY								
12...	--	130	0	--	659	8.0	23.0	--
12...	424	130	0	3.6	649	7.8	23.0	170
12...	--	130	0	--	657	7.8	23.0	--
OCT.								
05...	--	160	0	--	779	8.1	13.0	--
05...	500	170	0	3.7	806	8.1	13.0	210
05...	--	170	0	--	803	8.1	14.0	--

07226530 UTE RESERVOIR AT SITE D--Continued

APR., 1971								
08...	--	170	0	--	742	8.3	15.0	--
08...	454	160	0	3.4	742	8.2	15.0	120
08...	--	150	0	--	790	8.1	15.0	--
OCT.								
05...	--	150	0	--	718	8.1	14.0	--
05...	439	150	0	3.3	715	8.1	14.0	190
05...	--	150	0	--	716	8.2	13.0	--

07226540 UTE RESERVOIR AT SITE E--Continued

JAN., 1971								
18...	--	--	--	--	686	--	5.0	--
18...	420	150	0	3.5	688	8.2	5.0	170
18...	--	--	--	--	687	--	5.0	--
APR.								
08...	--	140	0	--	742	8.2	14.0	--
08...	443	170	0	3.1	742	8.3	14.0	130
08...	--	160	0	--	748	8.3	14.0	--
JULY								
12...	--	140	0	--	708	8.0	24.0	--
12...	406	140	0	3.3	682	7.8	23.0	170
12...	--	140	0	--	675	7.8	22.0	--
OCT.								
05...	--	150	0	--	715	8.2	14.0	--
05...	437	150	0	3.4	715	8.1	13.0	170
05...	--	150	0	--	716	8.1	13.0	--

07226560 UTE RESERVOIR AT SITE B--Continued

JAN., 1971								
18...	--	--	--	--	665	--	5.0	--
18...	420	140	0	3.5	671	8.3	5.0	160
18...	--	--	--	--	663	--	5.0	--
APR.								
08...	--	150	0	--	728	8.2	14.0	--
08...	441	160	0	3.4	728	8.2	14.0	120
08...	--	150	0	--	727	8.2	13.0	--
JULY								
12...	--	140	0	--	710	8.1	23.0	--
12...	426	140	0	3.3	696	8.0	23.0	180
12...	--	160	0	--	701	8.3	21.0	--
OCT.								
05...	--	150	0	--	711	8.4	14.0	--
05...	439	150	0	3.5	712	8.1	13.0	180
05...	--	150	0	--	714	8.2	13.0	--

ARKANSAS RIVER BASIN

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07226800 UTE RESERVOIR NEAR LOGAN, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DEPTH BELOW LAND SURFACE (FT) (72019)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MERCURY (HG) (UG/L) (71900)
------	------	--	---	---	---	---

07226510 UTE RESERVOIR AT SITE F--Continued

APR., 1971						
08...	1035	5.00	--	--	0	.1
08...	1040	10.00	20	30	0	.1
08...	1045	20.00	--	--	0	.1

07226530 UTE RESERVOIR AT SITE D--Continued

APR., 1971						
08...	1130	5.00	--	--	0	.1
08...	1135	10.00	120	120	0	.1
08...	1140	20.00	--	--	0	.1

07226540 UTE RESERVOIR AT SITE E--Continued

APR., 1971						
08...	1220	10.00	--	--	0	.1
08...	1225	20.00	130	10	0	.1
08...	1230	40.00	--	--	0	.0

07226560 UTE RESERVOIR AT SITE B--Continued

APR., 1971						
08...	1310	5.00	--	--	0	.1
08...	1315	27.50	120	110	0	.3
08...	1320	55.00	--	--	0	.0

ARKANSAS RIVER BASIN

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07227100 REVUELTO CREEK NEAR LOGAN, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (R) (UG/L) (01020)
OCT., 1970								
30...	1000	328	132	5.6	1570	8.2	12.0	--
NOV.								
18...	1200	360	148	6.4	1860	7.6	8.0	--
DEC.								
15...	1170	380	170	5.6	1570	7.9	3.0	--
JAN., 1971								
15...	1200	330	99	6.9	1940	7.9	7.0	--
FEB.								
05...	1500	400	175	8.2	2260	8.0	13.0	--
MAR.								
04...	1450	390	180	7.7	2110	8.2	13.0	--
MAY								
01...	939	370	210	3.6	1400	7.7	27.0	220
11...	1130	400	200	4.6	1530	8.0	15.0	250
JUNE								
09...	1090	350	150	5.6	1590	7.8	23.0	--
JULY								
07...	881	280	110	4.7	1330	7.7	32.0	--
23...	503	160	0	3.8	731	7.2	22.0	--
AUG.								
10...	460	160	0	3.2	727	7.6	25.8	--
24...	871	280	110	4.5	1260	7.9	25.0	--
SEP.								
23...	667	250	110	3.3	996	7.6	10.0	140
OCT.								
13...	1010	360	180	4.4	1500	8.0	21.0	270
NOV.								
04...	1050	280	59	6.2	1600	8.2	17.0	--
DEC.								
03...	929	230	17	6.8	1400	8.0	6.0	--
29...	--	--	--	--	1980	--	7.0	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- 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)
OCT., 1970								
30...	1200	12.0	6.5	83	1.4	--	--	--
NOV.								
18...	1130	8.0	3.8	93	.95	--	--	--
DEC.								
15...	1040	3.0	2.1	222	1.3	--	--	--
JAN., 1971								
15...	1445	7.0	9.0	78	1.9	--	--	--
FEB.								
05...	1540	13.0	1.8	4	.02	--	--	--
MAR.								
04...	1420	13.0	11	255	7.6	--	--	--
MAY								
01...	1430	27.0	30	368	30	--	--	--
11...	1355	15.0	16	171	7.4	--	--	--
JUNE								
09...	1015	23.0	9.2	82	2.0	--	--	--
JULY								
07...	1645	32.0	7.2	65	1.3	--	--	--
23...	1225	22.0	63	3580	609	57	77	87
AUG.								
10...	1445	25.8	263	20100	14300	--	--	--
24...	1150	25.0	13	475	17	--	--	--
SEP.								
23...	1240	10.0	154	5260	2190	--	--	--
OCT.								
13...	1515	21.0	13	253	8.9	--	--	--
NOV.								
04...	1425	17.0	5.0	200	3.0	--	--	--
DEC.								
03...	1455	6.0	32	2170	187	--	--	--
29...	1355	7.0	5.0	131	1.8	--	--	--

ARKANSAS RIVER BASIN

07227100 REVUELTO CREEK NEAR LOGAN, N. MEX.--Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, OCTOBER 1970 TO DECEMBER 1971

DATE	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. SIEVE DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70343)	SUS. SED. SIEVE DIAM. % FINER THAN (70332)	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. SIEVE DIAM. % FINER THAN (70333)	SUS. SED. FALL DIAM. % FINER THAN (70345)
OCT., 1970							
30...	--	--	--	--	--	--	--
NOV.							
18...	--	--	--	--	--	--	--
DEC.							
15...	--	--	--	--	--	--	--
JAN., 1971							
15...	--	--	--	--	--	--	--
FEB.							
05...	--	--	--	--	--	--	--
MAR.							
04...	--	--	--	--	--	--	--
MAY							
01...	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--
JUNE							
09...	--	--	--	--	--	--	--
JULY							
07...	--	--	--	--	--	--	--
23...	91	--	93	--	99	--	100
AUG.							
10...	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--
SEP.							
23...	--	--	--	--	--	--	--
OCT.							
13...	--	--	--	--	--	--	--
NOV.							
04...	--	--	--	--	--	--	--
DEC.							
03...	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--

07227140 CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE, N. MEX.
(Surveillance network station)

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

DRAINAGE AREA.--12,616 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1969 to December 1971.
Sediment records: February 1970 to December 1971.

REMARKS.--Aquatic biology analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHANGE (CFS) (000660)	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	
			SOLVED SILICA (SI02) (MG/L) (000955)	SOLVED IRON (FE) (UG/L) (01046)	SOLVED CAL- CIUM (CA) (MG/L) (00915)	SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	SOLVED SODIUM (NA) (MG/L) (00930)	SOLVED TAS- SIUM (K) (MG/L) (00935)	NICAR- BONATE (MG/3) (MG/L) (00440)	CAN- BONATE (C03) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	
OCT., 1970												
07...	1400	21	10	0	92	51	1060	6.8	238	0	412	
NOV.												
05...	0945	16	11	40	120	55	1200	6.5	288	0	454	
DEC.												
07...	1300	10	12	20	130	69	1410	7.4	302	0	436	
JAN., 1971												
11...	1145	25	13	--	120	60	1300	7.0	326	0	400	
FEB.												
01...	1220	11	10	--	140	54	1400	9.0	298	0	440	
MAR.												
01...	1230	20	8.9	40	93	47	780	5.0	297	0	480	
APR.												
13...	1159	16	9.0	40	120	100	1500	11	278	0	786	
MAY												
10...	1230	27	7.0	--	97	59	750	9.0	242	0	540	
JUNE												
14...	1400	23	12	--	150	72	2400	11	385	0	600	
24...	0915	131	8.4	--	38	15	280	5.4	208	0	210	
JULY												
15...	1030	13	10	--	82	46	700	7.1	247	0	300	
AUG.												
09...	1230	678	9.2	--	18	5.3	110	3.5	159	0	100	
24...	1500	316	4.5	--	37	15	120	4.7	213	0	170	
31...	1145	236	4.3	--	37	17	140	4.5	216	0	180	
SEP.												
13...	1245	18	11	--	91	55	910	7.4	233	0	550	
OCT.												
12...	1200	18	9.7	0	100	60	1200	8.3	246	0	460	
NOV.												
08...	1230	14	14	--	120	54	1100	6.9	293	0	430	
DEC.												
13...	1235	20	13	--	130	60	1300	7.9	327	0	460	
DATE		DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (N) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	DIS- SOLVED ORGANIC NITRO- GEN (N) (MG/L) (00605)	DIS- SOLVED TOTAL NITRO- GEN (N) (MG/L) (00600)	DIS- SOLVED TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)
OCT., 1970												
07...	1530	.7	.07	.30	.00	--	.13	.52	.72	.02	--	--
NOV.												
05...	1800	.6	.25	1.1	--	--	--	--	--	--	--	--
DEC.												
07...	2140	.6	.41	1.8	--	--	--	--	--	--	--	--
JAN., 1971												
11...	2000	.6	--	1.0	--	1.0	--	--	--	--	--	1.3
FEB.												
01...	2200	.7	--	--	--	.00	--	--	--	--	--	--
MAR.												
01...	1000	.7	--	--	--	.10	--	--	--	--	--	--
APR.												
13...	2100	.8	.20	.90	.00	.20	.26	--	--	--	.12	.00
MAY												
10...	1000	.6	--	--	--	.20	--	--	--	--	--	.01
JUNE												
14...	3800	.8	--	--	--	.09	--	--	--	--	--	.01
24...	270	.7	--	--	--	.93	--	--	--	--	.70	.02
JULY												
15...	1000	.7	--	--	--	.04	--	--	--	--	--	.01
AUG.												
09...	51	.7	--	--	--	1.0	--	--	--	--	--	.04
24...	67	.7	--	--	--	.23	--	--	--	--	--	.01
31...	72	.7	--	--	--	.05	--	--	--	--	--	.01
SEP.												
13...	1200	.6	--	--	--	.01	--	--	--	--	--	.03
OCT.												
12...	1800	.7	.05	.20	.00	.05	.09	.25	.39	.16	.06	.06
NOV.												
08...	1700	.5	--	--	--	.68	--	--	--	--	--	.06
DEC.												
13...	1800	.7	--	--	--	.62	--	--	--	--	--	.03

ARKANSAS RIVER BASIN

07227140 CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION HATIO (00931)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DENSITY (GM/ML AT 20 C) (71820)	DIS- SOLVED BORON (9) (UG/L) (01020)
OCT., 1970										
07...	3350	3300	450	255	22	5500	8.0	19.0	--	310
NOV.										
05...	3810	3770	555	319	22	6490	7.9	6.0	--	--
DEC.										
07...	4500	4360	610	362	25	7420	7.9	9.0	--	--
JAN., 1971										
11...	3940	4100	550	283	24	6860	7.8	.5	--	--
FEB.										
01...	4440	4400	560	316	26	6780	7.8	5.0	--	--
MAR.										
01...	2560	2600	430	186	17	4370	8.1	7.5	--	--
APR.										
13...	4980	4760	710	480	24	7990	7.9	17.0	--	460
MAY										
10...	2720	2580	480	280	15	4440	7.8	20.5	--	--
JUNE										
14...	6900	7240	670	350	40	11300	7.8	29.5	1.001	--
24...	936	934	160	0	9.7	1540	8.0	22.0	--	--
JULY										
15...	2240	2270	390	190	15	3720	7.1	25.5	--	--
AUG.										
09...	372	380	67	0	5.9	616	7.6	23.5	--	--
24...	432	525	150	0	4.2	897	8.0	27.0	--	--
31...	468	562	160	0	4.8	922	7.9	24.5	--	--
SEP.										
13...	--	2940	450	260	19	5320	7.9	27.5	--	--
OCT.										
12...	3620	3760	500	290	23	6290	7.8	18.5	--	350
NOV.										
08...	3700	3570	520	280	21	6190	7.9	13.0	--	--
DEC.										
13...	4080	3940	570	300	24	6760	7.8	6.0	--	--

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	HEXA- VALENT CHROM- IUM (CR6) (UG/L) (01032)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED IRON (FE) (UG/L) (01046)
OCT., 1970							
07...	1400	<10	0	0	0	--	--
07 A.	1405	--	--	--	--	<20	<5
JUNE, 1971							
24...	0915	--	--	--	--	--	--

DATE	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MANG- NESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970							
07...	0	--	--	<.5	--	--	0
07 A.	<20	<6	--	--	<20	<60	20
JUNE, 1971							
24...	1	--	.2	--	--	--	--

A Water quality data supplied by Environmental Protection Agency.

ARKANSAS RIVER BASIN

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07227140 CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DISE- CHARGE (CFS) (000660)	SPE- CLIFIC CON- DUCT- ANCE (MICRO- MHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970							
07...	1400	21	6000	8.3	19.0	18.0	7
NOV.							
05...	0945	16	6750	8.5	6.0	15.5	3
DEC.							
07...	1300	10	7450	8.4	9.0	19.5	3
JAN., 1971							
11...	1145	25	--	8.0	.5	16.0	3
FEB.							
01...	1220	11	--	8.4	5.0	6.0	0
MAR.							
01...	1230	20	4100	8.4	7.5	10.0	10
APR.							
13...	1159	16	8100	8.6	17.0	17.0	--
MAY							
10...	1230	27	4400	8.4	20.5	22.5	15
JUNE							
14...	1400	23	--	8.1	29.5	31.0	5
24...	0915	131	1570	8.3	22.0	27.0	50
JULY							
15...	1030	13	4000	8.5	25.5	30.0	3
AUG.							
09...	1230	678	645	8.3	23.5	28.5	80
SEP.							
13...	1245	18	--	8.4	27.5	33.0	5
OCT.							
12...	1200	18	6000	8.4	18.5	27.0	5
NOV.							
08...	1230	14	5990	8.2	13.0	21.5	15
DEC.							
13...	1235	20	--	8.3	6.0	16.0	20

DATE	TUR- BID- ITY (JTU) (00070)	DISE- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LUM LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCUCCI (COL- GNIES PER 100 ML) (31679)
OCT., 1970							
07...	23	7.9	5	.9	A 80	A10	A <10
NOV.							
05...	10	10.9	3	.2	16	8	18
DEC.							
07...	4	11.3	7	.2	0	0	6
JAN., 1971							
11...	4	12.5	14	.7	0	0	A <10
FEB.							
01...	3	12.8	3	.6	0	0	0
MAR.							
01...	170	11.5	4	.8	12	12	45
APR.							
13...	35	8.0	3	1.3	2	2	26
MAY							
10...	70	7.3	6	2.0	16	9	31
JUNE							
14...	5	6.5	4	1.1	0	0	0
24...	3000	6.8	7	6.7	A20	A<10	A<10
JULY							
15...	15	7.1	6	1.6	9	9	10
AUG.							
09...	12000	7.1	17	9.8	32000	16000	22000
SEP.							
13...	20	7.6	14	2.9	12	3	35
OCT.							
12...	35	9.0	6	1.8	A 700	230	220
NOV.							
08...	0	10.0	3	1.5	A 3	A0	A 0
DEC.							
13...	80	10.7	2	.5	2	2	19

A Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

ARKANSAS RIVER BASIN

07227140 CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE, N. MEX.--Continued

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: October 7, 1970
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Odonata: Anisoptera, 1

Date: April 13, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Neuroptera (adult), 1

Date: June 14, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Diptera: Chironomidae, 21

Date: September 13, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Hemiptera: Corixidae (adult), 14

Date: July 15, 1971
 Method of sampling: Surber (3 square feet)
 No macroinvertebrates in sample

PESTICIDE ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	ALDRIN (UG/L) (39330)	CHLOR- DANE (UG/L) (39350)	DDD (UG/L) (39360)	DDE (UG/L) (39365)	DDT (UG/L) (39370)	DI- AZINON (UG/L) (39570)	DI- ELDRIN (UG/L) (39380)	ENDRIN (UG/L) (39390)	HEPTA- CHLOR (UG/L) (39410)
OCT., 1970										
07...	1400	.00	.0	.00	.00	.00	.00	.00	.00	.00
APR., 1971										
13...	1159	.00	.0	.00	.00	.00	.00	.00	.00	.00
JUNE										
14...	1400	.00	.0	.00	.00	.00	.00	.00	.00	.00
JULY										
15...	1030	.00	.0	.00	.00	.00	--	.00	.00	.00
SEP.										
13...	1245	.00	.0	.00	.00	.00	--	.00	.00	.00

DATE	HEPTA- CHLOR EPOXIDE (UG/L) (39420)	LINDANE (UG/L) (39340)	MALA- THION (UG/L) (39530)	METHYL PARA- THION (UG/L) (39600)	PARA- THION (UG/L) (39540)	TOX- APHENE (UG/L) (39400)	2,4-D (UG/L) (39730)	2,4,5-T (UG/L) (39740)	SILVEX (UG/L) (39760)
OCT., 1970									
07...	.00	.00	.00	.00	.00	.0	.00	.00	.00
APR., 1971									
13...	.00	.00	.00	.00	.00	.0	.00	.00	.00
JUNE									
14...	.00	.00	.00	.00	.00	.0	.00	.00	.00
JULY									
15...	.00	.00	--	--	--	--	.00	.00	.00
SEP.									
13...	.00	.00	--	--	--	--	.00	.00	.00

ARKANSAS RIVER BASIN

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07227140 CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT 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)
OCT., 1970								
07...	1330	19.0	21	88	5.0	35	42	79
NOV.								
05...	0945	6.0	16	43	1.9	--	--	--
DEC.								
07...	1300	9.0	10	7	.21	--	--	--
JAN., 1971								
11...	1145	.5	25	11	.75	--	--	--
FEB.								
01...	1220	5.0	11	7	.21	--	--	--
MAR.								
01...	1230	7.5	20	303	16	26	92	99
APR.								
13...	1159	17.0	16	83	3.6	--	--	--
MAY								
10...	1230	20.5	27	163	12	38	66	93
JUNE								
14...	1400	29.5	23	20	1.3	--	--	--
24...	0915	22.0	131	4200	1490	57	72	94
JULY								
15...	1030	25.5	13	21	.76	--	--	--
AUG.								
09...	1245	23.5	678	27900	51100	55	65	87
SEP.								
13...	1245	27.5	18	79	3.8	--	--	--
OCT.								
12...	1200	18.5	18	111	5.4	--	--	--
NOV.								
08...	1230	13.0	14	266	10	--	--	--
DEC.								
13...	1235	6.0	20	303	16	--	--	--

DATE	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. SIEVE DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70343)	SUS. SED. SIEVE DIAM. % FINER THAN (70332)	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. SIEVE DIAM. % FINER THAN (70333)	SUS. SED. FALL DIAM. % FINER THAN (70345)
OCT., 1970							
07...	--	96	--	98	--	100	--
NOV.							
05...	--	--	--	--	--	--	--
DEC.							
07...	--	--	--	--	--	--	--
JAN., 1971							
11...	--	--	--	--	--	--	--
FEB.							
01...	--	--	--	--	--	--	--
MAR.							
01...	--	100	--	--	--	--	--
APR.							
13...	--	--	--	--	--	--	--
MAY							
10...	--	99	--	99	--	100	--
JUNE							
14...	--	--	--	--	--	--	--
24...	98	--	99	--	100	--	--
JULY							
15...	--	--	--	--	--	--	--
AUG.							
09...	96	--	98	--	100	--	--
SEP.							
13...	--	--	--	--	--	--	--
OCT.							
12...	--	--	--	--	--	--	--
NOV.							
08...	--	--	--	--	--	--	--
DEC.							
13...	--	--	--	--	--	--	--

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, COLO.

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

DRAINAGE AREA.--7,700 sq mi, approximately (includes 2,940 sq mi in closed basin in northern part of San Luis Valley, Colo.).

PERIOD OF RECORD.--Chemical analyses: September 1969 to December 1971.

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

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED CHARGE (LBS) (000000)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANG- NESE (MN) (UG/L) (01056)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED P(=) TAS- SIUM (K) (MG/L) (00935)	DIS- SOLVED HICAR- MONATE (MG/L) (00440)
OCT., 1970										
06...	1030	254	--	--	--	39	8.0	--	--	123
NOV.										
03...	1130	692	--	--	--	25	5.1	--	--	89
DEC.										
02...	1430	544	--	--	--	28	5.5	--	--	96
JAN., 1971										
11...	1230	270	39	--	--	50	5.3	16	4.1	120
FEB.										
03...	1500	500	26	--	--	25	4.0	--	--	85
MAR.										
01...	1445	370	--	--	--	30	6.2	32	--	107
APH.										
01...	1745	808	--	--	--	25	5.0	--	--	70
MAY										
06...	1045	88	--	--	--	75	19	--	--	210
JUNE										
08...	1530	110	--	--	--	65	17	--	--	173
JULY										
06...	1430	118	--	--	--	98	24	--	--	215
AUG.										
04...	1315	128	24	20	40	44	9.7	39	5.1	163
SEP.										
02...	1145	102	--	--	--	33	6.7	--	--	140
OCT.										
05...	1500	671	--	--	--	18	3.4	--	--	68
NOV.										
09...	1330	466	--	--	--	24	4.3	--	--	82
DEC.										
08...	1100	280	--	--	--	31	5.9	--	--	117

DATE	CAN- MONATE (CU3) (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 NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA PLUS GEN (N) (MG/L) (00608)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHU. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SULFOS (RESI- DUE AT 180 C) (MG/L) (70300)
OCT., 1970										
06...	3	76	8.4	--	--	.10	.00	.06	.05	259
NOV.										
03...	0	44	5.7	--	--	.30	.00	.07	.03	156
DEC.										
02...	0	48	5.4	--	--	.20	.00	.04	.03	183
JAN., 1971										
11...	0	34	4.8	--	--	.60	.03	.13	--	184
FEB.										
03...	0	--	3.6	--	--	.20	.00	.10	.06	142
MAR.										
01...	0	70	7.0	--	.01	.40	.06	.16	.07	232
APH.										
01...	0	37	4.0	--	--	.50	.01	.30	--	170
MAY										
06...	0	280	27	--	--	.00	.17	.09	--	628
JUNE										
08...	0	230	20	--	--	.00	.21	.10	--	516
JULY										
06...	0	320	28	--	--	.02	.21	.08	--	712
AUG.										
04...	0	83	8.7	.3	--	.00	--	--	.10	--
SEP.										
02...	0	62	9.5	--	--	.01	.25	.20	--	252
OCT.										
05...	0	45	2.8	--	--	.17	.09	.27	--	80
NOV.										
09...	0	54	3.6	--	--	.00	.54	.13	--	184
DEC.										
08...	0	44	7.2	--	--	.20	.08	.10	--	238

RIO GRANDE BASIN

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08251500 RIO GRANDE NEAR LOBATOS, COLO.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00951)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- CUBALT UNITS) (00080)	TUR- BID- ITY (JTU) (00070)
OCT., 1970									
06...	--	130	24	--	402	8.3	10.5	0	--
NOV.									
05...	--	84	11	--	252	8.1	4.0	0	--
DEC.									
02...	--	92	13	--	286	7.9	1.0	0	--
JAN., 1971									
11...	190	97	0	.7	261	7.9	.0	--	--
FEB.									
05...	--	79	9	--	215	7.7	3.0	--	--
MAR.									
01...	--	100	12	1.4	284	7.7	.0	0	--
APR.									
01...	--	83	26	--	228	7.3	8.0	20	40
MAY									
06...	--	270	43	--	411	7.8	9.0	0	10
JUNE									
08...	--	230	90	--	760	7.8	18.0	--	6
JULY									
06...	--	340	170	--	--	7.5	18.0	30	6
AUG.									
04...	294	150	16	1.4	466	7.7	24.5	--	--
SEP.									
02...	--	110	0	--	--	7.3	19.0	20	10
OCT.									
05...	--	59	3	--	170	7.4	14.5	20	20
NOV.									
09...	--	78	10	--	224	8.4	6.0	10	5
DEC.									
08...	--	100	6	--	294	7.6	.0	7	3

TRACE ELEMENT AND RADIOCHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	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) (05515)	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 METHOD (PC/L) (09511)	DIS- SOLVED URANIUM (U) (UG/L) (80020)
NOV., 1971									
09...	1330	3.3	.6	3.7	.8	2.9	.8	.03	.87
DEC.									
08...	1100	0.1	<.4	4.5	.6	3.6	.6	.03	--

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, COLO.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	CULUR (PLAT- INUM- CUBALT UNITS) (00080)
UCT., 1970							
06...	1050	254	440	8.1	10.5	13.5	0
NOV.							
03...	1130	692	270	8.1	4.0	--	0
DEC.							
02...	1450	544	220	7.6	1.0	--	0
JAN., 1971							
11...	1250	270	500	7.2	.0	--	--
FEB.							
03...	1500	500	225	7.1	3.0	14.0	--
MAR.							
01...	1445	570	250	7.9	.0	--	0
APR.							
01...	1745	808	210	7.7	8.0	--	20
MAY							
06...	1045	88	950	8.1	9.0	12.0	0
JUNE							
08...	1550	110	700	8.3	18.0	14.0	--
AUG.							
04...	1315	128	450	8.2	24.5	28.0	--
SEP.							
02...	1145	102	570	9.0	19.0	--	20
OCT.							
05...	1500	671	200	8.6	14.5	--	20
NOV.							
09...	1330	466	210	9.2	6.0	--	10
DEC.							
08...	1100	280	255	6.8	.0	--	7

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00500)	CHEM- ICAL OXYGEN DEMAND (LUM LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE CULI- FORM (CUL. PER 100 ML) (31501)	FECAL CULI- FORM (CUL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
UCT., 1970							
06...	--	9.6	10	2.2	--	16	0
NOV.							
03...	--	12.4	11	.0	--	26	64
DEC.							
02...	--	--	10	3.4	--	20	10
JAN., 1971							
11...	--	8.0	15	1.5	4	2	4
FEB.							
03...	--	9.8	17	2.6	230	--	12
MAR.							
01...	--	10.8	11	1.4	5	1	44
APR.							
01...	40	9.6	34	2.6	0	0	26
MAY							
06...	10	9.9	25	1.6	90	2	165
JUNE							
08...	6	7.6	24	.8	40	14	29
AUG.							
04...	--	8.1	--	3.8	640	25	214
SEP.							
02...	10	7.3	0	3.9	100	0	0
OCT.							
05...	20	8.0	27	2.0	--	280	446
NOV.							
09...	5	9.4	15	1.1	--	73	27
DEC.							
08...	3	8.5	8	1.0	0	0	76

RIO GRANDE BASIN

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08255500 COSTILLA CREEK NEAR COSTILLA, N. MEX.

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

DRAINAGE AREA.--195 sq mi.

PERIOD OF RECORD.--Chemical analyses: August 1966 to December 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SIJ2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED TAS- SIUM (K) (MG/L) (00935)	HICAR- BONATE (MG/L) (00440)	CAR- BONATE (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
UCT., 1970											
27...	1225	9.1	16	0	23	4.3	6.3	1.4	105	0	3.2
FEB., 1971											
02...	1500	14	15	20	23	3.9	6.1	1.2	93	0	8.3
MAY											
11...	1110	30	15	20	21	3.4	9.3	1.4	91	0	6.3
JULY											
15...	1050	34	16	40	20	3.6	5.4	1.1	96	0	3.8
NOV.											
02...	1145	6.7	16	0	25	4.1	6.9	1.3	108	0	7.3

DATE	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SURP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
UCT., 1970											
27...	1.5	.8	.10	110	75	0	.3	179	7.5	4.0	0
FEB., 1971											
02...	2.8	.9	.10	107	73	0	.3	168	7.8	.0	10
MAY											
11...	1.4	.6	.52	105	66	0	.3	156	7.6	7.5	10
JULY											
15...	1.8	1.0	.01	100	65	0	.3	151	7.4	16.0	10
NOV.											
02...	2.4	.8	.00	117	79	0	.3	190	8.0	2.0	4

08266800 RED RIVER AT FISH HATCHERY, NEAR QUESTA, N. MEX.

LOCATION.--Lat 36°41'07", long 105°39'05", SE~~SE~~SW~~SW~~ sec.3, T.28 N., R.12 E., Taos County, at Fish Hatchery bridge, 3.5 miles upstream from mouth, and 4 miles southwest of Questa.

DRAINAGE AREA.--185 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: January 1966 to December 1971.

Water temperatures: January 1966 to December 1971.

Sediment records: July 1970 to December 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SOLVED CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SIU2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- ASSIUM (K) (MG/L) (00935)	BICAR- BONATE (MG/L) (00440)	CAM- MONATE (CU3) (MG/L) (00445)
OCT., 1970									
01-26	39	19	--	77	9.8	27	5.6	98	0
27-31	36	--	--	61	8.4	--	5.6	90	0
NOV.									
01-05	37	--	--	60	8.2	--	5.4	89	0
04...	36	15	120	66	9.1	24	6.0	93	0
05-30	34	--	--	55	8.2	--	5.6	88	0
DEC.									
01-06	27	--	--	60	9.0	--	6.2	97	0
07-22	19	--	--	48	8.0	--	2.5	112	0
23-31	25	--	--	65	9.2	--	--	105	0
JAN., 1971									
01-09	19	--	--	46	8.8	--	3.6	109	0
10-13	25	17	100	52	8.8	23	5.7	91	0
14-20	26	--	--	48	8.1	--	5.1	89	0
21-31	27	--	--	50	8.5	--	6.2	90	0
FEB.									
01-28	27	--	--	50	9.1	--	--	85	0
MAR.									
01-31	24	--	--	47	8.5	--	--	96	0
APR.									
01-04	24	13	10	76	9.8	21	5.0	86	0
05-19	27	11	0	68	11	22	5.6	62	0
20-30	29	11	10	150	13	28	3.6	68	0
MAY									
01...	36	--	--	37	7.1	--	--	A	9
02-07	38	--	--	120	11	--	--	38	0
08-16	38	--	--	30	8.2	--	--	67	0
17-31	48	--	--	100	11	--	--	47	0
JUNE									
01-08	58	--	--	100	10	--	--	53	0
09-17	57	--	--	79	9.0	--	--	65	0
18-21	52	--	--	76	8.7	--	--	78	0
22-23	52	--	--	120	11	--	--	66	0
24-29	49	--	--	87	9.4	--	--	79	0
30...	57	--	--	230	15	--	--	67	0
JULY									
01-03	45	--	--	56	9.0	--	--	95	0
04-12	37	--	--	38	8.2	--	--	101	0
13-31	47	--	--	100	11	--	--	74	0
AUG.									
01-08	50	--	--	110	12	--	--	44	0
09-17	46	--	--	120	12	--	--	61	0
18-19	42	--	--	140	14	--	--	60	0
20-31	53	--	--	89	10	--	--	71	0
SEP.									
01-05	42	--	--	91	10	--	--	94	0
06-08	41	--	--	140	12	--	--	87	0
09-11	36	--	--	110	12	--	--	97	0
12-24	33	--	--	130	13	--	--	95	0
25-30	40	--	--	51	9.0	--	--	90	0
OCT.									
01-08	62	--	--	59	8.1	--	--	74	0
09-18	47	--	--	75	9.4	--	--	88	0
19-31	47	--	--	42	7.2	--	--	83	0
NOV.									
01-06	43	--	--	43	7.3	--	--	91	0
07-15	42	--	--	67	9.6	--	--	91	0
16-30	35	--	--	91	11	--	--	95	0
DEC.									
01-07	30	--	--	77	11	--	--	101	0
08-16	26	--	--	50	8.6	--	--	110	0
17-21	28	--	--	72	10	--	--	105	0
22-31	34	--	--	45	8.1	--	--	100	0
CALENDAR YEAR									
MTD. AVG.	--	--	--	79	9.8	--	--	79	0
TIME MTD.									
AVG.	38	--	--	76	9.8	--	--	82	0
TONS									
PER DAY	--	--	--	8.0	1.0	--	--	8	0
WATER YEAR									
MTD. AVG.	--	--	--	80	9.9	--	--	79	0
TIME MTD.									
AVG.	35	--	--	76	9.7	--	--	83	0
TONS									
PER DAY	--	--	--	7.7	.9	--	--	8	0

08266800 RED RIVER AT FISH HATCHERY, NEAR QUESTA, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

EXTREMES, 1970-71.--Hardness: Maximum, 640 mg/l June 30, 1971; minimum, 110 mg/l May 8-16, 1971.

Specific conductance: Maximum daily, 1,280 micromhos June 30, 1971; minimum daily, 258 micromhos May 12, 1971.

Water temperatures: Maximum, 16°C Aug. 30, 1971; minimum, 3.0°C on several days during January and December 1971.

EXTREMES, 1966-71.--Hardness: Maximum, 640 mg/l June 30, 1971; minimum, 60 mg/l Jan. 14, 1969.

Specific conductance: Maximum daily, 1,280 micromhos June 30, 1971; minimum daily, 172 micromhos May 21, 1968.

Water temperatures: Maximum, 20°C July 24, 1970; minimum, freezing point Feb. 7, 1966, Dec. 17, 1968, Nov. 18, 26, 1969.

REMARKS.--Mean daily discharge is estimated by subtracting 10-20 cfs from the mean daily discharge computed from the record of the station at the mouth of the river.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SOLVED SULFATE (SU4) (MG/L) (00945)	DIS- SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUORIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA PHOSPHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (MG/L) (01020)	DIS- SOLVED (SUM OF CATIONS PER TUNTS) (MG/L) (70501)	DIS- SOLVED (SUM OF ANIONS PER TUNTS) (MG/L) (70303)	DIS- SOLVED (SUM OF CATIONS PER TUNTS) (MG/L) (70502)
OCT., 1970									
01-26	190	6.0	--	.60	--	--	380	.52	40.0
27-31	--	--	--	.20	--	--	--	--	--
NOV.									
01-03	--	--	--	.20	--	--	--	--	--
04...	180	4.8	1.5	.20	--	0	350	.48	34.0
05-30	--	--	--	.30	--	--	--	--	--
DEC.									
01-06	--	--	--	.50	--	--	--	--	--
07-22	--	--	--	.20	--	--	--	--	--
23-31	--	--	--	.20	.03	--	--	--	--
JAN., 1971									
01-09	--	--	--	.10	--	--	--	--	--
10-13	140	6.3	1.5	.30	--	0	300	.41	20.2
14-20	--	--	--	.20	--	--	--	--	--
21-31	--	--	--	.20	--	--	--	--	--
FEB.									
01-28	--	--	--	.50	--	--	--	--	--
MAR.									
01-31	--	--	--	.48	--	--	--	--	--
APR.									
01-04	190	9.0	1.2	.30	--	20	369	.50	23.9
05-19	250	6.3	1.3	.23	--	20	427	.58	31.1
20-30	410	7.2	1.4	1.2	--	30	663	.90	51.9
MAY									
01...	--	--	--	.00	--	--	--	--	--
02-07	--	--	--	.07	--	--	--	--	--
08-16	--	--	--	.04	--	--	--	--	--
17-31	--	--	--	.01	--	--	--	--	--
JUNE									
01-08	--	--	--	.12	--	--	--	--	--
09-17	--	--	--	.10	--	--	--	--	--
18-21	--	--	--	.04	--	--	--	--	--
22-23	--	--	--	.12	--	--	--	--	--
24-29	--	--	--	.02	--	--	--	--	--
30...	--	--	--	.54	--	--	--	--	--
JULY									
01-03	--	--	--	.00	--	--	--	--	--
04-12	--	--	--	.02	--	--	--	--	--
13-31	--	--	--	.04	--	--	--	--	--
AUG.									
01-08	--	--	--	.00	--	--	--	--	--
09-17	--	--	--	.04	--	--	--	--	--
18-19	--	--	--	.18	--	--	--	--	--
20-31	--	--	--	.01	--	--	--	--	--
SEP.									
01-05	--	--	--	.05	--	--	--	--	--
06-08	--	--	--	.22	--	--	--	--	--
09-11	--	--	--	.15	--	--	--	--	--
12-24	--	--	--	.30	--	--	--	--	--
25-30	--	--	--	.06	--	--	--	--	--
OCT.									
01-08	--	--	--	.35	--	--	--	--	--
09-18	--	--	--	.41	--	--	--	--	--
19-31	--	--	--	.30	--	--	--	--	--
NOV.									
01-06	--	--	--	.27	--	--	--	--	--
07-15	--	--	--	.31	--	--	--	--	--
16-30	--	--	--	.63	--	--	--	--	--
DEC.									
01-07	--	--	--	.71	--	--	--	--	--
08-16	--	--	--	.58	--	--	--	--	--
17-21	--	--	--	.46	--	--	--	--	--
22-31	--	--	--	.24	--	--	--	--	--
CALENDAR YEAR									
MTD. AVG.	--	--	--	.25	--	--	--	--	--
TIME MTD.									
AVG.	--	--	--	.28	--	--	--	--	--
TONS									
PER DAY	--	--	--	.03	--	--	--	--	--
WATER YEAR									
MTD. AVG.	--	--	--	.23	--	--	--	--	--
TIME MTD.									
AVG.	--	--	--	.26	--	--	--	--	--
TONS									
PER DAY	--	--	--	.02	--	--	--	--	--

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	HARD- NESS (CA, MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00951)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	COLOR (PLAT- INUM- CURALT UNITS) (00080)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT.									
01-26	230	150	.8	579	7.5	--	--	0	20
27-31	190	116	--	510	7.3	--	--	0	120
NOV.									
01-05	180	107	--	496	7.2	--	--	2	93
04...	200	124	.7	524	7.5	--	--	0	65
05-30	170	98	--	494	7.3	--	--	3	30
DEC.									
01-06	190	110	--	521	7.4	--	--	0	86
07-22	150	58	--	581	7.6	--	--	0	42
23-31	200	114	--	518	7.8	--	--	0	50
JAN.									
01-09	150	61	--	422	7.4	--	--	8	58
10-15	170	95	.8	468	7.4	--	--	1	62
14-20	150	77	--	440	7.2	--	--	1	59
21-31	160	86	--	476	7.1	--	--	2	47
FEB.									
01-28	160	90	--	487	7.7	5	3	0	20
MAR.									
01-31	150	74	--	427	7.7	5	3	1	10
APR.									
01-04	230	160	.6	540	7.7	5	1	1	10
05-19	260	210	.6	618	7.8	7	1	0	0
20-30	430	370	.6	892	7.6	7	0	4	50
MAY									
01...	120	--	--	581	9.2	20	3	2	0
02-07	340	310	--	758	7.8	5	0	9	40
08-16	110	54	--	507	8.4	5	0	1	0
17-31	290	260	--	666	7.9	5	0	1	30
JUNE									
01-08	290	250	--	669	8.3	5	1	1	20
09-17	230	180	--	530	8.2	5	0	1	60
18-21	230	160	--	515	8.1	5	0	1	70
22-23	340	290	--	734	8.2	5	1	0	70
24-29	260	190	--	583	8.4	5	0	2	30
30...	640	580	--	1280	8.0	5	3	1	10
JULY									
01-03	180	99	--	439	8.3	5	1	2	20
04-12	150	46	--	534	8.1	0	1	4	70
13-31	290	230	--	660	8.1	0	0	3	10
AUG.									
01-08	320	290	--	699	8.0	5	0	3	30
09-17	350	300	--	885	8.1	3	0	1	20
18-19	410	360	--	755	7.9	0	0	7	40
20-31	260	210	--	594	8.0	3	0	2	20
SEP.									
01-05	270	190	--	592	8.0	3	0	0	10
06-08	400	330	--	840	7.8	0	0	6	10
09-11	320	240	--	714	7.8	0	0	1	10
12-24	380	300	--	856	7.8	3	0	1	50
25-30	160	91	--	418	7.6	3	0	0	40
OCT.									
01-08	180	120	--	434	8.0	0	3	4	50
09-18	230	150	--	529	8.0	0	0	4	10
19-31	130	66	--	340	7.7	0	0	15	20
NOV.									
01-06	140	63	--	327	7.9	0	1	7	50
07-15	210	130	--	499	8.0	0	0	3	30
16-30	270	190	--	640	7.9	0	0	--	30
DEC.									
01-07	240	150	--	559	7.7	3	1	40	20
08-16	160	70	--	410	7.9	3	1	1	8
17-21	220	130	--	539	7.9	0	1	2	20
22-31	150	64	--	360	7.8	0	1	2	20
CALENDAR YEAR									
MTD. AVG.	236	172	--	562	7.9	--	--	3	27
TIME MTD.									
AVG.	229	162	--	552	7.9	--	--	3	26
TONS									
PER DAY	--	--	--	--	--	--	--	0	0
WATER YEAR									
MTD. AVG.	239	176	--	580	7.8	--	--	2	31
TIME MTD.									
AVG.	227	161	--	561	7.8	--	--	2	31
TONS									
PER DAY	--	--	--	--	--	--	--	0	

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

[illegible]

RIO GRANDE BASIN

08266800 RED RIVER AT FISH HATCHERY, NEAR QUESTA, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	SODIUM AD- SORP- TION HA11U (000931)	SPE- CIFIC CUN- DUCT- ANCE (MICKU- MHUS) (00095)	PH (UNITS) (000400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00086)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED BROM- (B) (UG/L) (01020)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970									
20...	--	711	--	7.5	3	6	--	--	--
26...	--	479	--	10.5	3	1	--	--	--
NOV.									
17...	--	396	--	10.5	3	2	--	--	--
FEB., 1971									
02-03	--	469	7.9	--	5	6	--	5	80
MAR.									
15...	--	340	--	11.0	0	2	--	--	--
APR.									
06...	--	500	--	14.0	5	2	--	--	--
28...	--	674	--	--	5	2	--	--	--
MAY									
17...	--	481	--	16.0	2	4	--	--	--
JUNE									
30...	--	971	--	15.0	5	0	--	--	--
JULY									
20...	--	482	--	18.0	5	10	--	--	--
AUG.									
03...	--	803	7.9	18.5	5	3	16	4	<440
11...	--	686	--	19.0	3	7	--	--	--
SEP.									
01...	--	409	--	20.0	7	10	--	--	--
22...	--	521	--	11.0	3	15	--	--	--
OCT.									
05...	--	384	7.6	15.5	--	--	30	6	<220
20...	--	301	--	12.5	3	7	--	--	--
21...	--	320	7.9	12.0	3	50	--	10	10
NOV.									
01...	--	289	--	9.0	3	6	--	--	--
23...	--	465	--	7.5	3	4	--	--	--
DEC.									
15...	--	314	--	7.5	3	1	--	--	--

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	DIS- SOLVED BURN- (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 COBALT (CU) (UG/L) (01035)
OCT., 1970											
08...	1040	--	<10	--	--	--	--	1	--	0	0
AUG., 1971											
03...	1705	88	0	41	<2	<7	16	<95	<7	--	<7
OCT.											
05...	1615	830	0	40	<1	<4	30	<50	<4	--	<4

DATE	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED GALLIUM (GA) (UG/L) (01120)	DIS- SOLVED GER- MANIUM (GE) (UG/L) (01125)	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)	DIS- SOLVED MANG- NESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)
OCT., 1970										
08...	--	--	--	--	--	0	--	--	--	<.5
AUG., 1971										
03...	4	<2	<10	15	--	<7	10	120	.1	--
OCT.										
05...	6	<1	<5	160	17	<4	<10	190	.2	--

DATE	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED TIN (SN) (UG/L) (01100)	DIS- SOLVED TAN- TANIUM (TI) (UG/L) (01150)	DIS- SOLVED VAN- ADIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED ZIR- CONIUM (Zr) (UG/L) (01160)
OCT., 1970										
08...	--	--	--	--	--	--	--	--	0	--
AUG., 1971										
03...	460	<7	<1	2	1300	<10	<7	<7.0	<440	<20
OCT.										
05...	200	10	<1	6	410	<5	12	3.0	<220	<10

RIO GRANDE BASIN

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08266800 RED RIVER AT FISH HATCHERY, NEAR QUESTA, N. MEX.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENTS)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	615	439	509	364	459	480	532	381	605	459	549	505	353	312	611
2	579	510	532	408	443	460	515	797	654	470	626	493	391	313	554
3	578	513	511	442	454	463	558	773	611	384	637	491	406	317	594
4	613	524	495	451	456	465	582	829	583	348	669	624	437	309	572
5	621	504	506	388	457	436	615	723	586	319	775	663	457	300	530
6	626	499	532	414	492	457	652	607	734	348	775	750	424	309	505
7	639	529	378	416	492	490	636	618	682	330	690	735	482	437	476
8	606	442	336	407	497	473	557	368	687	337	508	908	455	492	398
9	615	456	328	425	498	440	628	273	490	---	738	675	535	519	435
10	608	471	360	501	492	453	620	262	385	316	805	581	532	562	416
11	601	450	365	516	477	456	640	269	411	356	811	777	530	549	379
12	529	466	365	470	465	443	703	258	330	312	787	850	505	500	385
13	579	448	374	447	471	433	647	270	462	631	652	818	512	499	379
14	593	476	364	428	456	428	655	309	590	727	754	878	522	405	363
15	595	543	369	---	467	452	624	259	658	727	682	956	500	355	388
16	577	518	361	426	443	348	639	364	691	685	501	824	469	637	415
17	578	504	360	431	437	456	551	564	548	656	645	761	459	569	471
18	585	531	344	433	443	385	706	570	513	795	793	824	527	575	495
19	574	494	378	431	435	370	657	718	495	682	892	745	335	660	530
20	583	482	361	430	433	365	851	658	400	635	645	710	324	666	570
21	576	492	358	448	477	367	967	685	567	565	605	720	310	702	552
22	534	484	334	467	491	358	959	638	750	580	535	908	303	649	407
23	559	458	521	483	488	371	1040	600	665	660	585	761	---	639	365
24	554	499	532	492	462	329	959	648	557	578	594	806	292	639	360
25	543	471	509	489	462	326	994	780	618	510	570	476	482	607	345
26	574	442	501	490	473	347	1020	746	560	606	488	358	318	607	324
27	523	466	462	465	470	340	931	624	611	617	560	354	303	569	331
28	590	470	495	448	475	338	907	477	413	610	582	352	300	529	365
29	464	490	495	457	---	338	830	534	624	820	635	348	300	523	296
30	466	491	492	456	---	355	840	705	1280	606	471	452	294	627	369
31	463	---	501	448	---	457	---	632	---	641	549	---	331	---	396
MONTH	572	485	430	446	467	409	734	546	591	544	655	670	413	513	438

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	10.0	7.5	4.5	4.0	5.0	4.0	6.5	9.0	9.0	14.5	14.0	13.5	11.0	5.0	6.0
2	9.0	6.0	4.5	4.0	5.0	4.0	6.5	9.0	9.0	14.0	13.0	13.0	6.0	5.0	5.0
3	9.0	4.5	4.5	4.0	5.0	3.5	6.5	10.5	9.0	14.0	13.0	13.5	6.0	4.0	5.0
4	10.0	4.5	4.5	3.5	4.0	4.0	6.5	10.5	9.0	11.5	13.0	12.0	7.0	4.0	4.5
5	10.0	9.0	5.0	3.0	5.0	4.0	6.5	10.5	9.0	11.0	14.0	10.0	7.0	4.0	5.0
6	10.0	5.0	4.0	3.0	4.0	4.0	6.5	10.5	10.0	12.0	12.0	10.5	8.0	4.0	5.0
7	10.0	5.0	4.0	3.5	4.0	4.0	6.5	10.5	10.0	13.0	12.0	12.0	8.0	4.0	6.0
8	10.0	4.0	5.0	3.0	4.0	4.0	7.0	9.0	12.5	13.5	12.0	12.0	10.0	5.0	6.0
9	10.0	4.0	5.0	3.0	4.0	5.0	8.0	9.0	12.5	---	13.5	12.0	9.5	6.0	5.0
10	9.0	5.0	4.0	3.5	4.0	5.0	8.0	8.5	11.0	13.0	13.0	12.0	9.0	7.0	4.5
11	8.0	4.5	5.0	3.5	5.0	4.5	7.5	8.5	10.0	13.0	14.0	12.0	8.5	5.0	4.5
12	7.0	5.5	5.0	5.0	5.0	4.5	7.5	8.5	10.0	12.5	14.0	12.5	8.0	5.0	4.5
13	7.0	5.0	5.0	5.0	5.0	4.5	7.5	9.5	10.0	13.5	13.0	12.0	9.5	6.0	6.0
14	9.0	5.0	5.0	5.0	5.5	5.5	7.5	9.0	10.5	13.5	13.5	12.0	9.5	4.0	5.0
15	9.0	4.5	6.5	---	5.0	5.5	7.5	10.5	13.5	13.5	13.0	13.0	9.0	4.0	5.0
16	9.0	5.0	5.5	3.0	5.5	5.5	7.5	10.5	13.0	14.0	13.0	14.0	9.0	7.0	4.5
17	9.0	4.0	5.0	3.0	5.5	5.5	7.5	9.0	14.0	14.0	13.0	14.0	9.5	7.0	5.0
18	9.0	4.0	6.0	4.0	5.5	6.0	8.5	9.0	14.0	14.5	13.0	10.0	6.0	5.0	5.0
19	9.0	4.0	5.0	4.5	5.0	6.5	7.5	10.5	12.0	14.0	14.0	10.0	6.0	4.0	5.0
20	6.0	3.5	4.5	5.0	5.0	5.5	7.5	14.5	13.0	14.5	14.0	10.0	6.0	6.0	5.0
21	8.0	3.5	6.0	5.5	5.0	5.5	7.5	8.0	13.5	14.5	14.0	10.0	6.5	6.0	3.0
22	8.0	3.5	5.0	5.5	5.0	5.5	8.0	8.5	14.0	14.5	14.0	12.0	7.5	6.0	3.0
23	7.5	4.0	5.0	4.0	4.5	5.5	8.0	8.5	14.5	14.5	14.0	9.0	7.5	4.0	6.0
24	7.0	4.0	4.5	4.0	4.0	5.5	9.0	8.5	14.5	13.0	14.5	10.0	8.0	4.0	5.0
25	7.0	5.5	3.5	4.0	4.0	5.5	9.0	9.5	14.5	14.5	14.0	10.0	7.0	4.0	5.0
26	7.0	6.0	4.0	4.0	3.5	7.5	9.0	9.5	14.5	14.0	14.0	10.0	7.0	4.0	5.0
27	8.0	6.0	5.0	4.0	3.5	8.0	9.0	10.5	14.0	14.0	14.0	10.0	7.0	4.0	4.5
28	4.0	4.0	5.0	4.5	4.0	7.5	8.0	10.5	14.0	14.0	14.0	11.0	7.0	3.5	5.0
29	4.5	5.5	5.0	5.0	---	6.0	8.0	11.5	14.5	13.5	14.0	12.0	7.0	4.5	5.0
30	5.0	5.0	4.0	5.0	---	7.0	9.0	11.5	14.5	14.0	16.0	12.5	6.0	5.0	7.0
31	7.0	---	8.5	5.0	---	7.0	---	9.0	---	14.0	14.0	---	4.0	---	5.0
MONTH	8.0	5.0	5.0	4.0	4.5	5.5	7.5	9.5	12.0	13.5	13.5	11.5	7.5	5.0	5.0

RIO GRANDE BASIN

08266800 RED RIVER AT FISH HATCHERY, NEAR QUESTA, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)
OCT., 1970					
26...	1540	10.5	49	10	1.4
NOV.					
17...	1355	10.5	38	34	3.5
DEC.					
30...	0900	18.5	35	11	1.0
JAN., 1971					
29...	0900	8.0	26	8	.56
MAR.					
15...	1355	11.0	39	13	1.4
APR.					
06...	1730	14.0	37	11	1.1
28...	1215	14.0	40	9	.97
MAY					
17...	1715	16.0	39	17	1.8
JUNE					
09...	1615	16.5	59	739	118
30...	1130	15.0	51	29	4.0
JULY					
20...	1510	18.0	40	25	2.7
AUG.					
03...	1705	18.5	48	22	2.9
11...	1440	19.0	43	13	1.5
SEP.					
01...	1610	20.0	47	26	3.3
OCT.					
20...	1625	12.5	42	36	4.0
NOV.					
01...	1140	9.0	43	31	4.0
23...	0920	7.5	33	24	2.1
DEC.					
15...	0905	7.5	28	8	.60

08279000 EMBUDO CREEK AT DIXON, N. MEX.

LOCATION (revised).--Lat 36°12'39", long 105°54'47", in NE¼SE¼ sec.19, T.23 N., R.10 E., Rio Arriba County, at gaging station, on U.S. Highway 64, 0.5 mile upstream from mouth, 0.5 mile east of Embudo Post Office, and 1.7 miles northwest of Dixon. Prior to Sept. 2, 1971, at site 750 ft downstream.

DRAINAGE AREA.--305 sq mi.

PERIOD OF RECORD.--Chemical analyses: August 1970 to December 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00950)	DIS- SOLVED POT- ASSIUM (K) (MG/L) (00935)	BICAR- BONATE (MG/L) (00440)	CAR- BONATE (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLORIDE (CL) (MG/L) (00940)
UCT., 1970												
15...	1000	29	17	--	64	6.7	9.0	1.7	235	0	20	4.0
JAN., 1971												
14...	1520	31	13	--	56	7.3	7.6	1.5	202	0	16	2.6
FEB.												
16...	0945	30	13	--	57	7.4	7.6	1.5	198	0	25	7.9
MAR.												
30...	0900	41	12	--	48	6.4	5.8	1.2	166	0	22	4.4
APR.												
13...	1635	13	--	--	--	--	--	--	--	--	--	--
22...	1205	24	12	20	51	6.7	9.0	1.1	181	0	19	4.8
MAY												
12...	1120	19	6.6	--	27	2.4	2.0	1.0	87	0	12	.7
24...	0955	14	15	--	56	7.0	11	1.4	222	0	24	5.3
JUNE												
16...	1500	7.2	18	--	69	7.3	14	1.6	231	0	24	7.7
AUG.												
04...	0930	18	19	--	70	6.9	14	1.6	207	0	24	7.1
26...	1415	82	16	--	54	6.7	6.2	1.6	197	0	27	1.6
UCT.												
06...	0850	48	15	160	65	7.5	7.2	1.3	227	0	33	4.1
26...	1530	82	--	--	--	--	--	--	--	--	--	--
NOV.												
16...	1300	46	14	--	44	6.8	7.5	1.5	166	0	21	4.5
DEC.												
08...	1115	45	--	--	--	--	--	--	--	--	--	--
30...	1520	25	14	--	61	7.3	10	1.2	216	0	25	8.8

DATE	DIS- SOLVED FLUORIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00651)	DIS- SOLVED SOLIDS (SOLUBLE SOLIDS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION KATIU (MG/L) (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED BORON (B) (UG/L) (01020)
UCT., 1970												
15...	.5	.30	240	190	0	.3	399	7.6	9.0	--	--	0
JAN., 1971												
14...	.3	.20	200	170	4	.3	321	7.9	4.0	--	--	--
FEB.												
16...	.5	.50	220	170	8	.3	344	8.1	4.0	--	--	--
MAR.												
30...	.2	.40	184	150	14	.2	309	8.0	--	--	--	--
APR.												
13...	--	--	--	--	--	--	376	--	16.0	3	0	--
22...	.3	.10	194	150	2	.3	337	7.9	9.0	--	--	70
MAY												
12...	.1	.02	95	77	6	.1	154	7.9	13.0	--	--	--
24...	.3	.21	230	170	0	.4	406	7.8	12.0	--	--	--
JUNE												
16...	.6	.23	257	200	13	.4	400	7.7	23.0	--	--	--
AUG.												
04...	.5	.44	247	200	33	.4	396	7.7	16.0	--	--	--
26...	.3	.04	210	160	1	.2	328	7.9	21.0	--	--	--
UCT.												
06...	.2	.07	245	190	7	.2	372	8.0	14.5	--	--	20
26...	--	--	--	--	--	--	318	--	--	--	--	--
NOV.												
16...	.2	.05	192	140	0	.3	346	8.0	5.0	--	--	--
DEC.												
08...	--	--	--	--	--	--	332	--	2.0	--	--	--
30...	.2	.15	234	180	5	.3	394	8.1	4.5	--	--	--

RIO GRANDE BASIN

08279000 EMBUDO CREEK AT DIXON, N. MEX.--Continued

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED COBALT (CO) (UG/L) (01035)
AUG., 1971										
04...	0930	14	6	220	<2	<5	37	<60	<5	<5
OCT.										
06...	0830	590	1	150	<2	<4	20	<55	<4	<4

DATE	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED GALLIUM (GA) (UG/L) (01120)	DIS- SOLVED GER- MANIUM (GE) (UG/L) (01125)	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)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)
AUG., 1971										
04...	3	<2	<6	17	--	<5	20	24	.3	1
OCT.										
06...	4	<2	<6	160	13	<4	<10	47	.2	<1

DATE	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED TIN (SN) (UG/L) (01100)	DIS- SOLVED TAN- IUM (TI) (UG/L) (01150)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED ZIR- CONIUM (ZR) (UG/L) (01160)
AUG., 1971									
04...	<5	<1	2	430	<6	<5	<5.0	<280	<13
OCT.									
06...	<4	<1	10	290	<6	18	<4.0	<260	<12

08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, N. MEX.

LOCATION.--Lat 36°19'06", long 106°35'50", Rio Arriba County, at gaging station 7.7 miles downstream from Rio Gallina, 9 miles northwest of Youngsville, 15.6 miles upstream from Abiquiu Dam, 30.3 miles downstream from El Vado Dam, and at mile 47.4.

DRAINAGE AREA.--1,600 sq mi, of which 100 sq mi is probably noncontributing.

PERIOD OF RECORD.--Specific conductance: October 1969 to December 1971.

Water temperatures: October 1962 to December 1971.

Sediment records: October 1962 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum daily, 704 micromhos Feb. 20, 1971; minimum daily, 172 micromhos May 11, 1971.

Water temperatures: Maximum daily, 24.0°C on Oct. 5, 7, 18-19, 1971; minimum, freezing point on many days during winter months.

Sediment concentrations: Maximum daily, 36,700 mg/l Sept. 31, 1971; minimum daily, 30 mg/l on several days during October, January, June, and September, 1971.

Sediment discharge: Maximum daily, 85,800 tons Sept. 31, 1971; minimum daily, 1.5 tons Sept. 15-16, 1971.

EXTREMES, 1962-71.--Specific conductance (1969-71): Maximum daily, 1,270 micromhos July 16, 1970; minimum daily, 153 micromhos May 23, 1970.

Water temperatures: Maximum, 32°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 several days during Sept. 1968, July 1969.

Sediment discharge: Maximum daily, 230,000 tons Aug. 11, 1967; minimum daily, 1 ton on several days in 1964.

REMARKS.--Records furnished by the Corps of Engineers, Albuquerque District. Suspended sediment particle-size analyses for the 1963-71 water years determined by method established by the Corps of Engineers.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	366	417	435	500	426	625	385	200	184	---	---	---	---	392	---
2	365	417	526	500	435	588	385	208	200	---	---	---	400	454	---
3	357	333	556	476	435	526	263	217	238	---	385	---	454	444	---
4	357	350	588	476	476	588	278	229	227	---	---	---	400	364	---
5	355	392	588	500	465	571	267	244	256	---	---	---	416	344	---
6	370	413	588	500	465	571	235	222	263	---	---	---	408	357	588
7	370	392	588	500	526	571	250	250	217	---	---	---	400	328	---
8	403	388	625	500	549	571	227	208	200	---	---	---	454	323	---
9	413	418	588	488	535	526	278	222	208	---	---	---	454	333	---
10	417	346	526	476	538	645	286	178	213	---	---	---	425	322	---
11	422	310	526	465	538	540	357	172	213	---	---	---	425	322	---
12	345	308	500	454	556	588	345	178	208	---	---	---	444	322	---
13	345	311	500	454	526	571	323	215	208	444	---	---	434	322	---
14	417	323	526	454	540	540	312	200	200	---	---	649	385	344	---
15	366	319	526	454	540	556	312	202	204	---	---	---	385	384	---
16	392	321	556	454	588	540	308	192	217	---	---	---	556	384	---
17	395	311	556	454	606	500	377	212	182	---	---	---	500	454	---
18	413	317	556	454	625	500	345	192	206	---	---	---	500	454	---
19	382	323	556	454	625	513	377	179	192	---	---	---	408	465	---
20	385	303	556	454	704	500	298	175	188	---	---	---	408	500	---
21	375	312	526	454	694	513	241	175	286	---	---	---	416	500	---
22	465	312	455	625	606	500	323	179	278	---	---	---	425	500	---
23	469	312	472	625	606	488	263	181	263	---	---	---	454	465	---
24	420	312	500	476	526	500	303	230	282	---	190	---	444	476	---
25	417	323	500	485	571	488	200	196	---	---	---	---	465	476	---
26	454	435	556	483	588	370	192	182	---	---	---	---	476	465	---
27	454	370	556	476	571	312	200	185	---	---	---	---	556	465	---
28	408	312	476	500	625	286	230	182	---	---	---	---	425	465	---
29	417	323	476	513	---	417	241	196	---	---	---	---	377	465	---
30	357	455	476	500	---	263	212	200	213	---	---	---	377	465	---
31	368	---	476	500	---	270	---	208	---	---	---	---	400	---	---
MONTH	395	349	530	487	553	501	287	200	222	---	---	---	436	412	---

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	4.0	1.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	---	---	---	13.0	6.0	---
2	7.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	3.0	---	---	---	18.0	9.0	---
3	8.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	---	17.0	---	21.0	7.0	---
4	7.0	1.0	0.0	0.0	0.0	0.0	1.0	3.0	3.0	---	---	---	10.0	7.0	---
5	7.0	1.0	0.0	0.0	0.0	0.0	1.0	3.0	3.0	---	---	---	24.0	9.0	---
6	7.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	3.0	---	---	---	18.0	3.0	0.0
7	7.0	1.0	0.0	0.0	0.0	0.0	1.0	3.0	3.0	---	---	---	24.0	8.0	---
8	4.0	1.0	0.0	0.0	0.0	0.0	1.0	2.0	3.0	---	---	---	20.0	7.0	---
9	4.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	3.0	---	---	---	18.0	2.0	---
10	4.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	3.0	---	---	---	18.0	2.0	---
11	4.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	3.0	---	---	---	19.0	4.0	---
12	4.0	1.0	0.0	0.0	0.0	0.0	1.0	2.0	3.0	---	---	---	18.0	4.0	---
13	4.0	0.0	0.0	0.0	0.0	1.0	2.0	2.0	3.0	16.0	---	---	17.0	7.0	---
14	3.0	0.0	0.0	0.0	0.0	1.0	2.0	2.0	3.0	---	---	22.0	18.0	5.0	---
15	3.0	0.0	0.0	0.0	0.0	1.0	2.0	2.0	3.0	---	---	---	17.0	6.0	---
16	3.0	0.0	0.0	0.0	1.0	1.0	2.0	3.0	3.0	---	---	---	22.0	3.0	---
17	3.0	0.0	0.0	0.0	1.0	0.0	2.0	3.0	3.0	---	---	---	21.0	2.0	---
18	2.0	0.0	0.0	0.0	1.0	0.0	2.0	3.0	3.0	---	---	---	24.0	2.0	---
19	3.0	0.0	0.0	0.0	1.0	0.0	2.0	3.0	3.0	---	---	---	24.0	2.0	---
20	2.0	0.0	0.0	0.0	1.0	1.0	2.0	2.0	3.0	---	---	---	22.0	3.0	---
21	3.0	0.0	0.0	0.0	6.0	0.0	2.0	2.0	3.0	---	---	---	13.0	1.0	---
22	3.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	4.0	---	---	---	16.0	2.0	---
23	2.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	4.0	---	---	---	17.0	9.0	---
24	2.0	0.0	0.0	0.0	0.0	1.0	3.0	3.0	4.0	---	---	---	18.0	6.0	---
25	2.0	0.0	0.0	0.0	0.0	0.0	2.0	3.0	---	---	---	---	9.0	7.0	---
26	2.0	0.0	0.0	0.0	0.0	1.0	2.0	2.0	---	---	---	---	10.0	0.0	---
27	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	---	---	---	---	16.0	3.0	---
28	1.0	0.0	0.0	0.0	0.0	2.0	2.0	3.0	---	---	---	---	13.0	1.0	---
29	1.0	0.0	0.0	0.0	---	1.0	2.0	2.0	---	---	---	---	0.0	3.0	---
30	1.0	0.0	0.0	0.0	---	2.0	2.0	2.0	25.0	---	---	---	3.0	4.0	---
31	1.0	---	0.0	0.0	---	1.0	---	2.0	---	---	---	---	7.0	---	---
MONTH	3.5	0.0	0.0	0.0	0.5	0.5	1.5	2.5	3.0	---	---	---	16.5	4.5	---

RIO GRANDE BASIN

08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	119	516	166	69	3450	545	112	2000	605
2	139	185	69	54	2540	370	85	416	95
3	117	988	312	108	1670	542	69	100	19
4	79	1080	230	119	710	228	77	336	79
5	69	2010	374	98	2570	680	72	340	77
6	99	3290	858	66	3050	544	65	287	57
7	75	882	179	58	8200	1280	62	243	50
8	68	1240	228	108	10900	3090	70	283	74
9	65	1910	335	465	6160	6860	77	235	52
10	64	110	19	407	600	659	84	110	25
11	150	1030	514	396	600	642	94	200	51
12	132	814	290	396	380	406	78	344	80
13	105	100	28	389	190	200	57	407	61
14	102	110	30	389	180	189	52	377	59
15	119	60	19	400	410	443	75	284	58
16	72	30	5.8	541	486	710	62	382	80
17	78	1730	364	658	380	675	60	203	32
18	148	3380	1380	654	231	408	75	160	32
19	108	2700	787	654	390	689	68	303	61
20	106	3050	873	710	760	1460	75	6470	1310
21	79	4240	904	700	440	832	77	5950	1240
22	81	10100	2210	695	400	751	92	324	80
23	89	8330	2000	690	480	894	84	185	42
24	81	776	170	735	650	1290	70	140	26
25	95	855	219	730	600	1180	72	168	33
26	162	2670	1250	760	14700	30200	74	147	29
27	102	3160	865	750	13600	27500	74	218	44
28	139	675	253	745	5040	10100	75	200	41
29	102	114	31	815	3790	8340	72	120	23
30	73	100	20	304	4620	3740	70	190	36
31	110	176	56	--	--	--	65	215	38
TOTAL	3127	--	15038.8	13663	--	105447	2294	--	4589
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	65	210	37	85	110	25	66	274	58
2	63	200	34	95	120	31	65	190	33
3	63	100	17	105	230	65	65	120	21
4	63	290	49	103	220	61	70	308	58
5	63	50	8.5	88	300	79	87	170	40
6	60	50	8.1	81	188	42	73	250	73
7	60	40	6.5	77	186	40	73	291	75
8	65	30	5.3	70	197	37	80	272	63
9	70	30	5.7	70	150	28	84	300	68
10	70	40	7.6	70	3530	711	91	230	57
11	70	50	9.5	78	3080	648	99	350	94
12	70	50	9.5	82	3120	691	106	260	74
13	70	50	9.5	90	623	151	117	300	95
14	70	50	9.5	96	440	114	142	7630	2930
15	70	100	19	99	399	107	123	7060	2340
16	73	100	20	109	400	118	99	5580	1490
17	73	60	12	120	260	84	91	366	90
18	73	60	12	121	340	111	95	190	49
19	73	55	11	102	855	250	90	200	49
20	73	80	16	100	700	189	87	150	35
21	80	90	19	91	420	103	94	150	38
22	85	340	78	67	271	53	125	120	41
23	80	290	63	63	553	108	151	6420	2620
24	75	220	45	69	617	125	198	4950	2650
25	70	200	38	84	508	125	258	7550	5260
26	70	210	40	75	433	88	252	6250	4250
27	70	230	43	69	444	91	355	2020	2010
28	70	300	57	62	252	47	570	1290	1990
29	75	390	79	--	--	--	740	2100	4200
30	75	210	43	--	--	--	730	6320	12500
31	80	220	48	--	--	--	795	9050	19400
TOTAL	2187	--	859.7	2421	--	4322	6071	--	62751

08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	962	12500	32500	466	2350	2960	480	1060	1370
2	686	12800	23700	673	944	1720	355	198	190
3	650	19500	34200	884	950	2270	271	2020	1480
4	668	11500	20700	902	1120	2730	325	1170	1030
5	682	4920	9060	890	3720	8940	307	1980	1640
6	902	1030	2510	686	3460	6410	258	1900	1320
7	379	600	614	740	3970	7930	258	1560	1090
8	376	770	782	775	2610	5460	258	288	201
9	518	530	741	770	2160	4490	277	415	310
10	264	690	448	673	278	505	339	389	386
11	210	1920	1090	594	250	401	235	120	76
12	213	1690	972	686	288	533	240	50	32
13	218	488	287	655	340	601	218	30	18
14	222	240	144	642	1570	2720	444	977	1710
15	228	250	154	619	950	1590	646	150	262
16	235	2250	1430	673	709	1290	673	942	1710
17	228	4020	2470	725	200	392	664	376	674
18	235	8030	5100	745	140	282	682	883	1630
19	582	9160	12800	632	90	154	442	94	137
20	660	10200	18200	514	80	111	180	70	34
21	469	9280	11800	514	190	264	184	662	329
22	508	9510	13500	458	80	99	178	384	185
23	650	7700	13500	469	120	152	151	35	14
24	427	7490	8640	455	1800	2210	145	202	79
25	427	427	492	434	2480	2910	133	100	36
26	594	314	504	399	291	313	117	75	24
27	836	110	248	355	50	48	108	50	15
28	614	4620	7660	392	150	159	98	40	11
29	619	6500	10900	413	150	167	359	862	1220
30	469	3910	4950	416	988	1110	546	110	162
31	--	--	--	458	779	963	--	--	--
TOTAL	14731	--	240096	18707	--	59884	9571	--	17375
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	542	80	117	78	280	59	60	80	13
2	602	170	276	44	190	23	50	75	10
3	610	80	132	41	175	19	35	70	6.6
4	372	110	110	36	110	11	33	70	6.2
5	280	130	98	25	105	7.1	30	65	5.3
6	289	180	140	35	706	118	27	65	4.7
7	307	100	83	46	937	155	27	60	4.4
8	279	150	113	314	4050	4380	27	60	4.4
9	306	3010	37900	170	1900	949	27	60	4.4
10	83	400	90	82	420	93	25	50	3.4
11	55	290	43	63	310	53	23	50	3.1
12	42	220	25	58	450	107	22	50	3.0
13	40	150	16	78	220	46	21	40	2.3
14	40	110	12	50	100	14	20	40	2.2
15	39	100	11	35	90	8.5	19	30	1.5
16	29	90	7.0	35	80	7.6	19	30	1.5
17	26	80	5.6	34	70	6.4	105	5830	3480
18	28	220	17	33	50	4.5	242	4800	3140
19	216	1130	1190	35	250	24	220	410	244
20	476	680	874	125	3660	10500	228	410	252
21	420	200	227	446	2460	27000	258	580	404
22	280	150	113	110	800	238	262	450	318
23	144	120	47	231	4070	5070	232	380	238
24	113	498	152	97	400	105	262	450	318
25	95	190	49	105	1520	576	72	250	49
26	91	120	29	60	210	34	48	210	27
27	76	90	18	50	75	10	34	130	12
28	60	90	15	122	1260	512	29	100	7.8
29	52	80	11	66	160	29	155	7940	9740
30	45	75	9.1	60	110	18	945	36700	85800
31	70	544	151	60	100	16			
TOTAL	6107	--	42080.7	2824	--	50193.1	3557	--	104105.8

RIO GRANDE BASIN

08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	827	3010	7050	70	250	47	74	350	70
2	277	1380	1030	100	340	92	72	300	58
3	283	1360	1040	420	370	420	87	330	78
4	175	280	132	510	5900	8120	79	240	51
5	120	280	91	800	7660	16500	60	180	29
6	103	600	167	930	4390	11000	63	110	19
7	73	490	97	910	3300	8110	80	110	24
8	59	200	32	810	2850	6230	85	200	46
9	73	170	34	725	5710	11200	80	180	39
10	77	100	21	715	2780	5370	78	240	51
11	59	80	13	715	2360	4560	70	220	42
12	55	90	13	740	3050	6090	72	260	51
13	60	140	23	725	3050	5970	80	340	73
14	96	220	57	730	3200	6310	85	260	60
15	63	90	15	730	930	1830	80	210	45
16	58	1730	271	315	570	485	85	190	44
17	61	3400	560	130	320	112	85	240	55
18	106	3030	845	110	230	68	85	210	48
19	115	631	187	100	220	59	85	350	80
20	72	200	39	90	190	46	85	460	106
21	68	250	46	76	430	88	85	490	112
22	97	375	101	95	420	108	88	480	114
23	72	110	21	106	240	69	90	200	49
24	70	90	17	99	260	69	95	240	62
25	101	6700	2000	81	180	39	95	190	49
26	260	10900	7990	82	190	42	95	150	38
27	221	1000	614	83	240	54	90	130	32
28	111	470	141	87	520	122	90	120	29
29	156	380	160	92	350	87	90	150	36
30	112	380	115	82	300	66	85	70	16
31	100	250	68				80	40	8.6
TOTAL	4180	--	22990	11258	--	93363	2553	--	1614.6

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

85260
706742.1
84167
699634.9

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PEN- DED SED- IMENT (MG/L) (80154)	SUS- PEN- DED SED- IMENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70326)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70327)
NOV., 1970									
07...	0700	1.1	57	11400	1750	--	--	--	6
11...	0700	.0	396	520	556	--	--	--	6
18...	0700	.0	654	230	406	--	--	--	22
DEC.									
02...	0700	.0	84	150	34	--	--	--	56
MAR., 1971									
19...	0800	.0	98	140	40	--	--	--	48
31...	0800	1.1	740	13000	26000	--	--	--	6
APR.									
05...	0800	1.1	660	6370	11400	--	--	--	13
OCT.									
01...	1000	11.0	498	3260	4380	--	--	56	--
NOV.									
04...	1600	3.5	836	7760	17500	4	--	6	--

RIO GRANDE BASIN

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08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70339)	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70328)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70329)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70341)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70330)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)
NOV., 1970									
07...	--	11	--	16	--	23	--	40	--
11...	--	17	--	24	--	31	--	46	--
18...	--	28	--	37	--	48	--	67	--
DEC.									
02...	--	70	--	80	--	85	--	91	--
MAR., 1971									
19...	--	72	--	88	--	95	--	98	--
31...	--	7	--	8	--	10	--	15	--
APR.									
05...	--	17	--	25	--	35	--	64	--
OCT.									
01...	73	--	82	--	89	--	96	--	98
NOV.									
04...	8	--	14	--	20	--	44	--	88

DATE	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM (70332)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM (70333)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70345)	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM (70334)	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM (70346)	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM (70335)	SUS. SED. SIEVE DIAM. % FINER THAN 2.00 MM (70336)
NOV., 1970								
07...	83	--	98	--	100	--	--	--
11...	80	--	97	--	99	--	100	--
18...	93	--	99	--	100	--	--	--
DEC.								
02...	94	--	97	--	99	--	100	--
MAR., 1971								
19...	100	--	--	--	--	--	--	--
31...	31	--	82	--	99	--	100	--
APR.								
05...	86	--	96	--	98	--	99	100
OCT.								
01...	--	99	--	100	--	--	--	--
NOV.								
04...	--	98	--	100	--	--	--	--

08287000 RIO CHAMA BELOW ABIQUIU DAM, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	99	26	6.9	120	55	18	165	115	51
2	136	51	19	101	33	9.0	119	101	32
3	157	60	25	64	40	6.9	97	102	27
4	123	60	20	109	52	15	79	80	17
5	77	70	15	138	35	13	80	64	14
6	62	58	9.7	103	63	18	97	61	16
7	83	71	16	86	45	10	77	60	12
8	94	60	15	86	48	11	70	55	10
9	94	60	15	305	116	138	101	44	12
10	85	60	14	469	116	147	99	37	9.9
11	105	67	19	399	64	69	118	32	10
12	163	61	27	385	87	90	107	40	12
13	119	60	19	398	93	100	94	40	10
14	95	62	16	396	119	127	57	51	7.8
15	124	75	25	391	115	121	29	41	3.2
16	124	64	21	469	188	238	48	43	5.6
17	77	71	15	592	205	328	79	39	8.3
18	107	85	25	633	200	342	85	30	6.9
19	143	63	24	633	175	299	73	30	5.9
20	118	60	19	674	213	388	73	40	7.9
21	106	56	16	679	204	374	81	41	9.0
22	93	54	14	664	223	400	103	31	8.6
23	102	73	20	653	244	430	99	20	5.3
24	116	46	14	672	260	472	62	21	3.5
25	99	70	19	724	235	459	58	20	3.1
26	118	70	22	732	234	462	58	20	3.1
27	208	52	29	734	284	563	58	29	4.5
28	164	50	22	721	366	712	79	29	6.2
29	95	52	13	752	332	674	93	20	5.0
30	95	59	15	420	265	301	77	11	2.3
31	86	44	10	--	--	--	68	16	2.9
TOTAL	3467	--	559.6	13302	--	7334.9	2583	--	332.0
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	68	20	3.7	99	40	11	57	26	4.0
2	67	20	3.6	87	34	8.0	49	25	3.3
3	68	20	3.7	80	42	9.1	60	30	4.9
4	68	20	3.7	76	35	7.2	79	30	6.4
5	58	20	3.1	78	30	6.3	113	39	12
6	43	12	1.4	79	30	6.4	113	26	7.9
7	43	12	1.4	79	30	6.4	91	10	2.5
8	52	15	2.1	63	30	5.1	92	17	4.2
9	57	12	1.8	70	38	7.2	92	15	3.7
10	67	11	2.0	79	40	8.5	92	20	5.0
11	88	10	2.4	80	40	8.6	108	21	6.1
12	88	10	2.4	87	34	8.0	118	20	6.4
13	86	20	4.6	99	30	8.0	117	20	6.3
14	87	10	2.3	99	30	8.0	97	20	5.2
15	84	10	2.3	99	30	8.0	22	20	1.2
16	78	10	2.1	113	32	9.8	22	20	1.2
17	78	10	2.1	124	31	10	22	30	1.8
18	79	15	3.2	148	32	13	22	25	1.5
19	79	20	4.3	146	30	12	266	90	100
20	78	20	4.2	126	26	8.8	311	36	30
21	91	43	11	127	25	8.6	87	19	4.5
22	99	41	11	97	20	5.2	21	20	1.1
23	99	35	9.4	71	25	4.8	231	78	79
24	99	22	5.9	71	30	5.8	330	44	39
25	99	24	6.4	84	21	4.8	278	40	30
26	99	30	8.0	97	10	2.6	306	42	35
27	99	30	8.0	97	20	5.2	375	51	52
28	99	29	7.8	80	30	6.5	526	50	71
29	99	20	5.3	--	--	--	725	451	965
30	99	31	8.3	--	--	--	824	505	1120
31	99	40	11	--	--	--	819	441	975
TOTAL	2497	--	148.5	2635	--	212.9	6465	--	3585.2

RIO GRANDE BASIN

08287000 RIO CHAMA BELOW ABIQUIU DAM, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	907	506	1240	423	35	40	487	50	66
2	918	493	1220	625	64	108	461	50	62
3	743	424	851	888	102	245	301	44	36
4	689	324	603	957	110	284	255	45	31
5	714	279	538	954	110	283	337	51	46
6	845	256	584	792	120	257	315	50	43
7	616	205	341	744	85	171	273	50	37
8	415	182	204	776	81	170	266	50	36
9	449	175	212	894	87	210	262	50	35
10	381	160	165	740	80	160	314	565	479
11	253	130	89	641	70	121	299	180	145
12	233	130	82	672	87	158	219	60	35
13	225	130	79	692	80	149	238	59	38
14	219	130	77	665	81	145	349	354	559
15	249	110	74	691	70	131	692	642	1200
16	249	92	62	694	70	131	644	70	122
17	251	92	62	708	79	151	640	72	124
18	248	91	61	785	90	191	658	60	107
19	487	515	744	719	82	159	557	55	83
20	730	155	306	571	69	106	206	40	22
21	604	235	386	500	61	82	185	45	22
22	489	293	387	514	60	83	188	60	30
23	650	447	784	473	80	102	170	55	25
24	587	349	553	449	90	109	131	290	103
25	452	401	489	437	60	71	123	80	27
26	551	767	1140	413	58	65	118	51	16
27	821	686	1650	396	60	64	102	55	15
28	805	842	1910	383	55	57	93	81	20
29	682	121	223	432	65	76	197	173	92
30	584	49	77	440	62	74	508	104	143
31	--	--	--	442	70	84	--	--	--
TOTAL	16046	--	15193	19510	--	4237	9588	--	3799
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	551	77	115	97	79	21	62	89	15
2	611	99	163	80	90	19	53	103	15
3	657	51	90	48	90	12	59	99	16
4	474	51	65	43	95	11	35	80	7.6
5	348	50	47	59	130	21	26	70	4.9
6	302	59	48	163	45400	30700	24	50	3.2
7	282	75	57	98	4400	1160	24	50	3.2
8	285	80	62	187	3320	2560	38	88	9.0
9	356	154	148	410	15000	18500	32	81	7.0
10	221	201	120	194	5580	2920	19	80	4.1
11	70	200	38	120	2450	794	19	80	4.1
12	45	204	25	52	104	15	19	80	4.1
13	30	231	19	65	100	18	20	80	4.3
14	30	220	18	72	89	17	20	80	4.3
15	26	210	15	41	69	7.6	30	100	8.1
16	32	200	17	26	60	4.2	27	80	5.8
17	41	210	23	31	60	5.0	54	96	14
18	41	210	23	40	69	7.5	259	135	96
19	41	210	23	108	108	31	234	100	63
20	364	422	515	51	72	9.9	215	91	53
21	579	252	394	339	208	265	251	82	56
22	411	125	139	344	172	160	293	92	73
23	269	120	87	245	157	116	257	102	71
24	102	98	27	123	3890	1290	273	110	81
25	101	86	23	137	909	336	164	80	35
26	115	80	25	75	199	40	61	70	12
27	101	83	23	38	100	10	49	63	8.3
28	65	81	14	63	151	26	39	50	5.3
29	60	80	13	141	250	95	60	82	13
30	51	62	8.5	37	90	9.0	584	463	1050
31	34	49	4.5	57	82	13	--	--	--
TOTAL	6695	--	2389.0	3584	--	59193.2	3300	--	1746.3

RIO GRANDE BASIN

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08287000 RIO CHAMA BELOW ABIQUIU DAM, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1350	12200	42800	124	45	15	78	20	4.2
2	938	1550	5870	72	35	6.8	76	12	2.5
3	280	70	53	397	268	404	81	10	2.2
4	274	60	44	560	46	70	89	10	2.4
5	179	60	29	846	163	407	89	10	2.4
6	119	60	19	962	167	441	53	30	4.3
7	108	50	15	939	163	413	57	32	5.1
8	72	50	9.7	870	235	552	87	22	5.2
9	60	50	8.1	786	183	388	84	20	4.5
10	86	50	12	759	166	340	84	20	4.5
11	88	50	12	746	154	310	84	20	4.5
12	49	50	6.6	758	150	307	84	20	4.5
13	58	55	8.6	770	149	310	61	20	3.3
14	87	50	12	742	130	260	47	20	2.5
15	95	50	13	727	119	234	69	20	3.7
16	60	46	7.5	450	99	125	82	20	4.4
17	70	40	7.6	186	80	40	66	20	3.6
18	81	40	8.7	118	78	25	56	20	3.0
19	118	42	13	93	65	16	56	20	3.0
20	115	40	12	74	50	10	65	20	3.5
21	77	44	9.1	85	53	12	82	20	4.4
22	73	40	7.9	109	59	17	78	20	4.2
23	113	45	14	109	45	13	67	20	3.6
24	75	45	9.1	117	40	13	67	20	3.6
25	149	52	21	115	39	12	136	35	14
26	219	53	31	103	39	11	154	30	12
27	280	673	723	96	34	8.8	163	30	13
28	195	941	1320	96	30	7.8	183	745	368
29	159	170	73	96	30	7.8	190	25	13
30	158	48	20	88	25	5.9	114	25	7.7
31	120	46	15				57	25	3.8
TOTAL	5905	--	51203.9	11993	--	4782.1	2739	--	520.6

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

89672

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

98730.6

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

90957

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

147010.7

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PEN- DED SED- IMENT (MG/L) (80154)	SUS- PEN- DED SED- IMENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70326)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70327)
NOV., 1970									
06...	0800	7.2	133	70	25	--	--	--	61
10...	0800	5.6	431	120	140	--	--	--	38
12...	0800	6.1	363	90	88	--	--	--	42
16...	0800	5.6	391	140	148	--	--	--	66
27...	0800	4.4	727	260	510	--	--	--	57
DEC.									
03...	0800	3.3	117	190	60	--	--	--	39
JULY, 1971									
21...	0800	21.1	579	280	438	--	--	--	68
NOV.									
05...	1500	7.0	1120	220	665	--	--	51	--

RIO GRANDE BASIN

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08287000 RIO CHAMA BELOW ABIQUIU DAM, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	SUS. SED. FALL DIAM. % FINER THAN (70339)	SUS. SED. FALL DIAM. % FINER THAN (70328)	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. FALL DIAM. % FINER THAN (70329)	SUS. SED. FALL DIAM. % FINER THAN (70341)	SUS. SED. FALL DIAM. % FINER THAN (70330)	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. FALL DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70343)
NOV., 1970									
06...	--	73	--	85	--	88	--	92	--
10...	--	55	--	73	--	84	--	93	--
12...	--	61	--	87	--	91	--	93	--
16...	--	81	--	87	--	91	--	93	--
27...	--	75	--	88	--	93	--	97	--
DEC.									
03...	--	59	--	68	--	79	--	82	--
JULY, 1971									
21...	--	87	--	95	--	96	--	98	--
NOV.									
05...	68	--	84	--	92	--	97	--	98

DATE	SUS. SED. SIEVE DIAM. % FINER THAN (70332)	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. SIEVE DIAM. % FINER THAN (70333)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. SIEVE DIAM. % FINER THAN (70334)	SUS. SED. FALL DIAM. % FINER THAN (70346)	SUS. SED. SIEVE DIAM. % FINER THAN (70335)	SUS. SED. SIEVE DIAM. % FINER THAN (70336)
NOV., 1970								
06...	95	--	98	--	100	--	--	--
10...	97	--	99	--	100	--	--	--
12...	95	--	98	--	100	--	--	--
16...	96	--	98	--	100	--	--	--
27...	98	--	99	--	100	--	--	--
DEC.								
03...	87	--	95	--	99	--	100	--
JULY, 1971								
21...	98	--	99	--	100	--	--	--
NOV.								
05...	--	99	--	100	--	--	--	--

RIO GRANDE BASIN

08290000 RIO CHAMA NEAR CHAMITA, N. MEX.

LOCATION.--Lat 36°04'26", long 106°06'40", in NE¼ sec. 8, T.21 N., R.8 E., Rio Arriba County, San Juan Pueblo Grant at gaging station, at bridge on U.S. Highway 285, 0.5 mile west of Chamita, 2.5 miles northwest of San Juan Pueblo, and at mile 2.8.

DRAINAGE AREA.--3,144 sq mi, of which about 100 sq mi is probably noncontributing.

PERIOD OF RECORD.--Chemical analyses: April 1963 to December 1971.

Water temperatures: October 1950 to December 1971.

Sediment records: October 1947 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum daily, 946 micromhos Aug. 9, 1971; minimum daily, 218 micromhos May 10, 1971.

Water temperatures: Maximum, 30°C June 23, 1971; minimum, 0.5°C Dec. 28, 1971.

Sediment concentrations: Maximum daily, 62,800 mg/l July 27, 1971; minimum daily, 25 mg/l Jan. 3, 1971.

Sediment discharge: Maximum daily, 59,800 tons Aug. 19, 1971 minimum daily, 0.16 tons Sept. 16, 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (000060)	DIS- SOLVED SILICA (SIU2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- AS- SIUM (K) (MG/L) (00935)
OCT., 1970								
20...	1030	112	23	--	59	13	36	3.3
NOV.								
12...	1025	379	21	--	51	11	29	2.4
DEC.								
02...	1205	160	24	--	49	11	27	2.6
29...	1300	58	23	--	70	15	45	3.9
JAN., 1971								
18...	1345	112	21	--	60	13	42	3.5
FEB.								
04...	1430	126	--	--	--	--	--	--
19...	1410	217	19	--	66	14	42	3.2
MAR.								
08...	1420	123	--	--	--	--	--	--
30...	1155	1040	15	--	41	7.5	18	3.9
APR.								
19...	1445	328	15	60	36	7.8	23	2.1
MAY								
10...	1340	731	16	--	27	4.6	10	1.7
JUNE								
04...	1110	184	18	--	32	5.5	15	1.7
17...	1510	544	18	--	28	4.5	11	1.8
24...	1255	108	--	--	--	--	--	--
30...	1350	346	--	--	--	--	--	--
JULY								
26...	1205	50	21	--	56	8.7	41	3.5
AUG.								
04...	1030	5.1	21	--	63	10	51	4.6
09...	1140	285	12	--	130	16	54	5.3
25...	1610	117	12	--	86	14	59	4.7
SEP.								
16...	1040	1.3	26	--	87	16	58	4.2
OCT.								
06...	1030	225	16	10	67	11	41	3.6
08...	1400	221	--	--	--	--	--	--
28...	1225	208	--	--	--	--	--	--
NOV.								
10...	1240	829	18	--	41	8.0	16	2.8
18...	1205	184	--	--	--	--	--	--
DEC.								
07...	1145	87	22	--	60	14	47	3.8
DEC.								
31...	1220	77	--	--	--	--	--	--

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EXTREMES, 1947-71.--Specific conductance (1969-71): Maximum daily, 1,010 micromhos July 25, 1970; minimum daily, 186 micromhos July 26, 1970.
Water temperatures (1950-71): Maximum, 32°C July 19, 1951, Aug. 8, 1956, Aug. 21, 1969; 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 discharge: Maximum daily, 340,000 tons Aug. 9, 1967; minimum daily, 0 tons on several days in August 1950 and 1951, September 1953, and July 1955.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

[illegible]

RIO GRANDE BASIN

08290000 RIO CHAMA NEAR CHAMITA, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	NON-CARBONATE HARDNESS (MG/L) (00902)	SODIUM AD-SURF-TION RATIO (00931)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	TURBIDITY (JTU) (00070)	DISSOLVED BORON (B) (UG/L) (01020)
UCT., 1970								
20...	60	1.1	541	7.6	8.0	60	70	0
NOV.								
12...	58	1.0	457	7.4	4.5	60	75	--
DEC.								
02...	34	.9	437	7.6	4.0	80	120	--
29...	65	1.3	649	8.1	.0	0	2	--
JAN., 1971								
18...	46	1.3	526	7.9	.5	--	--	60
FEB.								
04...	--	--	545	--	--	--	--	--
19...	80	1.2	599	7.9	3.0	--	--	--
MAR.								
08...	--	--	542	--	--	--	--	--
30...	10	.7	318	7.8	7.0	--	--	--
APR.								
19...	26	.9	356	7.7	8.5	--	--	100
MAY								
10...	8	.5	218	7.8	15.0	--	--	--
JUNE								
04...	18	.6	276	7.8	9.0	--	--	--
17...	6	.5	206	7.9	14.0	30	50	--
24...	--	--	308	--	24.5	10	20	--
30...	--	--	373	--	22.5	7	70	--
JULY								
26...	21	1.3	505	7.6	21.0	15	60	--
AUG.								
04...	28	1.6	581	7.8	23.0	--	--	--
09...	210	1.2	946	7.2	19.0	--	--	--
25...	130	1.6	774	7.7	21.0	--	--	--
SEP.								
16...	61	1.5	761	8.1	17.0	--	--	--
OCT.								
06...	80	1.2	594	7.9	13.0	--	--	70
08...	--	--	578	--	--	--	--	--
26...	--	--	498	--	9.0	--	--	--
NOV.								
10...	34	.6	348	7.8	6.5	--	--	--
18...	--	--	425	--	3.0	--	--	--
DEC.								
07...	43	1.4	571	8.1	4.5	--	--	--
DEC.								
31...	--	--	564	--	0.0	--	--	--

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DISSOLVED ALUMINUM (AL) (UG/L) (01106)	DISSOLVED ARSENIC (AS) (UG/L) (01000)	DISSOLVED BARIUM (BA) (UG/L) (01005)	DISSOLVED BERYLLIUM (BE) (UG/L) (01010)	DISSOLVED BISMUTH (BI) (UG/L) (01015)	DISSOLVED BORON (B) (UG/L) (01020)	DISSOLVED CADMIUM (CD) (UG/L) (01025)	DISSOLVED CHROMIUM (CR) (UG/L) (01030)	DISSOLVED COBALT (CO) (UG/L) (01035)
AUG., 1971										
04...	1030	20	0	150	<2	<6	73	<80	<6	<6
UCT.										
06...	1030	24	0	130	<2	<5	70	<70	<5	<5

DATE	DISSOLVED COPPER (CU) (UG/L) (01040)	DISSOLVED GALLIUM (GA) (UG/L) (01120)	DISSOLVED GERMANIUM (GE) (UG/L) (01125)	DISSOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DISSOLVED LEAD (PB) (UG/L) (01049)	DISSOLVED LITHIUM (LI) (UG/L) (01130)	DISSOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DISSOLVED MOLYBDENUM (MO) (UG/L) (01060)
AUG., 1971										
04...	5	<2	<8	120	--	<6	60	<5	.1	3
UCT.										
06...	3	<2	<7	10	18	<5	40	13	.2	3

DATE	DISSOLVED NICKEL (NI) (UG/L) (01065)	DISSOLVED SILVER (AG) (UG/L) (01075)	DISSOLVED SELENIUM (SE) (UG/L) (01145)	DISSOLVED STRONTIUM (SR) (UG/L) (01080)	DISSOLVED TIN (SN) (UG/L) (01100)	DISSOLVED TITANIUM (TI) (UG/L) (01150)	DISSOLVED VANADIUM (V) (UG/L) (01085)	DISSOLVED ZINC (ZN) (UG/L) (01090)	DISSOLVED ZIRCONIUM (ZR) (UG/L) (01160)
AUG., 1971									
04...	<6	<1	10	820	<8	<6	8.0	<360	<17
UCT.									
06...	<5	<1	3	770	<7	<5	5.0	<320	<15

RIO GRANDE BASIN

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08290000 RIO CHAMA NEAR CHAMITA, N. MEX.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	540	465	---	625	606	298	243	---	303	540	769	645	---	512
2	526	538	437	---	606	588	370	243	263	227	588	769	625	---	555
3	526	581	476	---	606	525	384	250	263	---	512	---	847	606	564
4	526	515	500	---	625	646	344	250	276	---	581	769	613	625	416
5	581	555	526	---	625	588	344	250	298	250	---	---	632	---	488
6	606	555	571	666	625	588	322	243	---	256	666	---	594	---	540
7	581	578	540	684	---	588	---	227	282	278	487	746	625	---	571
8	578	480	606	666	645	684	308	222	298	260	282	735	---	370	571
9	588	400	625	666	606	555	333	227	---	278	946	724	---	364	588
10	574	425	645	645	645	571	312	218	270	266	820	735	---	348	588
11	571	370	645	645	625	555	317	282	270	303	758	724	625	357	---
12	555	457	588	625	625	571	253	278	---	488	---	---	658	357	588
13	555	384	666	645	645	571	---	278	240	512	758	724	676	357	588
14	571	370	645	625	645	571	240	312	---	571	---	694	666	357	588
15	568	380	588	645	588	571	230	303	---	606	---	781	645	357	588
16	571	---	699	606	645	571	278	---	312	571	724	761	---	357	588
17	549	---	---	606	625	588	256	263	---	488	---	---	581	377	588
18	534	384	666	526	625	645	286	278	---	476	---	588	588	444	588
19	568	384	625	---	599	645	356	256	232	476	408	694	617	434	588
20	541	384	666	666	625	645	294	357	266	---	820	704	636	555	588
21	534	384	714	625	---	571	333	282	286	505	752	549	625	512	588
22	543	370	730	625	625	588	333	---	---	384	820	549	520	512	588
23	546	357	724	625	606	588	263	---	---	308	416	694	---	526	512
24	574	368	---	625	606	500	263	240	312	400	---	---	602	555	---
25	497	344	---	625	571	500	256	243	877	454	781	488	571	666	---
26	546	364	---	625	781	---	263	286	---	500	774	598	526	666	588
27	549	357	---	625	---	512	---	256	---	357	758	598	571	377	588
28	474	368	666	---	588	384	256	274	416	500	758	---	658	666	595
29	529	370	649	---	---	400	263	---	476	526	---	571	543	666	595
30	552	384	666	588	---	318	---	270	---	526	---	---	610	645	595
31	562	---	800	---	---	338	---	260	---	526	735	---	---	---	645
MONTH	552	427	620	---	625	556	298	263	---	418	---	---	616	474	573

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20.0	7.0	6.0	---	3.0	8.0	13.0	16.0	---	21.0	23.0	23.0	18.5	---	4.5
2	27.0	8.0	7.0	---	3.0	8.0	10.0	18.0	19.0	21.0	24.0	21.0	19.5	---	5.0
3	24.0	7.0	7.0	---	4.0	7.0	13.0	17.0	20.0	---	24.0	---	19.5	15.5	4.0
4	25.0	7.0	8.0	---	4.0	8.0	10.0	18.0	21.0	---	23.0	20.0	18.5	14.5	4.5
5	23.0	11.0	7.0	---	4.0	8.0	13.0	18.0	19.0	23.0	---	---	18.5	---	7.0
6	24.0	10.0	7.0	1.0	3.0	6.0	12.0	18.0	---	23.0	23.0	---	17.0	---	6.5
7	23.0	8.0	6.0	1.0	3.0	6.0	---	18.0	21.0	24.0	24.0	23.0	16.5	---	4.5
8	24.0	6.0	6.0	1.0	3.0	---	13.0	16.0	20.0	27.0	24.0	21.0	---	14.5	4.5
9	23.0	4.0	5.0	1.0	5.0	7.0	12.0	17.0	---	27.0	22.0	23.0	---	15.5	5.5
10	23.0	6.0	8.0	1.0	5.0	8.0	13.0	16.0	20.0	24.0	21.0	24.0	---	13.5	4.5
11	24.0	6.0	7.0	1.0	5.0	8.0	12.0	16.0	21.0	26.0	24.0	23.0	17.0	15.0	---
12	24.0	6.0	5.0	1.0	2.0	10.0	14.0	16.0	---	26.0	24.0	---	18.5	15.0	6.5
13	23.0	7.0	6.0	1.0	3.0	10.0	---	17.0	23.0	27.0	---	24.0	19.5	13.0	6.5
14	22.0	7.0	5.0	1.0	4.0	8.0	14.0	20.0	---	27.0	---	24.0	20.5	13.0	4.5
15	21.0	12.0	5.0	1.0	6.0	8.0	16.0	17.0	---	27.0	---	24.0	20.0	13.5	3.5
16	21.0	---	3.0	1.0	5.0	8.0	16.0	---	21.0	27.0	24.0	18.0	---	12.0	1.5
17	21.0	---	---	4.0	5.0	12.0	16.0	20.0	21.0	29.0	23.0	16.0	17.0	10.0	1.0
18	18.0	12.0	3.0	8.0	8.0	12.0	14.0	17.0	---	27.0	---	15.0	17.0	11.5	1.0
19	18.0	8.0	2.0	---	8.0	14.0	16.0	20.0	21.0	27.0	24.0	14.0	16.0	11.5	3.5
20	16.0	8.0	1.0	7.0	8.0	14.0	17.0	17.0	23.0	---	21.0	14.0	18.0	11.5	4.5
21	16.0	8.0	2.0	7.0	---	13.0	17.0	---	27.0	28.0	21.0	14.0	19.5	11.5	4.5
22	13.0	7.0	3.0	9.0	6.0	14.0	16.0	---	27.0	27.0	23.0	14.0	16.5	8.5	2.0
23	12.0	5.0	3.0	7.0	5.0	12.0	14.0	---	30.0	24.0	24.0	---	16.5	8.5	---
24	8.0	5.0	---	8.0	5.0	14.0	14.0	17.0	25.0	25.0	---	---	15.5	6.0	---
25	9.0	10.0	---	7.0	2.0	14.0	14.0	20.0	---	24.0	---	13.0	14.5	7.0	---
26	7.0	8.0	---	8.0	2.0	---	16.0	17.0	---	24.0	24.0	14.0	14.5	6.5	---
27	5.0	8.0	---	8.0	---	13.0	---	21.0	---	26.0	21.0	13.0	---	7.0	1.5
28	6.0	5.0	3.0	---	1.0	12.0	14.0	18.0	26.0	23.0	24.0	---	14.5	7.0	0.5
29	8.0	4.0	3.0	---	---	14.0	14.0	---	24.0	24.0	---	13.0	14.0	5.5	1.5
30	6.0	2.0	2.0	9.0	---	10.0	---	18.0	24.0	---	24.0	---	---	4.5	1.5
31	7.0	---	2.0	---	---	12.0	---	20.0	---	24.0	---	---	---	---	3.0
MONTH	17.5	7.0	4.5	---	4.5	10.5	14.0	18.0	---	25.5	---	---	---	11.0	4.0

RIO GRANDE BASIN

08290000 RIO CHAMA NEAR CHAMITA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	76	95	19	87	142	33	235	219	139
2	98	99	26	122	130	43	170	175	80
3	136	88	32	102	114	31	136	160	59
4	128	61	21	83	149	33	114	172	53
5	82	43	9.5	102	150	41	100	130	35
6	46	40	5.0	109	120	35	93	80	20
7	33	79	7.0	97	90	24	113	75	23
8	48	108	14	95	349	90	98	52	14
9	64	90	16	98	372	98	118	80	25
10	75	75	15	491	208	276	135	58	21
11	75	112	23	411	160	178	130	51	18
12	105	75	21	389	279	293	139	45	17
13	124	61	20	417	167	188	120	84	27
14	82	120	27	420	160	181	113	79	24
15	75	174	35	420	170	193	90	60	15
16	125	174	59	435	181	213	69	50	9.3
17	91	95	23	604	221	360	81	41	9.0
18	72	90	17	673	200	363	116	58	18
19	110	155	46	674	159	289	95	47	12
20	113	109	33	697	177	333	100	98	26
21	107	151	44	744	271	544	108	77	22
22	114	160	49	720	295	573	112	211	64
23	97	119	31	712	335	644	128	96	33
24	93	169	42	700	391	739	102	54	15
25	97	260	68	765	370	764	85	51	12
26	95	196	50	802	432	935	88	40	9.5
27	139	102	38	802	600	1300	106	50	14
28	253	231	158	796	749	1610	89	47	11
29	115	158	49	801	639	1380	103	49	14
30	92	160	40	741	515	1030	119	77	25
31	92	119	30	--	--	--	92	47	12
TOTAL	3052	--	1067.5	14109	--	12814	3497	--	875.8
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	88	33	7.8	134	80	29	105	65	18
2	94	29	7.4	133	80	29	106	131	37
3	75	25	5.1	124	79	26	88	154	37
4	70	79	15	124	111	37	112	99	30
5	65	114	20	113	120	37	124	91	30
6	60	72	12	120	88	29	156	43	18
7	55	95	14	114	69	21	137	51	19
8	55	102	15	114	51	16	129	175	61
9	70	90	17	107	47	14	130	100	35
10	90	60	15	113	51	16	129	110	38
11	110	51	15	125	60	20	131	95	34
12	115	70	22	121	58	19	159	112	48
13	115	69	21	130	60	21	167	119	54
14	115	80	25	141	61	23	177	99	47
15	115	79	25	137	49	18	143	121	47
16	115	134	42	146	88	35	79	155	33
17	110	352	105	162	88	38	72	176	34
18	110	308	91	182	89	44	69	220	41
19	110	278	83	210	131	74	63	251	43
20	110	303	90	174	80	38	508	228	315
21	126	346	118	164	90	40	180	492	239
22	133	480	172	161	95	41	137	458	169
23	123	502	167	122	90	30	105	367	104
24	131	383	135	112	85	26	482	281	366
25	120	351	114	110	60	18	408	231	254
26	126	300	102	124	100	33	423	240	274
27	130	342	120	128	79	27	531	369	529
28	126	325	111	136	70	26	815	3720	8370
29	121	220	72	--	--	--	834	2810	6330
30	122	113	37	--	--	--	982	1230	3260
31	128	82	28	--	--	--	1160	960	3010
TOTAL	3233	--	1823.3	3781	--	825	8841	--	23924

RIO GRANDE BASIN

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08290000 RIO CHAMA NEAR CHAMITA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1130	748	2280	463	434	543	386	215	224
2	1140	232	714	472	230	293	447	151	182
3	982	181	480	745	162	326	295	456	363
4	855	347	801	866	111	260	177	577	276
5	844	360	820	922	100	249	215	702	408
6	899	408	990	855	109	252	282	162	123
7	899	380	922	701	153	290	218	112	66
8	540	521	760	767	135	280	183	55	27
9	540	291	424	811	103	226	189	59	30
10	570	299	460	789	111	236	202	100	55
11	376	625	635	648	82	143	291	118	93
12	293	555	439	632	55	94	170	70	32
13	266	462	332	713	40	77	206	229	127
14	235	827	525	653	49	86	179	121	58
15	252	584	397	699	51	96	526	117	166
16	293	929	735	688	71	132	591	401	640
17	313	1220	1030	694	80	150	569	231	355
18	306	600	496	761	99	203	604	194	316
19	392	369	391	753	111	226	609	146	240
20	712	313	602	625	102	172	268	75	54
21	660	210	374	480	100	130	129	51	18
22	540	141	206	477	101	130	109	50	15
23	630	358	580	466	100	126	102	53	15
24	701	813	1540	390	169	178	98	47	12
25	540	240	350	384	195	202	72	70	14
26	570	177	272	338	170	155	64	92	16
27	745	286	575	347	270	253	54	100	15
28	888	350	839	295	338	269	39	94	9.9
29	701	221	418	349	345	325	40	50	5.4
30	640	210	363	372	279	280	264	222	186
31	--	--	--	364	261	257	--	--	--
TOTAL	18422	--	19750	18519	--	6639	7578	--	4141.3
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	725	652	2880	45	1830	222	23	514	32
2	679	2490	4560	55	1150	171	33	351	31
3	651	1200	2110	40	499	54	15	268	11
4	549	200	296	20	791	43	8.0	212	4.6
5	323	140	122	21	682	39	10	192	5.2
6	260	131	92	95	22300	5720	8.0	101	2.2
7	223	135	81	146	10100	3980	6.0	89	1.4
8	216	96	56	115	20000	6210	4.0	129	1.4
9	222	82	49	261	12000	8460	3.0	72	.58
10	309	446	372	269	3460	2510	2.0	140	.76
11	132	604	215	85	1950	448	2.0	181	.98
12	59	248	40	91	1720	423	2.0	110	.59
13	30	127	10	72	1180	229	2.0	50	.27
14	9.0	42	1.0	95	1140	292	1.5	92	.37
15	7.0	41	.77	81	1450	317	1.5	70	.28
16	7.5	33	.67	68	1840	338	1.2	50	.16
17	7.0	201	3.8	50	5180	699	70	2110	1230
18	6.7	176	3.2	233	8550	34200	168	4890	2220
19	14	268	10	342	40800	59800	237	4810	3080
20	60	599	97	189	16500	9440	187	4860	2450
21	542	710	1040	163	8860	3900	206	1890	1050
22	501	390	528	498	44000	59200	311	1860	1560
23	262	3330	2360	261	14400	10100	343	1490	1380
24	206	1430	795	195	10300	5420	260	1120	786
25	60	370	60	125	6040	2040	317	770	659
26	168	6840	8780	122	11800	3890	110	250	74
27	136	62800	23100	45	6500	790	77	150	31
28	75	11800	2390	16	7760	335	63	140	24
29	45	1270	154	62	9860	1650	76	150	31
30	49	1760	233	108	17400	5070	721	4990	10200
31	49	1760	233	34	4710	432	--	--	--
TOTAL	6582.2	--	50672.44	4002	--	226422	3268.2	--	24867.79

RIO GRANDE BASIN
08290000 RIO CHAMA NEAR CHAMITA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1310	9530	33700	174	270	127	117	270	85
2	1420	9220	35300	149	200	80	120	175	57
3	336	10400	9430	167	450	203	117	130	41
4	493	7750	10300	670	1110	2010	124	180	60
5	294	490	389	726	590	1160	120	240	78
6	246	552	367	1090	750	2210	117	360	114
7	179	400	193	1010	920	2510	91	740	182
8	140	400	151	999	950	2560	114	1560	480
9	105	400	113	898	720	1750	123	840	279
10	99	400	107	856	1270	2940	124	760	254
11	119	400	129	813	570	1250	127	620	213
12	118	275	88	816	640	1410	118	360	115
13	82	150	33	813	540	1190	122	220	72
14	86	180	42	823	570	1270	104	130	37
15	119	190	61	823	700	1560	89	190	46
16	105	200	57	706	730	1390	108	170	50
17	101	780	213	366	430	425	99	160	43
18	139	1610	604	216	350	204	93	150	38
19	136	660	242	158	220	94	106	130	37
20	187	430	217	121	150	49	110	120	36
21	146	650	256	104	160	45	110	120	36
22	109	1710	503	121	180	59	132	110	39
23	106	3380	967	142	210	81	120	130	42
24	136	1440	529	142	240	92	118	140	45
25	145	620	243	145	160	63	123	120	40
26	225	1790	1090	131	130	46	191	130	67
27	372	1770	1780	113	450	137	218	110	65
28	259	1410	986	117	220	69	232	130	81
29	195	2460	1300	124	70	23	281	120	91
30	252	890	606	120	100	32	245	720	476
31	169	290	132				115	380	118
TOTAL	7928	--	100128	13653	--	25039	4128	--	3417

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

94884.4
373822.13
99935.4
487648.83

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDIMENT (MG/L) (80154)	SUS- PENDED SEDIMENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN (70337)	SUS. SED. FALL DIAM. % FINER THAN (70326)	SUS. SED. FALL DIAM. % FINER THAN (70338)	SUS. SED. FALL DIAM. % FINER THAN (70327)
MAY, 1971									
27...	0700	16.7	328	320	283	--	--	--	23
JULY									
24...	1400	25.0	190	470	241	--	--	--	57
SEP.									
20...	1630	13.9	181	4940	2410	--	--	--	--
OCT.									
29...	1700	14.0	74	2460	492	--	--	17	--

RIO GRANDE BASIN

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08290000 RIO CHAMA NEAR CHAMITA, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.
	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN
DATE	.008 MM (70339)	.008 MM (70328)	.016 MM (70340)	.016 MM (70329)	.031 MM (70341)	.031 MM (70330)	.062 MM (70342)	.062 MM (70331)	.125 MM (70343)
MAY , 1971									
27...	--	32	--	46	--	63	--	73	--
JULY									
24...	--	75	--	88	--	93	--	96	--
SEP.									
20...	--	--	--	--	--	--	--	57	--
OCT.									
29...	30	--	42	--	48	--	63	--	81

	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.
	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN
DATE	.125 MM (70332)	.250 MM (70344)	.250 MM (70333)	.500 MM (70345)	.500 MM (70334)	1.00 MM (70346)	1.00 MM (70335)	2.00 MM (70336)
MAY , 1971								
27...	85	--	96	--	100	--	--	--
JULY								
24...	97	--	99	--	100	--	--	--
SEP.								
20...	65	--	90	--	98	--	100	--
OCT.								
29...	--	97	--	99	--	100	--	--

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, N. MEX.
(Irrigation and surveillance network station)

LOCATION.--Lat 35°52'29", long 106°08'30", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.18, T.19 N., R.8 E., Santa Fe County, in San Ildefonso Pueblo Grant at gaging station, 400 ft downstream from bridge on State Highway 4, 1.8 miles southwest of San Ildefonso Pueblo, 2.5 miles downstream from Pojoaque River, and 6.8 miles west of Pojoaque.

DRAINAGE AREA.--14,300 sq mi, approximately (includes 2,940 sq mi in closed basin in San Luis Valley, Colo.).

PERIOD OF RECORD.--Chemical analyses: October 1946 to December 1971.

Water temperatures: October 1948 to December 1971.

Sediment records: October 1947 to December 1971.

EXTREMES, 1970-71.--Dissolved solids: Maximum, 425 mg/l Oct. 1-2, 1971; minimum, 160 mg/l Apr. 1-7, 1971.

Hardness: Maximum, 220 mg/l Aug. 22-31, Oct. 1-2, 1971; minimum, 99 mg/l Apr. 1-7, 1971.

Specific conductance: Maximum daily, 777 micromhos Aug. 22, 1971; minimum daily, 232 micromhos Apr. 2, 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SIU2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED TAS- SIU4 (K) (MG/L) (00955)	DIS- SOLVED BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED CAR- BONATE (CO3) (MG/L) (00445)
OCT., 1970									
01-11	614	25	--	46	7.8	28	--	140	3
12-31	883	22	--	40	7.1	23	--	125	2
NOV.									
01-04	936	22	--	38	6.3	20	--	122	0
05-30	1490	21	--	35	6.2	17	--	111	0
DEC.									
01-03	993	25	--	37	7.4	19	2.9	132	0
04-09	815	26	--	37	7.8	20	2.7	142	0
10-31	731	28	--	40	8.6	22	3.2	147	0
JAN., 1971									
01-09	624	31	--	50	7.6	20	3.1	142	0
10-31	760	31	--	35	7.0	21	3.2	143	0
FEB.									
01-28	877	27	--	37	6.7	22	3.3	126	0
MAR.									
01-19	847	27	--	36	7.6	22	3.0	134	0
20-26	1140	29	--	38	8.2	22	3.1	128	0
27-31	2250	22	--	36	6.2	14	2.9	117	0
APR.									
01-07	1940	20	--	31	5.5	11	2.5	105	0
08-30	993	20	40	36	6.6	21	2.8	116	0
MAY									
01-02	787	19	--	44	9.3	28	2.8	128	0
03-20	1050	18	--	33	6.3	18	2.8	121	0
21-31	668	19	--	44	8.0	25	3.0	139	0
JUNE									
01-14	532	23	--	45	8.5	28	3.4	148	0
15-19	813	23	--	39	6.7	23	2.9	128	0
20-24	476	27	--	51	9.7	35	4.4	163	0
25-30	326	26	--	60	12	44	4.9	186	0
JULY									
01-10	722	23	--	49	8.6	30	3.7	147	0
11-20	269	28	--	60	12	41	4.5	180	0
21-31	701	27	--	52	8.4	35	4.2	171	0
AUG.									
01-10	469	26	--	58	9.5	34	4.4	171	0
11-21	457	26	--	58	8.5	32	4.1	183	0
22-31	464	25	--	68	11	44	4.1	219	0
SEP.									
01-18	266	25	--	48	8.5	29	4.2	165	0
19-25	561	22	--	52	9.0	33	3.9	157	0
26-30	655	22	--	43	7.5	29	3.6	163	0
OCT.									
01-02	1990	17	--	68	11	48	4.5	173	0
03-05	977	21	--	48	8.1	28	3.4	134	0
06-25	813	24	--	37	6.2	21	3.0	125	0
26-31	841	22	--	42	7.9	26	3.0	144	0
NOV.									
01-03	672	24	--	42	8.0	26	4.5	150	0
04-06	1390	21	--	43	8.3	25	4.0	137	0
07-19	1460	22	--	36	6.8	18	3.7	125	0
20-30	853	26	--	38	7.2	23	4.0	140	0
DEC.									
01-31	735	27	--	40	7.7	21	2.5	144	0
CALENDAR YEAR									
MTD. AVG.	--	24	--	41	7.4	23	3.2	137	0
TIME MTD.									
AVG.	799	25	--	43	7.8	25	3.4	144	0
TUNS									
PER DAY	--	52	--	88	16	50	7.0	295	0
WATER YEAR									
MTD. AVG.	--	24	--	40	7.3	22	3.2	133	0
TIME MTD.									
AVG.	814	25	--	43	7.8	25	3.4	142	0
TUNS									
PER DAY	--	52	--	88	16	49	6.6	293	0

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, N. MEX.--Continued

EXTREMES, 1970-71--Continued

Water temperatures: Maximum, 30.0°C July 14, Sept. 1, 1971; minimum, freezing point on several days during winter months.
 Sediment concentrations: Maximum daily, 32,500 mg/l Oct. 1, 1971; minimum daily, 50 mg/l Jan. 6-9, 1971.
 Sediment discharge: Maximum daily, 164,000 tons Oct. 1, 1971; minimum daily, 61 tons July 19, 1971.

EXTREMES, 1946-71.--Dissolved solids: Maximum, 1,030 mg/l Aug. 5, 1963; minimum, 135 mg/l May 1-31, 1969.

Hardness: Maximum, 702 mg/l Aug. 5, 1963; minimum, 83 mg/l May 22-26, 1960, June 22-28, 1968.

Specific conductance: Maximum daily, 1,310 micromhos Aug. 5, 1963; minimum daily, 165 micromhos June 13, 1952.

Water temperatures (1948-71): Maximum, 31°C Aug. 4, 5, 1954; minimum, freezing point on many days during winter months.

Sediment concentrations (1947-71): Maximum daily, 43,500 mg/l Aug. 21, 1955; maximum daily, 11 mg/l July 27, 1963.

Sediment discharge (1947-71): Maximum daily, 366,000 tons Aug. 23, 1961; minimum daily, 3 tons July 27, 1963.

REMARKS.--Bacteria and aquatic biology analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SULFATE (SO ₄) (MG/L) (00945)	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)	DIS- SOLVED FLUOR- IDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO ₃) (MG/L) (71851)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHU- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BORON (B) (MG/L) (01020)
OCT., 1970								
01-11	75	7.4	--	.09	.40	--	--	--
12-31	63	5.6	--	.02	.10	--	--	--
NOV.								
01-04	55	5.4	--	.05	.20	--	--	--
05-30	51	3.9	--	.14	.60	--	--	--
DEC.								
01-03	50	6.0	--	--	--	--	--	--
04-09	52	7.8	--	--	--	--	--	--
10-31	56	8.8	--	--	--	--	--	--
JAN., 1971								
01-09	45	4.4	--	--	--	.10	.07	--
10-31	40	7.5	--	--	--	.10	.03	--
FEB.								
01-28	52	7.3	.4	--	--	.40	--	--
MAR.								
01-19	51	6.1	.4	--	--	.37	--	--
02-26	62	14	.4	--	--	.36	--	--
27-31	42	3.6	.3	--	--	.64	--	--
APR.								
01-07	33	3.3	.3	--	--	.41	--	--
08-30	60	5.8	.4	--	--	.18	--	10
MAY								
01-02	64	29	.5	--	--	.06	--	--
03-20	48	5.7	.4	--	--	.00	--	--
21-31	69	7.0	.5	--	--	.00	--	--
JUNE								
01-14	89	10	.8	--	--	.12	--	--
15-19	72	6.3	.7	--	--	.18	--	--
20-24	110	10	.9	--	--	.19	--	--
25-30	150	16	.9	--	--	.14	--	--
JULY								
01-10	92	7.4	.5	--	--	.22	--	--
11-20	130	10	.8	--	--	.15	--	--
21-31	98	7.6	.6	--	--	.47	--	--
AUG.								
01-10	110	7.9	.6	--	--	.37	--	--
11-21	94	7.3	.6	--	--	.30	--	--
22-31	130	6.5	.7	--	--	.31	--	--
SEP.								
01-18	75	11	.7	--	--	.15	--	--
19-25	100	9.9	.6	--	--	.10	--	--
26-30	65	17	.6	--	--	.10	--	--
OCT.								
01-02	180	7.1	.4	--	--	.88	--	--
03-05	110	7.2	.5	--	--	.49	--	--
06-25	61	6.4	.4	--	--	.22	--	--
26-31	82	7.4	.4	--	--	.16	--	--
NOV.								
01-03	65	11	.5	--	--	.13	--	--
04-06	79	6.7	.3	--	--	.13	--	--
07-19	56	5.1	.2	--	--	.14	--	--
20-30	53	7.3	.4	--	--	.17	--	--
DEC.								
01-31	53	8.7	.5	--	--	.21	--	--
CALENDAR YEAR								
MTD. AVG.	64	8.0	.4	--	--	.24	--	--
TIME MTD.	70	8.8	.5	--	--	.22	--	--
AVG. TONS PER DAY	139	17	1.0	--	--	.53	--	--
WATER YEAR								
MTD. AVG.	61	7.6	--	--	--	.30	--	--
TIME MTD.	69	8.5	--	--	--	.27	--	--
AVG. TONS PER DAY	135	17	--	--	--	.62	--	--

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SOLVED (MG/L) (70501)	DIS- SOLVED (TONS) PER AC-FI (70503)	DIS- SOLVED (TONS) PER DAY (70502)	HAZ- LESS (CA, MG) (00900)	HAZ- LESS (MG/L) (00902)	SOLU- TION RATIO (00931)	SPE- CIFIC CON- CENT- RATION (00995)	PH
OCT., 1970								
01-11	242	.36	451	147	28	1.0	404	8.4
12-31	224	.30	544	129	23	.9	353	8.3
NOV.								
01-04	207	.28	527	121	21	.8	329	8.2
05-30	190	.26	777	113	22	.7	303	8.1
DEC.								
01-03	218	.30	584	120	15	.7	320	8.0
04-09	232	.32	511	120	8	.8	332	8.2
10-31	240	.33	474	140	19	.8	378	8.2
JAN., 1971								
01-09	270	.37	455	160	44	.7	333	8.2
10-31	210	.29	431	120	3	.8	344	8.1
FEB.								
01-28	220	.30	521	120	17	.9	339	8.0
MAR.								
01-19	221	.30	505	120	11	.9	351	7.7
20-26	241	.33	742	130	24	.8	362	7.6
27-31	195	.26	1140	120	19	.6	295	7.5
APR.								
01-07	160	.22	836	99	13	.5	254	7.7
08-30	210	.29	563	120	22	.8	339	7.7
MAY								
01-02	260	.35	552	130	43	1.0	341	8.0
03-20	192	.26	544	110	9	.8	286	7.9
21-31	244	.33	440	140	29	.9	364	8.1
JUNE								
01-14	261	.38	404	130	25	1.0	435	8.0
15-19	237	.32	520	120	20	.9	359	7.8
20-24	329	.45	423	170	34	1.2	492	8.1
25-30	366	.53	342	200	47	1.4	582	8.0
JULY								
01-10	287	.49	559	160	37	1.0	439	7.8
11-20	375	.51	272	200	52	1.3	569	7.9
21-31	319	.43	604	160	24	1.2	488	7.6
AUG.								
01-10	336	.46	425	180	44	1.1	511	7.4
11-21	322	.44	417	160	29	1.0	494	7.7
22-31	396	.54	499	220	35	1.3	556	7.5
SEP.								
01-18	282	.38	203	150	20	1.0	434	8.2
19-25	308	.42	467	170	38	1.1	482	8.1
26-30	268	.36	459	140	5	1.1	404	8.0
OCT.								
01-02	425	.58	2180	220	73	1.4	647	7.6
03-05	294	.40	771	150	43	1.0	447	7.8
06-25	221	.30	494	120	15	.8	340	8.0
26-31	262	.36	626	140	19	1.0	406	7.8
NOV.								
01-03	255	.35	463	140	15	1.0	396	8.0
04-06	255	.35	957	140	29	.9	396	7.8
07-19	210	.29	828	120	15	.7	322	7.9
20-30	229	.31	527	120	10	.9	351	7.9
DEC.								
01-31	232	.32	460	130	13	.8	359	8.1
CALENDAR YEAR								
WTD. AVG.	240	.33	--	133	20	.9	368	7.9
TIME WTD.								
AVG.	255	.35	--	140	22	.9	389	7.9
TONS								
PER DAY	517	--	--	--	--	--	--	--
WATER YEAR								
WTD. AVG.	232	.32	--	131	21	.9	358	7.9
TIME WTD.								
AVG.	251	.34	--	140	23	.9	385	8.0
TONS								
PER DAY	510	--	--	--	--	--	--	--

RIO GRANDE BASIN

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08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PU- TAS- SIUM (K) (MG/L) (00955)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
UCI., 1970											
06...	1530	560	25	10	47	8.4	26	5.7	135	8	77
NOV.											
03...	1330	967	21	10	57	6.3	18	2.7	126	0	54
DEC.											
10...	1130	880	25	20	42	7.4	22	2.8	143	0	55
JAN., 1971											
14...	1115	680	30	--	59	8.1	22	5.3	150	0	54
FEB.											
04...	1000	931	26	--	55	6.7	19	2.8	121	0	40
MAR.											
17...	0945	884	27	--	54	6.1	21	3.2	122	0	43
APR.											
07...	0630	1620	20	180	51	5.9	13	2.9	100	0	36
MAY											
04...	1230	1230	20	--	27	6.1	17	2.8	99	0	51
JUNE											
08...	0900	473	20	--	52	9.9	30	5.8	151	0	110
JULY											
07...	0930	505	23	--	45	8.8	29	5.2	151	0	86
AUG.											
04...	1215	404	26	--	49	8.5	35	4.4	180	0	83
SEP.											
04...	1035	248	19	--	49	8.7	28	5.4	163	0	76
UCI.											
06...	1200	1170	23	10	56	6.5	21	5.2	127	0	62
NOV.											
05...	1200	648	23	--	44	8.2	24	2.9	149	0	78
DEC.											
09...	1050	728	26	--	54	7.6	23	5.1	148	0	57

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHU. PHOS- PHORUS (P) (MG/L) (00671)
UCI., 1970											
06...	7.4	.6	.07	.30	.00	--	.09	.37	.53	--	--
NOV.											
03...	5.5	.4	.00	.00	--	--	--	--	--	--	--
DEC.											
10...	6.7	.5	.27	1.2	--	--	--	--	--	--	--
JAN., 1971											
14...	8.5	.6	--	--	--	.70	--	--	--	--	2.7
FEB.											
04...	6.8	.4	--	--	--	.00	--	--	--	--	--
MAR.											
17...	8.1	.3	--	--	--	.20	--	--	--	--	.05
APR.											
07...	4.8	.3	.20	.90	.00	.20	.10	--	.46	.40	.03
MAY											
04...	5.3	.5	--	--	--	.00	--	--	--	--	.04
JUNE											
08...	8.4	.5	--	--	--	.01	--	--	--	--	.03
JULY											
07...	5.3	.6	--	--	--	.21	--	--	--	--	.02
AUG.											
04...	14	.7	--	--	--	.01	--	--	--	--	.02
SEP.											
09...	8.0	.6	--	--	--	.99	--	--	--	--	.01
UCI.											
06...	5.4	.3	.23	1.0	.00	.23	.10	.45	.78	.45	.03
NOV.											
05...	7.9	.5	--	--	--	.05	--	--	--	--	.02
DEC.											
09...	7.5	.5	--	--	--	.15	--	--	--	--	.02

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SULFIDES (KESL- OUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SULFIDES (SUM OF CONSTITU- TENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NUN- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED MURUM (B) (01020)
UCT., 1970									
06...	267	270	151	40	.9	420	8.5	17.5	80
NOV.									
03...	226	207	121	18	.7	328	8.2	8.0	--
DEC.									
10...	241	233	130	13	.8	359	8.0	5.5	--
JAN., 1971									
14...	262	250	150	7	.8	373	8.1	.5	--
FEB.									
04...	220	200	120	21	.8	272	7.8	1.0	--
MAR.									
17...	184	204	110	10	.9	309	7.8	5.0	--
APR.									
07...	214	164	100	18	.6	277	7.9	7.5	20
MAY									
04...	174	179	92	11	.8	283	7.7	17.0	--
JUNE									
08...	310	309	170	47	1.0	469	7.8	14.5	--
JULY									
07...	280	274	140	20	1.1	410	7.6	18.0	--
AUG.									
04...	322	309	160	10	1.2	450	7.7	23.5	--
SEP.									
09...	276	277	160	24	1.0	434	7.6	19.0	--
UCT.									
06...	266	221	120	12	.8	338	7.5	13.5	50
NOV.									
03...	272	262	140	21	.9	396	7.8	8.5	--
DEC.									
09...	264	232	120	0	.9	377	7.8	.0	--

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL MERCURY (MG) (UG/L) (71900)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)
AUG., 1971				
04...	1215	3	.0	4

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- CUBALT UNITS) (00080)
UCT., 1970							
06...	1530	560	445	7.9	17.5	30.5	5
NOV.							
03...	1330	967	320	8.4	8.0	12.5	3
DEC.							
10...	1130	880	370	8.2	5.5	26.5	3
JAN., 1971							
14...	1115	680	360	8.1	.5	4.0	10
FEB.							
04...	1000	931	270	8.3	1.0	3.0	5
MAR.							
17...	0945	884	300	8.4	5.0	13.0	22
APR.							
07...	0630	1620	255	8.3	7.5	2.5	70
MAY							
04...	1230	1230	--	8.4	17.0	20.5	80
JUNE							
08...	0900	473	465	8.5	14.5	21.0	15
JULY							
07...	0930	505	425	8.3	18.0	21.5	30
AUG.							
04...	1215	404	460	8.4	23.5	28.5	10
SEP.							
09...	1035	248	412	8.6	19.0	23.0	10
UCT.							
06...	1200	1170	340	8.5	13.5	19.0	10
NOV.							
03...	1200	648	385	8.3	8.5	10.5	23
DEC.							
09...	1050	728	370	8.6	.0	.5	3

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TUM= BID= ITY (JTU) (00070)	DIS= SOLVED UXYGEN (MG/L) (00300)	CHEM= ICAL OXYGEN DEMAND (LUM LEVEL) (MG/L) (00335)	BIU= LHEM= ICAL JXYGEN UEMAND (MG/L) (00310)	IMME= DIATE CULI= FORM (CUL. PER (00301)	FECAL FUMM (CUL. PER (01016)	STREP= IUCUCCI (COL= UNIES PER (01079)
UCT., 1970							
06...	12	8.5	6	1.6	500	10	--
NOV.							
03...	15	6.7	5	.9	250	80	60
DEC.							
10...	12	9.8	4	.8	<100	<10	<10
JAN., 1971							
14...	7	11.2	14	.9	240	40	70
FEB.							
04...	10	12.0	3	.7	--	--	--
MAR.							
17...	20	11.6	5	1.5	2500	500	30
APR.							
07...	75	8.6	4	1.9	800	540	30
MAY							
04...	75	8.7	4	1.0	<1000	140	50
JUNE							
08...	20	8.4	6	1.6	2700	130	90
JULY							
07...	40	7.4	3	1.9	2600	330	320
AUG.							
04...	110	8.1	9	4.2	600	120	0
SEP.							
04...	45	8.0	11	3.3	--	--	--
UCT.							
06...	130	8.7	8	2.4	4000	920	50
NOV.							
03...	25	10.7	7	.8	42	0	0
DEC.							
09...	20	11.4	10	.7	--	--	--

E Estimated.

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: September 1, 1970 (Revised)
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Ephemeroptera: Baetidae; Baetis sp., 2
 Ephemerella sp., 3
 Heptageniidae; Heptagenia sp., 2
 Trichoptera: Hydropsychidae; Hydropsyche sp., 8

Date: April 7, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Coleoptera: Elmidae, 2
 Diptera: Chironomidae, 4
 Ephemeroptera: Baetidae; Ephemerella sp., 24
 Traverella sp., 1
 Oligochaeta: Lumbriculidae, 3

Date: June 8, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Coleoptera: Elmidae, 2
 Diptera: Chironomidae, 13
 Ephemeroptera: Baetidae; Baetis sp., 41
 Ephemerella sp., 83
 Pseudocleon sp., 19
 Traverella sp., 2
 Heptageniidae; Heptagenia sp., 4
 Trichoptera: Hydropsychidae; Hydropsyche sp., 14
 Cheumatopsyche sp., 8
 Nematomorpha, 1

Date: July 7, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Diptera: Chironomidae, 27
 Ephemeroptera: Baetidae; Baetis sp., 1
 Pseudocleon sp., 3
 Traverella sp., 20
 Tricorythodes sp., 36
 Heptageniidae; Heptagenia sp., 1
 Odonata: Gomphidae; Orphogomphus sp., 2
 Trichoptera: Hydropsychidae; Hydropsyche sp., 21
 Limnophilidae cases, 3
 Rhynchophiliidae; Protoptila sp., 1
 Nematomorpha, 2
 Oligochaeta: Lumbriculidae, 3

Date: September 9, 1971
 Method of sampling: Surber (3 square feet)
 No macroinvertebrates in sample

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, N. MEX.--Continued

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

		DIS- SOLVED COPPER (CU) (UG/L) (01040)		DIS- SOLVED LEAD (PB) (UG/L) (01049)		DIS- SOLVED SILICA (SE) (UG/L) (01145)		DIS- SOLVED ZINC (ZN) (UG/L) (01090)							
		DATE	TIME												
		GCT., 1970													
		06...	1535	<4	<4	<13	5								
SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), OCTOBER 1970 TO DECEMBER 1971 (ONCE-DAILY MEASUREMENT)															
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	378	328	318	396	315	334	239	329	400	418	451	437	706	389	325
2	385	335	325	331	318	334	232	349	370	507	453	454	568	378	330
3	406	328	325	334	313	338	239	299	413	392	445	414	450	378	339
4	403	---	340	303	300	345	246	274	454	358	451	403	435	410	344
5	409	314	328	---	298	348	255	272	454	402	481	419	477	382	347
6	411	278	325	---	321	360	251	268	419	421	500	419	415	361	356
7	421	265	347	---	321	344	249	289	446	445	518	406	298	327	365
8	427	265	353	---	301	344	281	277	450	443	457	376	295	315	360
9	423	263	351	---	328	341	285	271	448	445	543	411	295	315	360
10	412	314	361	372	320	332	302	273	450	479	660	422	288	307	390
11	405	291	337	374	335	320	321	288	416	534	532	419	301	302	378
12	397	286	345	373	330	332	341	306	440	574	571	396	301	304	371
13	373	275	344	362	330	323	350	304	458	594	488	396	289	309	360
14	334	278	348	351	342	330	350	296	454	616	455	412	289	305	325
15	344	282	350	340	327	323	361	288	385	594	477	359	306	304	331
16	378	298	343	335	324	312	354	283	360	554	470	389	302	308	359
17	383	309	358	327	328	309	347	286	372	534	466	408	289	324	343
18	384	311	353	325	326	298	336	280	360	555	421	386	319	314	339
19	388	311	360	320	325	304	353	269	374	523	433	522	334	314	343
20	380	313	364	311	316	399	333	292	448	523	476	495	353	324	340
21	363	313	359	320	303	342	315	317	490	457	515	468	346	323	340
22	348	308	353	319	327	326	336	338	507	453	777	450	349	319	355
23	334	308	363	314	350	315	336	369	500	455	605	454	338	341	354
24	331	310	349	320	326	366	324	369	512	439	534	415	350	351	347
25	331	313	354	321	332	353	343	379	548	474	537	415	330	346	342
26	335	310	358	328	332	338	339	369	560	561	529	401	373	355	359
27	348	308	371	327	329	329	329	369	523	486	377	386	347	345	335
28	357	313	354	321	332	310	298	385	585	481	453	374	381	334	342
29	322	316	355	328	---	287	314	382	595	476	451	348	377	340	340
30	328	321	349	325	---	274	314	371	583	463	549	380	382	433	335
31	328	---	331	329	---	249	---	371	---	477	457	---	---	---	326
MONTH	373	302	347	335	323	328	309	317	460	489	505	414	357	339	348

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(RECORDER MAXIMUM AND MINIMUM)

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		MAY	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.0	14.0	10.0	6.0	5.5	2.0	2.0	0.0	6.5	4.0	1.5	0.0	11.5	6.5	17.0	11.0
2	18.0	11.0	9.0	6.0	4.5	1.5	1.5	0.0	6.5	2.5	1.5	0.0	15.5	6.5	18.0	11.5
3	15.0	12.0	14.5	5.0	5.5	2.5	0.5	0.0	6.0	2.5	4.5	0.0	10.5	6.5	17.0	11.5
4	16.0	12.0	8.5	4.5	4.5	1.0	0.0	0.0	5.0	1.5	8.0	1.0	10.5	7.0	15.5	11.5
5	16.5	11.5	8.5	5.0	5.0	1.0	0.0	0.0	4.5	0.0	8.0	4.0	11.5	6.0	14.0	10.5
6	17.0	11.0	8.5	4.5	5.0	0.5	0.0	0.0	4.5	0.0	6.0	1.5	11.5	6.5	15.5	11.0
7	15.5	11.5	7.0	5.5	4.5	1.0	0.0	0.0	4.0	0.0	7.0	1.0	10.5	8.0	14.0	10.5
8	13.5	9.0	8.0	5.0	5.0	1.0	0.0	0.0	4.0	0.5	8.0	1.5	14.0	8.0	15.0	10.5
9	13.5	7.0	8.0	4.5	5.0	1.5	0.0	0.0	5.0	0.5	9.5	4.0	14.0	8.5	15.5	10.0
10	13.0	9.0	8.0	4.5	6.5	4.0	0.0	0.0	5.5	1.0	9.0	4.0	14.5	9.0	15.0	11.0
11	14.5	9.0	8.0	4.0	5.5	2.0	0.0	0.0	6.5	2.5	9.5	4.5	15.5	9.5	15.0	12.0
12	14.5	9.5	7.0	4.5	4.5	1.5	0.0	0.0	8.0	2.5	11.0	5.5	16.5	9.5	18.0	11.0
13	14.0	9.5	6.5	5.5	5.0	0.5	0.0	0.0	8.5	2.0	11.0	5.5	15.0	9.5	17.0	12.0
14	14.0	8.5	6.5	4.0	4.5	1.5	0.0	0.0	9.0	4.5	9.0	5.5	15.0	8.0	16.5	12.0
15	11.0	5.0	6.0	2.0	5.5	3.5	0.0	0.0	8.5	4.5	9.0	3.5	13.5	9.5	18.5	13.5
16	10.0	4.5	6.0	3.5	4.5	1.5	0.0	0.0	10.0	5.5	9.5	4.0	16.0	8.5	17.0	14.0
17	12.0	7.0	6.5	2.5	4.5	1.5	2.5	2.0	9.0	0.5	9.5	4.5	16.0	11.5	17.0	14.5
18	14.0	9.0	5.5	2.5	5.0	2.0	6.5	2.0	8.0	6.0	8.5	3.5	13.0	10.0	14.5	12.0
19	12.0	8.5	6.0	4.0	4.5	1.5	8.0	3.5	8.5	6.0	8.5	2.5	10.5	7.0	16.5	10.0
20	13.0	8.5	5.5	2.5	5.0	1.5	8.5	4.0	6.5	2.5	7.0	3.5	10.5	5.5	17.0	11.0
21	14.0	9.5	5.5	2.5	6.0	2.5	8.0	4.5	4.5	1.5	11.5	4.5	10.5	7.0	16.5	12.0
22	11.5	9.0	6.0	3.5	6.0	2.5	9.0	5.0	2.5	0.0	12.0	6.0	11.5	7.0	18.5	12.0
23	11.5	8.5	5.5	3.5	4.0	2.0	8.0	6.0	4.0	0.0	13.0	7.0	12.0	8.0	15.0	12.0
24	11.5	7.0	6.0	2.5	2.5	1.0	6.0	3.5	6.0	1.0	13.5	9.5	14.0	8.5	19.0	10.0
25	11.5	8.5	6.5	3.5	3.5	1.0	5.5	1.5	6.5	1.0	14.0	9.0	16.0	10.0	19.0	12.0
26	11.0	8.5	6.5	5.0	3.5	1.0	6.0	2.0	4.5	1.0	15.0	9.5	14.5	10.5	19.5	13.0
27	9.0	6.0	7.0	6.0	4.0	2.0	6.5	2.0	4.0	0.0	16.0	11.5	14.5	9.0	20.5	13.0
28	8.5	4.5	7.0	4.0	3.5	0.5	7.0	2.5	3.0	0.0	14.0	11.0	15.0	10.0	20.0	14.5
29	9.0	4.5	7.0	5.0	1.5	0.0	7.0	2.5	---	---	14.0	9.5	14.5	10.0	18.5	14.5
30	9.5	4.5	5.5	---	2.0	0.0	7.0	3.5	---	---	13.5	9.0	16.5	10.0	19.5	12.0
31	9.5	5.0	---	---	2.5	0.0	8.5	4.5	---	---	13.5	9.5	---	---	19.5	13.0
MONTH	18.0	4.5	14.5	2.0	6.5	0.0	9.0	0.0	10.0	0.0	16.0	0.0	16.5	5.5	20.5	10.0

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, N. MEX.--Continued

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(RECORDER MAXIMUM AND MINIMUM)

DAY	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.5	13.0	27.0	10.5	24.5	16.0	30.0	22.0	18.5	14.5	9.0	6.0	8.0	2.0
2	18.5	13.0	19.5	13.0	23.5	18.5	28.5	22.0	17.0	12.0	9.0	6.0	4.0	1.0
3	19.5	13.0	24.0	16.5	25.5	17.0	26.5	22.0	14.0	9.0	14.0	4.0	4.0	1.0
4	19.5	13.0	24.0	18.5	25.0	18.5	26.5	20.0	16.0	9.0	9.0	5.0	3.0	1.0
5	20.5	13.5	24.0	17.0	24.0	19.0	23.0	16.0	16.0	11.0	9.0	5.0	2.0	1.0
6	22.0	12.0	24.0	19.0	23.5	18.0	23.5	14.5	16.0	11.0	9.0	6.0	3.0	1.0
7	20.5	14.5	24.5	17.0	20.5	17.0	24.5	16.0	17.0	11.0	7.5	4.0	4.0	1.0
8	20.0	15.0	24.0	19.5	22.0	16.0	26.0	18.0	17.0	12.0	8.0	4.0	3.0	1.0
9	21.0	14.5	24.5	18.0	23.0	18.0	25.5	18.0	17.0	12.0	8.0	4.0	3.0	0.0
10	22.0	15.0	25.0	19.0	23.0	18.5	25.0	16.0	17.0	12.0	8.0	4.0	2.0	0.0
11	20.0	14.5	27.0	19.5	23.0	17.0	25.5	17.0	16.0	12.0	8.0	4.0	2.0	0.0
12	20.5	15.5	29.0	21.0	23.0	18.5	25.0	17.0	15.0	11.0	7.0	4.0	2.0	0.0
13	23.0	14.5	29.0	21.0	23.0	16.5	24.5	16.0	15.0	12.0	8.0	5.0	1.0	0.0
14	24.0	15.5	30.0	21.0	22.0	19.5	25.0	16.5	14.0	11.0	7.0	3.0	3.0	0.0
15	24.5	18.5	27.0	21.0	24.5	19.0	21.0	15.5	14.0	11.0	6.0	6.0	1.0	0.0
16	22.0	18.5	29.5	20.5	25.0	21.5	21.0	18.5	14.0	12.0	6.0	5.0	0.0	0.0
17	23.5	18.0	29.0	20.0	25.0	22.0	16.5	11.5	17.5	12.0	7.0	4.0	0.0	0.0
18	22.0	18.0	28.0	20.0	24.5	22.0	11.5	8.5	11.0	8.0	4.0	2.0	0.0	0.0
19	22.0	18.5	26.5	21.0	27.0	19.5	14.5	13.0	11.0	7.0	4.0	1.0	0.5	0.0
20	25.0	18.0	27.0	20.5	27.0	21.5	19.5	14.5	11.0	7.0	4.0	0.0	1.0	0.0
21	26.0	18.5	25.5	20.5	27.0	21.5	16.0	11.5	11.0	7.0	4.0	1.0	1.0	0.0
22	26.0	19.5	27.0	21.0	23.5	23.0	14.0	10.5	12.0	7.0	5.0	3.0	1.0	0.0
23	25.5	18.0	24.0	20.5	22.0	20.0	13.0	9.5	12.0	7.0	5.0	2.0	4.0	0.0
24	25.5	13.5	26.0	19.0	21.0	20.0	15.0	11.0	12.0	8.0	5.0	1.0	3.0	1.0
25	25.5	19.0	26.5	20.5	21.0	19.5	15.0	11.0	12.0	9.0	5.0	1.0	4.0	2.0
26	25.0	19.0	---	---	21.0	20.0	19.0	13.0	11.0	8.0	6.0	1.0	4.0	2.0
27	26.0	19.5	---	---	21.0	20.0	19.0	15.5	12.0	7.0	5.0	2.0	6.0	2.0
28	25.0	18.5	---	---	21.5	20.0	19.0	16.0	12.0	8.0	5.0	2.0	3.0	1.0
29	26.0	19.5	21.5	20.0	20.5	20.5	18.5	16.0	12.0	8.0	6.0	3.0	3.0	2.0
30	24.0	18.5	20.5	18.0	25.5	---	20.0	15.5	8.0	4.0	4.0	1.0	3.0	1.0
31	---	---	23.5	17.0	---	---	---	---	8.0	4.0	---	---	2.0	0.0
MONTH	26.0	12.0	30.0	10.5	27.0	16.0	30.0	8.5	18.5	4.0	14.0	0.0	8.0	0.0

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	682	636	1170	900	400	972	1060	1250	3580
2	664	680	1220	930	520	1310	967	425	1110
3	658	690	1230	967	700	1830	952	330	848
4	658	612	1090	945	660	1680	839	570	1290
5	605	495	809	1240	950	3180	778	260	546
6	565	495	755	1310	500	1770	798	227	489
7	543	440	645	1320	1160	4130	832	258	580
8	538	470	683	1350	540	1970	825	210	468
9	576	510	793	1370	750	2770	818	187	413
10	611	735	1210	1680	1280	5810	894	232	560
11	652	635	1120	1660	770	3450	916	240	594
12	852	645	1480	1580	530	2260	923	265	660
13	902	627	1530	1610	525	2280	825	227	506
14	732	745	1470	1520	450	1850	752	195	396
15	695	480	901	1380	370	1380	707	172	328
16	720	510	991	1330	400	1440	634	185	317
17	707	525	1000	1430	450	1740	664	195	350
18	688	770	1430	1460	925	3650	594	160	257
19	785	830	1760	1460	775	3060	707	175	334
20	866	865	2020	1500	590	2390	701	163	309
21	945	690	1760	1560	780	3290	707	190	363
22	952	960	2470	1540	555	2310	758	162	332
23	960	935	2420	1500	600	2430	771	196	408
24	967	570	1490	1490	625	2510	707	130	248
25	974	465	1220	1550	575	2410	682	122	225
26	997	420	1130	1600	560	2420	652	80	141
27	1030	650	1810	1630	710	3120	670	85	154
28	1110	940	2820	1600	760	3280	682	106	195
29	974	630	1660	1580	860	3670	688	105	195
30	902	375	913	1610	880	3830	714	175	337
31	900	350	851	---	---	---	726	122	239
TOTAL	24410	---	41851	42602	---	78192	23943	---	16772

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	711	108	207	864	270	630	758	145	297
2	722	90	175	871	240	564	705	105	200
3	746	136	274	897	200	484	643	82	142
4	676	116	212	924	250	624	654	108	191
5	585	63	100	890	240	577	795	112	240
6	550	50	74	845	255	582	864	400	933
7	530	50	72	852	310	713	878	250	593
8	520	50	70	839	343	777	845	112	256
9	580	50	78	782	300	633	845	128	292
10	600	142	230	807	275	599	910	163	400
11	620	110	184	845	285	650	959	178	461
12	640	120	207	852	280	644	959	183	474
13	660	120	214	852	240	552	952	138	355
14	680	140	257	878	240	569	959	142	368
15	680	200	367	884	255	609	945	146	373
16	680	210	386	904	270	659	917	137	339
17	720	424	824	945	255	651	884	148	353
18	752	330	670	1020	250	689	826	121	270
19	758	370	757	1060	290	830	801	129	279
20	770	315	655	1010	270	736	1120	480	1450
21	801	340	735	980	215	569	980	270	714
22	839	358	811	832	160	359	917	180	446
23	826	335	747	682	180	331	871	125	294
24	820	285	631	801	180	389	1230	430	1430
25	839	300	680	839	145	328	1380	435	1620
26	852	310	713	897	125	303	1510	580	2360
27	845	345	787	884	168	401	1710	1000	4620
28	839	265	600	826	137	306	1800	1430	6950
29	826	238	531	--	--	--	2210	1320	7880
30	832	285	640	--	--	--	2670	1580	11400
31	852	280	644	--	--	--	2860	1680	13000
TOTAL	22351	--	13532	24562	--	15758	35357	--	58980

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2700	1300	9480	852	350	805	654	233	411
2	2410	1210	7870	722	250	487	728	295	580
3	1990	960	5160	1060	505	1450	616	250	416
4	1750	780	3690	1220	375	1240	510	184	253
5	1610	825	3590	1220	525	1730	515	163	227
6	1560	625	2630	1200	640	2070	575	197	306
7	1580	580	2470	988	600	1600	501	200	271
8	1130	560	1710	1080	388	1130	469	157	199
9	1060	525	1500	1120	377	1140	464	162	203
10	1100	700	2080	1160	412	1290	478	138	178
11	890	415	997	988	400	1070	530	220	315
12	782	575	1210	966	378	986	464	155	194
13	722	460	897	1050	540	1530	469	155	196
14	716	320	619	988	363	968	469	161	204
15	776	325	681	1000	358	967	688	512	1080
16	864	380	886	980	375	992	852	1350	3110
17	820	460	1020	959	410	1060	820	1940	4300
18	788	320	681	973	423	1110	845	825	1880
19	814	325	714	1040	337	946	858	550	1270
20	1190	1240	3980	910	330	811	660	430	766
21	1220	880	2900	740	320	639	464	499	625
22	1020	330	909	728	278	546	430	287	333
23	1020	1100	3030	782	316	667	425	203	233
24	1230	1060	3520	711	292	561	401	204	221
25	1030	600	1670	676	256	467	362	215	210
26	995	470	1260	616	234	389	334	152	137
27	1140	575	1770	616	205	341	313	107	90
28	1380	870	3240	575	230	357	294	92	73
29	1110	480	1440	616	247	411	279	83	63
30	1040	400	1120	649	198	347	387	285	298
31	--	--	--	643	184	319	--	--	--
TOTAL	36437	--	72724	27828	--	28426	15854	--	18642

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	907	3993	20500	457	1900	2340	312	2200	1850
2	1240	11100	48300	446	2020	2430	303	1180	965
3	897	1750	4240	414	1800	2010	285	1100	846
4	864	1080	2520	368	1300	1290	281	1200	910
5	649	680	1190	363	2820	2760	256	1090	753
6	554	550	823	452	4300	5250	252	1150	782
7	510	550	757	463	4600	5750	225	950	577
8	520	1230	1730	508	4400	6040	256	1000	691
9	492	1720	2280	525	5250	7440	244	970	639
10	585	2180	3440	694	4650	8710	244	1950	1280
11	409	1610	1780	399	2000	2150	240	950	616
12	351	670	635	335	1650	1490	221	600	358
13	288	460	358	519	7650	10700	232	780	489
14	256	560	387	349	2500	2360	218	900	530
15	232	238	149	358	1990	1920	225	870	529
16	219	165	98	321	1320	1140	228	900	554
17	214	129	75	312	1390	1170	240	1160	752
18	210	110	62	307	1750	1450	531	4660	6680
19	219	103	61	1120	21400	82700	519	2730	3830
20	294	630	500	537	13500	19600	468	1330	1680
21	689	1790	3610	474	9700	12400	468	1420	1790
22	1190	2760	12400	855	30500	70400	555	1600	2400
23	665	2150	3860	661	14700	26200	674	2630	4790
24	580	3650	5720	591	7900	12600	579	1720	2690
25	510	2320	3190	409	7050	7790	661	2260	4030
26	1260	13500	106000	394	4150	4410	485	1600	2100
27	770	20400	48700	340	2300	2110	430	1000	1160
28	561	13500	20400	281	1550	1180	419	750	848
29	531	5400	7740	342	2670	2790	409	950	1050
30	491	2700	3580	404	4900	5340	1430	19600	90800
31	463	1150	1440	358	3450	3330	--	--	--
TOTAL	17620	--	306525	14356	--	317250	11890	--	136969

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1980	32500	164000	694	890	1670	848	730	1670
2	2000	8120	43800	674	690	1260	819	625	1380
3	885	5390	12900	648	1030	1800	805	1080	2350
4	946	3980	10200	1150	2650	8230	728	843	1660
5	1100	3570	10600	1220	2220	7310	707	950	1810
6	1200	3160	10200	1800	4140	20100	668	647	1170
7	1080	2550	7440	1660	2620	11700	623	665	1120
8	994	2100	5640	1730	2700	12600	668	823	1480
9	915	2390	5900	1600	2070	8940	694	529	991
10	855	2240	5170	1570	1950	8270	598	607	980
11	862	1720	4000	1540	2000	8320	591	885	1410
12	855	3350	7730	1530	1870	7720	629	878	1490
13	783	1970	4160	1560	1910	8040	648	830	1450
14	769	1380	2870	1540	1550	6440	707	747	1430
15	790	1290	2750	1550	1690	7070	681	683	1260
16	790	1170	2500	1520	2990	12300	674	640	1160
17	805	1370	2980	1180	1670	5320	648	614	1070
18	805	1970	4280	1030	1100	3060	668	845	1520
19	707	1430	2730	962	1100	2860	655	858	1520
20	661	1320	2360	855	1550	3580	674	668	1220
21	642	1220	2110	870	1100	2580	616	639	1060
22	642	1010	1750	826	1130	2520	629	972	1650
23	604	910	1480	841	760	1730	688	1340	2490
24	623	970	1630	819	1020	2260	735	979	1940
25	870	3120	7330	862	1130	2630	721	625	1220
26	930	2000	5020	862	912	2120	848	840	1920
27	946	1610	4110	870	799	1880	1040	1380	3880
28	833	1970	4430	855	850	1960	994	1200	3220
29	797	2290	4930	878	798	1890	1030	1010	2810
30	790	1490	3180	848	532	1220	962	913	2370
31	748	920	1860				797	872	1880
TOTAL	28207	--	350040	34544	--	167380	22793	--	52581

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

297210

1105621

291799

1538807

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	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 .002 MM (70326)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70327)
APR., 1971									
01...	1645	11.0	2650	1500	10700	13	--	15	--
24...	1700	15.0	1240	802	2680	22	--	25	--
MAY									
13...	1600	17.5	1070	630	1820	28	--	37	--
JUNE									
08...	1145	18.0	453	156	191	13	--	16	--
JULY									
02...	0845	13.5	1100	14900	44300	52	--	58	--
11...	1600	26.0	389	1580	1660	61	--	70	--
24...	1530	25.0	5.4	3750	54	32	--	35	--
AUG.									
09...	1600	22.0	604	7580	12400	41	--	49	--
22...	1445	23.5	812	32000	70200	47	--	61	--
OCT.									
01...	1415	14.0	1940	38200	200000	51	--	60	--
15...	1615	16.5	797	1340	2880	6	--	7	--
NOV.									
06...	1615	9.0	1890	3830	19500	9	--	10	--
15...	1345	5.0	1620	1410	6170	--	--	--	--

DATE	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70339)	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70328)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70329)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70341)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70330)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)
APR., 1971									
01...	--	--	18	--	--	--	29	--	49
24...	--	--	27	--	--	--	35	--	60
MAY									
13...	--	--	49	--	--	--	53	--	65
JUNE									
08...	--	--	19	--	--	--	24	--	35
JULY									
02...	--	--	78	--	--	--	91	--	97
11...	--	--	81	--	--	--	84	--	90
24...	--	--	44	--	--	--	59	--	85
AUG.									
09...	--	--	63	--	--	--	74	--	93
22...	--	--	80	--	--	--	88	--	96
OCT.									
01...	--	--	77	--	--	--	88	--	97
15...	--	--	10	--	--	--	23	--	60
NOV.									
06...	--	--	14	--	--	--	34	--	74
15...	--	--	--	--	--	--	17	--	46

DATE	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM (70332)	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM (70344)	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM (70333)	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM (70345)	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM (70334)	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM (70346)	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM (70335)	SUS. SED. SIEVE DIAM. % FINER THAN 2.00 MM (70336)
APR., 1971								
01...	--	70	--	96	--	100	--	--
24...	--	93	--	100	--	--	--	--
MAY								
13...	--	97	--	100	--	--	--	--
JUNE								
08...	--	98	--	100	--	--	--	--
JULY								
02...	--	100	--	--	--	--	--	--
11...	--	100	--	--	--	--	--	--
24...	--	92	--	97	--	100	--	--
AUG.								
09...	--	99	--	100	--	--	--	--
22...	--	98	--	99	--	100	--	--
OCT.								
01...	--	100	--	--	--	--	--	--
15...	--	91	--	100	--	--	--	--
NOV.								
06...	--	97	--	100	--	--	--	--
15...	--	89	--	99	--	100	--	--

08317400 RIO GRANDE BELOW COCHITI DAM, N. MEX.

LOCATION.--Lat 35°35'47", long 106°20'48", in SE 1/4 sec. 19, T.16 N., R.6 E., Sandoval County, in Pueblo de Cochiti Grant, on left bank 0.3 mile upstream from Peralta Canyon, 0.5 mile downstream from Santa Fe River, 0.9 mile south of Cochiti Pueblo, and 2.5 miles downstream from Cochiti Dam.

DRAINAGE AREA.--14,900 sq mi, approximately (includes 2,940 sq mi in closed basin in San Luis Valley, Colo.).

PERIOD OF RECORD.--Chemical analyses: November 1971 to December 1971.
Water temperatures: July 1971 to December 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED GROSS ALPHA AS	SUS- PENDED GROSS ALPHA AS	DIS- SOLVED GROSS BETA AS	SUS- PENDED GROSS BETA AS	DIS- SOLVED GROSS BETA AS	SUS- PENDED GROSS BETA AS	DIS- SOLVED GROSS BETA AS	SUS- PENDED GROSS BETA AS	DIS- SOLVED GROSS BETA AS	SUS- PENDED GROSS BETA AS
		(U-137) (UG/L) (80050)	(U-137) (UG/L) (80040)	(U-137) (UG/L) (03515)	(U-137) (UG/L) (03516)	(U-137) (UG/L) (00050)	(U-137) (UG/L) (80060)	(U-137) (UG/L) (00050)	(U-137) (UG/L) (80060)	(U-137) (UG/L) (00050)	(U-137) (UG/L) (80060)
NOV., 1971											
03...	1715	14	10	0.0	8.0	5.4	6.4	0.7	3.2		

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(RECORDER MAXIMUM AND MINIMUM)

DAY	JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	--	--	24.5	18.0	26.0	19.5	16.5	13.5	9.5	6.0	3.0	1.5
2	--	--	24.5	19.0	26.0	19.5	13.5	11.0	9.5	5.5	4.0	1.5
3	--	--	25.0	19.0	25.5	19.5	14.5	11.5	9.5	5.5	3.5	2.0
4	--	--	26.0	19.0	22.5	17.0	15.0	11.5	8.5	5.5	3.0	1.0
5	--	--	25.5	20.0	24.0	14.0	15.5	12.5	8.5	6.0	2.5	0.0
6	--	--	24.5	18.5	24.5	15.0	15.5	12.5	8.5	7.0	2.5	0.0
7	--	--	23.0	18.5	25.5	16.5	16.0	12.5	8.0	6.0	3.0	0.5
8	--	--	22.5	17.5	26.5	18.0	16.5	13.0	8.5	6.5	2.5	1.5
9	--	--	23.5	18.0	27.5	18.5	17.0	13.5	8.5	6.0	3.5	0.5
10	--	--	22.0	19.0	26.5	17.0	17.5	14.0	8.0	6.0	2.5	0.0
11	--	--	24.0	19.0	26.0	17.5	16.0	13.5	7.0	6.0	2.0	0.0
12	--	--	26.0	16.0	26.0	17.5	16.0	12.5	7.5	6.0	1.5	0.0
13	--	--	25.0	18.0	26.0	17.0	16.5	13.0	8.0	6.0	0.5	0.0
14	--	--	26.5	19.5	26.0	17.0	16.5	12.5	7.0	5.0	2.5	0.0
15	--	--	26.5	19.0	24.5	16.0	16.0	13.0	6.5	6.0	1.0	0.0
16	30.5	19.5	26.5	20.0	22.0	13.5	15.5	13.5	7.0	5.5	0.0	0.0
17	30.5	20.0	27.5	20.5	16.5	12.5	14.0	11.0	7.5	5.5	0.0	0.0
18	28.0	20.5	27.0	20.0	12.0	9.5	11.0	9.0	6.5	3.5	0.0	0.0
19	28.5	19.5	22.5	20.0	15.0	8.5	11.5	8.0	4.5	1.5	0.0	0.0
20	26.5	17.5	24.5	18.5	16.5	10.5	12.0	7.5	4.5	1.5	0.0	0.0
21	27.0	20.5	25.0	20.0	18.0	12.5	11.5	8.5	4.5	2.0	--	--
22	25.5	21.5	24.0	20.0	15.5	12.5	13.0	9.0	6.5	3.5	--	--
23	23.0	19.5	24.0	20.0	13.5	12.0	14.0	10.0	5.0	2.5	--	--
24	26.0	20.0	24.5	21.0	18.0	12.0	13.0	10.5	5.5	2.5	--	--
25	27.5	21.5	25.0	19.0	18.5	12.5	12.0	10.0	5.5	3.0	--	--
26	26.0	9.5	26.0	19.5	19.0	14.0	10.0	9.0	5.0	3.0	--	--
27	22.0	9.0	26.0	19.5	19.0	13.0	11.5	8.0	6.0	3.5	--	--
28	24.5	19.5	27.5	20.5	19.0	13.5	12.5	9.0	5.5	3.5	--	--
29	26.0	19.5	27.0	20.5	17.5	13.5	12.0	8.5	5.0	3.5	--	--
30	23.0	19.0	26.0	19.0	16.0	14.0	8.5	6.0	4.0	2.5	--	--
31	22.5	18.5	26.5	18.5	--	--	8.5	5.0	--	--	--	--
AVG	--	--	25.0	19.0	21.5	15.0	14.0	10.5	7.0	4.5	--	--

TEMPERATURE(°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(RECORDER MEAN)

DAY	JUL	AUG	SEP	OCT	NOV	DEC
1	--	21.0	22.5	15.5	7.5	2.5
2	--	21.5	22.5	12.5	7.5	2.5
3	--	21.5	22.0	13.0	7.0	2.5
4	--	22.0	19.5	13.0	7.0	2.0
5	--	22.0	18.5	14.0	7.5	1.0
6	--	21.0	19.5	14.0	7.5	1.0
7	--	20.0	21.0	14.0	7.0	2.0
8	--	20.0	22.0	15.0	7.0	2.0
9	--	20.5	22.5	15.5	7.0	1.5
10	--	20.5	21.5	15.5	7.0	0.5
11	--	21.0	21.5	15.0	6.5	0.5
12	--	21.5	21.0	14.0	7.0	0.0
13	--	21.5	21.0	14.5	7.0	0.0
14	--	22.0	21.0	14.5	6.0	1.0
15	--	22.5	19.5	14.5	6.0	0.0
16	24.0	23.0	17.5	14.0	6.0	0.0
17	24.5	23.5	14.5	13.0	6.0	0.0
18	23.5	23.0	11.0	10.0	5.0	0.0
19	23.0	21.5	11.5	9.5	3.0	0.0
20	22.0	21.5	13.0	9.5	3.0	0.0
21	23.0	22.0	15.0	10.0	3.0	--
22	23.0	21.5	14.0	11.0	4.5	--
23	21.5	22.0	12.5	11.5	4.0	--
24	22.5	22.0	14.5	11.5	4.0	--
25	24.0	22.0	15.0	11.5	4.0	--
26	21.0	22.0	16.0	9.5	4.0	--
27	16.5	22.5	16.0	9.5	4.5	--
28	21.5	23.5	16.0	10.5	4.0	--
29	22.5	23.5	15.0	10.5	4.5	--
30	21.0	22.0	15.0	7.0	3.0	--
31	20.0	22.5	--	6.5	--	--
AVG	--	22.0	17.5	12.0	5.5	--

LOCATION.--Lat 35°27'56", long 106°12'57", in SE¹SE¹ sec.5, T.14 N., R.7 E., Santa Fe County, in Mesita de Juana Lopez Grant, at gaging station, 0.6 mile downstream from Galisteo Dam, and 5.5 miles northwest of Cerrillos.

PERIOD OF RECORD.--Specific conductance: July 1971 to December 1971.
Water temperatures: July 1971 to December 1971.
Sediment records: July 1971 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum, not determined; minimum, not determined.
Water temperatures: Maximum, not determined; minimum, not determined.
Sediment concentrations: Maximum daily, 40,100 mg/l Sept. 30, 1971; minimum daily, no flow on several days.
Sediment discharge: Maximum daily, 113,000 tons July 20, 1971; minimum daily, 0 tons on several days.

REMARKS.--No flow July 5-18. The extremes for specific conductance and water temperatures were not reported because the number of missing days of record exceeded 20 percent of year.

[illegible][illegible]

08317950 GALISTEO CREEK BELOW GALISTEO DAM, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, JULY 1971 TO DECEMBER 1971

JULY				AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	21	729	66	13	4200	147	.86	360	.84
2	.86	196	.46	6.5	2200	39	.63	330	.56
3	.23	160	.10	19	5750	1590	.63	270	.46
4	.03	150	.01	36	16100	2210	.48	260	.34
5	0	0	0	4.5	2000	24	.43	310	.36
6	0	0	0	27	21800	1900	.43	280	.33
7	0	0	0	12	19200	622	.39	280	.29
8	0	0	0	5.5	3000	45	.39	310	.33
9	0	0	0	3.4	1200	11	.31	290	.24
10	0	0	0	3.0	1100	8.9	.30	140	.11
11	0	0	0	11	5800	196	.30	50	.04
12	0	0	0	3.6	2700	26	.25	25	.02
13	0	0	0	24	11200	1760	.25	30	.02
14	0	0	0	22	17600	1440	.25	20	.01
15	0	0	0	7.5	7000	142	.25	40	.03
16	0	0	0	6.0	1100	18	.25	40	.03
17	0	0	0	76	20000	9290	4.3	4130	206
18	0	0	0	35	21500	3360	11	11800	428
19	34	5980	7140	76	24900	10600	2.3	1440	8.9
20	948	38700	113000	19	28900	1970	1.1	320	.95
21	41	23500	2750	6.8	9500	174	.63	320	.54
22	15	28700	1280	9.6	9620	770	.58	280	.44
23	26	22000	2450	8.6	16300	528	.98	300	.79
24	227	35800	24000	15	525	21	3.8	525	5.4
25	7.9	15900	368	6.9	3430	83	1.4	375	1.4
26	361	16200	40900	1.6	600	2.6	1.0	300	.81
27	1170	18900	73700	.86	370	.86	.90	250	.61
28	62	7930	3490	.80	310	.67	.75	210	.43
29	401	17400	29700	11	3450	202	.63	195	.33
30	17	7250	431	10	12600	429	101	40100	15200
31	76	19300	6810	2.3	1070	6.6	--	--	--
TOTAL	3408.02	--	306085.57	483.46	--	37323.63	136.77	--	15858.61
OCTOBER				NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	9.6	7500	194	2.5	310	2.1	2.0	210	1.1
2	2.0	4500	24	2.0	300	1.6	2.0	200	1.1
3	1.0	3000	8.1	1.5	290	1.2	2.0	200	1.1
4	1.0	1800	4.9	1.0	290	.78	2.0	190	1.0
5	1.0	1000	2.7	.75	280	.57	1.8	180	.87
6	1.0	500	1.4	.75	280	.57	1.8	170	.83
7	1.0	450	1.2	.50	270	.36	1.8	160	.78
8	1.0	410	1.1	.50	270	.36	1.6	170	.73
9	1.0	370	1.0	.53	260	.37	1.6	170	.73
10	1.0	340	.92	.63	260	.44	1.6	170	.73
11	1.0	320	.86	.74	250	.50	1.6	160	.69
12	1.0	300	.81	.86	250	.58	1.6	150	.65
13	1.0	300	.81	.74	250	.50	1.8	140	.68
14	1.0	290	.78	.63	240	.41	2.0	120	.65
15	1.0	290	.78	1.9	500	2.6	1.8	100	.49
16	1.0	280	.76	3.2	500	4.3	1.6	100	.43
17	1.0	280	.76	4.9	1000	13	1.8	100	.49
18	1.0	270	.73	8.4	5000	113	2.0	100	.54
19	.98	270	.71	8.9	4800	115	2.0	100	.54
20	.92	260	.65	5.2	4000	56	2.0	100	.54
21	.92	260	.65	5.2	3500	49	2.2	150	.89
22	.92	260	.65	6.0	3000	49	2.4	200	1.3
23	.92	250	.62	6.8	2800	51	2.6	180	1.3
24	.98	250	.66	6.8	2200	40	2.4	150	.97
25	127	29900	26100	4.9	1800	24	2.2	200	1.2
26	128	29800	13500	4.3	1400	16	2.4	500	3.2
27	16	4800	207	3.2	1000	8.6	3.8	600	6.2
28	9.6	1170	30	1.9	600	3.1	12	1000	32
29	6.0	390	6.3	1.9	400	2.1	14	1000	38
30	4.6	350	4.3	1.8	230	1.1	5.6	500	7.6
31	3.5	330	3.1				5.2	450	6.3
TOTAL	327.94	--	40100.25	88.93	--	558.14	91.2	--	113.63
TOTAL DISCHARGE FOR PERIOD (CFS-DAYS)				4536.32					
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR PERIOD (TONS)				400039.81					

RIO GRANDE BASIN

08317950 GALISTEO CREEK BELOW GALISTEO DAM, N. MEX.--Continued

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	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 .002 MM (70326)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70327)
JULY, 1971									
01...	1150	19.5	15	593	24	59	--	68	--
20...	1030	16.0	1250	46900	158000	52	--	65	--
27...	0100	8.0	1930	38400	200000	42	--	56	--
AUG.									
06...	1130	21.2	24	28800	1900	59	--	77	--
20...	1240	25.5	20	30200	1660	59	--	77	--
SEP.									
30...	1345	21.0	84	48400	10900	48	--	62	--
OCT.									
26...	1445	9.5	68	25400	4660	46	--	60	--

DATE	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70339)	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70328)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70329)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70341)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70330)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)
JULY, 1971									
01...	--	--	84	--	--	--	--	99	--
20...	--	--	90	--	--	--	97	--	97
27...	--	--	83	--	--	--	95	--	95
AUG.									
06...	--	--	98	--	--	--	100	--	--
20...	--	--	98	--	--	--	--	100	--
SEP.									
30...	--	--	87	--	--	--	99	--	100
OCT.									
26...	--	--	77	--	--	--	94	--	99

DATE	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM (70332)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM (70333)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70345)	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM (70334)	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM (70346)	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM (70335)	SUS. SED. SIEVE DIAM. % FINER THAN 2.00 MM (70336)
JULY, 1971								
01...	100	--	--	--	--	--	--	--
20...	--	98	--	99	--	100	--	--
27...	--	97	--	98	--	100	--	--
AUG.								
06...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
SEP.								
30...	--	--	--	--	--	--	--	--
OCT.								
26...	--	100	--	--	--	--	--	--

RIO GRANDE BASIN

91

08318000 GALISTEO CREEK AT DOMINGO, N. MEX.

LOCATION.--Lat 35°30'43" (revised), long 106°19'01", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.21, T.15 N., R.6 E., Sandoval County, in Santo Domingo Pueblo Grant, at gaging station, 0.2 mile northeast of Domingo, 2.8 miles east of Santo Domingo Pueblo, and 4 miles upstream from mouth.

DRAINAGE AREA.--640 sq mi, approximately.

PERIOD OF RECORD.--Specific conductance: October 1964 to June 1971 (discontinued).

Water temperatures: July 1961 to June 1971 (discontinued).

Sediment records: January 1948 to June 1971 (discontinued).

EXTREMES, 1970-71.--Sediment concentrations: Maximum daily, 220 mg/l Apr. 15, 1971; minimum daily, no flow on many days.

Sediment discharge: Maximum daily, 0.25 tons Dec. 24, 1970; minimum daily, 0 ton on many days.

EXTREMES, 1948-71.--Specific conductance (1964-70): Maximum daily, 4,950 micromhos May 30, 1965; minimum daily, 302 micromhos June 20, 1966.

Water temperatures (1961-70): Maximum, 36°C June 27, 1966; minimum, freezing point on many days during winter months.

Sediment concentrations: Maximum daily, 102,000 mg/l Oct. 20, 1957; minimum daily, no flow on many days each year.

Sediment discharge: Maximum daily, 1,600,000 tons Sept. 25, 1955; minimum daily, 0 tons on many days each year.

REMARKS.--No flow Oct. 1-14, 16-26, Oct. 29 to Nov. 17, Nov. 19, 22-23, Nov. 25 to Dec. 3, Dec. 9-10, 15, 1970; Jan. 3 to Feb. 28, Mar. 3 to Apr. 14, 16-18, Apr. 20 to June 30, 1971.

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO JUNE 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	.02	35	0
5	0	0	0	0	0	0	.03	40	0
6	0	0	0	0	0	0	.04	45	0
7	0	0	0	0	0	0	.04	45	0
8	0	0	0	0	0	0	.02	35	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	.01	25	0
12	0	0	0	0	0	0	.06	70	.01
13	0	0	0	0	0	0	.06	70	.01
14	0	0	0	0	0	0	.11	125	.04
15	.05	100	.01	0	0	0	0	0	0
16	0	0	0	0	0	0	.07	80	.02
17	0	0	0	0	0	0	.08	80	.02
18	0	0	0	.01	25	0	.05	50	.01
19	0	0	0	0	0	0	.25	160	.11
20	0	0	0	.01	25	0	.15	140	.06
21	0	0	0	.02	35	0	0	0	0
22	0	0	0	0	0	0	.07	80	.02
23	0	0	0	0	0	0	.33	180	.16
24	0	0	0	.05	50	.01	.46	200	.25
25	0	0	0	0	0	0	.35	180	.17
26	0	0	0	0	0	0	.25	165	.11
27	.08	110	.02	0	0	0	.15	140	.06
28	.01	25	0	0	0	0	.07	80	.02
29	0	0	0	0	0	0	.30	170	.14
30	0	0	0	0	0	0	.25	160	.11
31	0	0	0	--	--	--	.19	150	.08
TOTAL	.14	--	.03	.09	--	.01	3.41	--	1.40

RIO GRANDE BASIN

08318000 GALISTEO CREEK AT DOMINGO, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO JUNE 1971

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.22	155	.09				.02	25	0
2	.18	148	.07				.01	25	0
3	0	0	0				0	0	0
4	0	0	0				0	0	0
5	0	0	0				0	0	0
6	0	0	0				0	0	0
7	0	0	0				0	0	0
8	0	0	0				0	0	0
9	0	0	0				0	0	0
10	0	0	0				0	0	0
11	0	0	0				0	0	0
12	0	0	0				0	0	0
13	0	0	0				0	0	0
14	0	0	0				0	0	0
15	0	0	0				0	0	0
16	0	0	0				0	0	0
17	0	0	0				0	0	0
18	0	0	0				0	0	0
19	0	0	0				0	0	0
20	0	0	0				0	0	0
21	0	0	0				0	0	0
22	0	0	0				0	0	0
23	0	0	0				0	0	0
24	0	0	0				0	0	0
25	0	0	0				0	0	0
26	0	0	0				0	0	0
27	0	0	0				0	0	0
28	0	0	0				0	0	0
29	0	0	0				0	0	0
30	0	0	0				0	0	0
31	0	0	0				0	0	0
TOTAL	.40	--	.16	0	--	0	.03	--	0
DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0						
2	0	0	0						
3	0	0	0						
4	0	0	0						
5	0	0	0						
6	0	0	0						
7	0	0	0						
8	0	0	0						
9	0	0	0						
10	0	0	0						
11	0	0	0						
12	0	0	0						
13	0	0	0						
14	0	0	0						
15	.06	220	.04						
16	0	0	0						
17	0	0	0						
18	0	0	0						
19	.02	35	0						
20	0	0	0						
21	0	0	0						
22	0	0	0						
23	0	0	0						
24	0	0	0						
25	0	0	0						
26	0	0	0						
27	0	0	0						
28	0	0	0						
29	0	0	0						
30	0	0	0						
31	--	--	--						
TOTAL	.08	--	.04	0	--	0	0	--	0

TOTAL DISCHARGE FOR PERIOD (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR PERIOD (TONS)

4.15

1.64

LOCATION.--Lat 35°23'24", long 106°32'03", in NE¼ sec.5, T.13 N., R.4 E., Sandoval County, at gaging station 0.8 mile downstream from Jemez Canyon Dam, 1.5 miles upstream from mouth, and 6 miles north of Bernalillo.

PERIOD OF RECORD.--Chemical analyses: February 1966 to December 1971.

REMARKS.--Daily specific conductance records computed from records furnished by the U.S. Corps of Engineers.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	DIS- SOLVED	
			SILICA (SI02) (MG/L) (00955)	IRON (FE) (UG/L) (01046)	CAL- CIUM (CA) (MG/L) (00915)	MAG- NE- SIUM (MG) (MG/L) (00925)	SODIUM (NA) (MG/L) (00930)	POT- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (CO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	SULFATE (SO4) (MG/L) (00945)
NOV., 1971											
29...	1150	20	33	0	58	6.6	130	9.3	237	8 89	
DEC.											
06...	1050	2.0	38	--	76	9.8	220	11	306	0 160	

DATE	DIS=	DIS=	DIS=	DIS=	HARD=	NUM=	SODIUM	SPE=	PH	TEMPER=	DIS=
	SOLVED	SOLVED	NITRITE	SOLUS		CAR=	AD=	CIFIC			
	CHLUM=	FLUO=	PLUS	(SUM OF	NESS	BONATE	SURF=	DUCT=			BODUM
	RIDE	RIDE	NITRATE	CONSTI=	(CA,MG)	HAND=	TUR	ANCE			(B)
	(CL)	(F)	(N)	TOENTS)	(MG/L)	NESS	RATIO	(MICRU=			(U/L)
	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	MMUS)	(UNITS)	(DEG C)	(U/L)
	(00940)	(00950)	(00651)	(70301)	(00900)	(00902)	(00931)	(00095)	(00400)	(00010)	(01020)
NOV., 1971											
29, ..	120	1.2	.05	5/3	170	0	4.3	949	8.4	3.5	020
DEC.											
06, ..	200	1.4	.08	867	230	0	6.5	1400	8.1	.0	-

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

[illegible]

RIO GRANDE BASIN

08329100 BERNALILLO FLOODWATER RETARDING RESERVOIR NO. 1 (PIEDRA LISA ARROYO), NEAR BERNALILLO, N. MEX.

LOCATION.--Lat 35°18'50", long 106°31'44" (revised), Sandoval County, in Bernalillo Grant, at outflow pipe of reservoir, 0.3 mile east of intersection of State Highways 44 and 422, and 1.5 miles northeast of Bernalillo.

DRAINAGE AREA.--4.1 sq mi, of which 2.0 sq mi has contouring, pitting and small dams to reduce surface runoff.

PERIOD OF RECORD.--Sediment records: July 1956 to December 1971.

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

Date	Flow event no.	Flow duration (hours)	Discharge (acre-feet)	Mean discharge for period (cfs)	Mean concentration (mg/l)	Outflow sediment load (tons)
July 23, 1971.....	27	.75	.04	.81	3,000	.21

08330000 RIO GRANDE AT ALBUQUERQUE, N. MEX.

LOCATION.--Lat 35°05'21", long 106°40'48", Bernalillo County, in Atrisco Grant, at gaging station on U.S. Highway 66 at Albuquerque.

DRAINAGE AREA.--17,440 sq mi, approximately (includes 2,940 sq mi in closed basin in San Luis Valley, Colo.).

PERIOD OF RECORD.--Specific conductance: October 1969 to December 1971.

Water temperatures: October 1969 to December 1971.

Sediment records: May 1969 to September 1969 (partial-record station), October 1969 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum daily, 1,360 micromhos Aug. 23, 1971; minimum daily, 133 micromhos July 21, 1971.

Water temperatures: Maximum, 31°C June 25, 27, July 16, 1971; minimum, freezing point Nov. 1, 1970, Jan. 3-5, 1971.

Sediment concentrations: Maximum daily, 45,500 mg/l July 21, 1971; minimum daily, no flow on several days during September 1971.

Sediment discharge: Maximum daily, 275,000 tons July 27, 1971; minimum daily, 0 tons on several days during September 1971.

EXTREMES, 1969-71.--Specific conductance: Maximum, 1,360 micromhos Aug. 23, 1971; minimum daily 133 micromhos July 21, 1971.

Water temperatures: Maximum, 34°C July 12, 1970; minimum, freezing point Nov. 1, 1970, Jan. 3-5, 1971.

Sediment concentrations: Maximum daily, 45,500 mg/l July 21, 1971; minimum daily, no flow on several days during September 1971.

Sediment discharge: Maximum daily, 275,000 tons July 27, 1971; minimum daily, 0 tons on several days during September, 1971.

REMARKS.--Additional sediment total discharge determination were made bi-weekly when needed. Chemical analysis performed on native water used in sediment particle-size analysis. No flow Sept. 10-18, 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- AS- 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)
AUG., 1971											
16...	1400	214	28	70	9.0	60	5.9	163	0	150	37

DATE	DIS- SOLVED FLUOR- IDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE PLUS NITRATE (N) (MG/L) (00651)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUEMENTS) (MG/L) (70301)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (MG/L) (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHMS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
AUG., 1971										
16...	.7	1.6	456	448	210	78	1.8	690	7.7	25.5

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	430	421	373	423	406	---	255	367	408	---	528	530	633	470	425
2	420	380	377	421	408	---	258	365	409	---	552	568	586	465	413
3	456	429	383	411	402	---	251	393	420	456	498	565	575	461	449
4	422	396	375	400	395	---	261	407	416	480	487	---	546	468	439
5	468	425	410	439	370	---	264	353	409	420	490	---	492	459	435
6	464	418	385	463	394	440	392	347	439	400	507	---	467	463	441
7	467	404	458	488	398	441	307	321	454	413	682	525	473	423	445
8	479	396	385	475	404	435	322	330	455	446	512	---	411	387	457
9	482	362	403	482	385	406	355	348	446	462	624	---	372	487	461
10	---	336	405	498	406	398	329	337	455	462	595	---	418	379	442
11	---	350	409	471	425	392	328	433	446	485	642	---	378	391	467
12	481	346	418	446	401	378	403	389	444	471	618	---	396	372	468
13	444	346	396	419	392	---	357	338	448	497	621	---	411	386	441
14	434	362	399	416	403	378	377	369	438	502	695	---	400	371	439
15	427	337	402	452	394	378	382	359	438	468	542	---	413	381	411
16	432	371	425	470	403	377	411	355	449	475	587	---	383	382	419
17	---	350	423	453	392	371	347	352	464	475	493	---	467	374	419
18	---	378	411	444	405	362	479	340	385	---	379	---	423	419	440
19	436	351	429	438	387	367	391	331	381	---	155	---	438	413	430
20	462	376	431	503	392	348	380	327	379	157	---	---	458	413	426
21	424	383	418	519	378	338	426	322	447	133	838	485	429	411	441
22	441	437	434	460	410	378	337	402	407	670	594	563	463	426	447
23	433	368	431	447	392	383	392	361	447	560	1360	383	457	415	438
24	404	359	413	443	430	370	407	371	468	577	784	---	454	435	451
25	428	356	412	431	461	399	388	375	472	628	792	476	385	431	458
26	413	---	405	424	---	384	378	381	460	510	665	495	877	432	475
27	394	358	421	425	---	405	386	386	450	524	627	593	757	425	518
28	419	348	444	413	---	329	399	401	---	595	580	520	527	431	504
29	396	353	454	422	---	321	368	413	---	513	550	485	482	429	459
30	432	358	416	406	---	330	352	413	---	572	542	---	485	400	471
31	394	---	424	402	---	300	---	419	---	472	534	---	485	---	447
MONTH	436	371	412	449	402	---	365	366	434	475	616	---	482	420	448

RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, N. MEX.--Continued

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	14.0	10.0	3.0	1.5	9.0	3.5	11.0	21.0	17.0	---	27.0	25.0	17.0	12.0	5.0
2	13.0	12.0	8.0	1.5	5.0	4.0	13.0	23.0	17.0	---	27.0	25.0	11.0	10.0	5.0
3	17.0	12.0	8.0	0.0	6.0	4.0	14.0	20.0	19.0	26.0	18.0	23.0	15.0	9.0	4.0
4	19.0	13.0	2.0	0.0	4.5	5.0	13.0	18.0	20.0	18.0	---	---	15.0	12.0	5.0
5	20.0	12.0	8.0	0.0	4.0	9.0	13.0	18.0	23.0	18.0	26.0	---	15.0	10.0	5.0
6	18.5	8.5	2.5	3.0	6.0	4.0	13.0	14.0	23.0	22.0	25.0	---	16.0	12.0	4.0
7	17.5	9.5	4.0	6.0	6.0	7.5	11.0	12.0	15.0	22.0	28.0	23.0	13.0	10.0	5.0
8	15.0	10.5	4.0	7.0	3.0	14.0	14.0	18.0	17.0	19.0	20.0	---	14.0	10.0	4.0
9	15.0	7.0	4.5	5.5	7.5	8.5	10.0	19.0	18.0	20.0	23.0	---	14.0	6.0	3.0
10	---	12.0	4.5	5.5	8.5	10.0	16.0	20.0	26.0	20.0	20.0	---	19.0	5.0	3.0
11	---	11.5	4.0	4.0	9.5	10.0	16.0	21.0	21.0	29.0	24.0	---	15.0	6.0	4.0
12	11.0	12.0	3.5	3.0	10.5	13.0	16.0	19.0	23.0	25.0	16.0	---	16.0	6.0	3.0
13	10.0	9.0	3.5	3.0	4.0	---	17.0	22.0	16.0	---	25.0	---	16.0	10.0	3.0
14	11.0	8.5	1.0	2.0	7.0	11.0	18.0	19.0	23.0	18.0	20.0	---	17.0	5.0	2.0
15	11.0	8.0	4.5	3.0	6.0	11.5	16.0	23.0	21.0	17.0	25.0	---	16.0	7.0	3.0
16	8.0	12.0	4.0	4.5	13.5	11.5	17.0	23.0	25.0	31.0	25.0	---	14.0	6.0	---
17	---	10.0	3.5	5.0	12.0	11.5	19.0	17.0	26.0	28.0	23.0	---	14.0	6.0	1.0
18	---	5.0	3.0	5.0	8.5	7.0	14.0	17.0	25.0	---	19.0	---	11.0	7.0	1.0
19	11.0	4.5	2.0	12.0	10.5	9.5	8.0	20.0	27.0	---	25.0	---	6.0	7.0	1.0
20	12.0	5.0	2.0	4.5	6.0	8.0	10.0	12.0	28.0	23.0	25.0	---	13.0	8.0	1.0
21	11.0	3.0	2.0	4.0	7.5	9.5	12.0	18.0	25.0	28.0	27.0	25.0	16.5	8.0	3.0
22	11.0	8.0	2.0	5.0	5.0	13.0	12.0	19.0	23.0	26.0	20.0	22.0	19.0	6.0	4.0
23	12.0	10.5	0.5	4.5	3.0	12.0	15.0	17.0	28.0	---	23.0	13.0	9.0	8.0	7.0
24	14.0	6.0	1.0	3.5	8.5	14.5	11.0	14.0	28.0	28.0	20.0	---	10.0	5.0	7.0
25	13.5	6.0	3.5	8.0	6.5	25.0	19.0	22.0	31.0	28.0	22.0	22.0	11.0	8.0	5.0
26	10.0	---	2.5	5.5	6.0	14.0	14.0	16.0	28.0	28.0	23.0	14.0	9.0	8.0	5.0
27	9.5	6.0	3.0	5.5	4.0	---	14.0	15.0	31.0	17.5	24.0	17.0	14.0	8.0	7.5
28	16.0	7.0	3.5	6.5	6.0	13.0	17.0	15.0	---	20.0	23.0	17.0	8.0	6.0	4.0
29	16.0	9.0	1.5	6.0	---	12.0	17.0	18.0	---	---	20.0	17.0	15.0	6.0	5.0
30	17.0	7.0	1.5	5.5	---	16.0	17.0	22.0	---	23.0	25.0	---	13.0	7.0	6.0
31	17.0	---	1.0	11.0	---	14.0	---	25.0	---	26.0	20.0	---	5.0	---	6.0
MONTH	13.5	8.5	3.5	4.5	7.0	10.5	14.0	18.5	23.0	---	23.0	---	13.5	8.0	4.0

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	406	1900	2080	694	3080	5770	1800	4800	23300
2	380	670	687	759	1080	2210	1250	3540	11900
3	355	370	355	946	1440	3680	1040	1810	5080
4	432	1970	2300	1060	1350	3860	1110	1480	4440
5	432	830	968	1140	1020	3140	1010	1380	3760
6	372	400	402	1510	2080	8480	901	1210	2940
7	306	370	306	1570	1900	8050	946	1420	3630
8	372	425	427	1390	1720	6460	930	1420	3570
9	355	375	359	1450	2060	8060	916	1280	3170
10	327	425	375	1650	2070	9220	843	1170	2660
11	341	490	451	2150	3540	20500	843	1280	2910
12	355	500	479	2010	2820	15300	886	1290	3090
13	389	880	924	2060	3560	19800	886	1380	3300
14	480	1170	1520	2150	2580	15000	814	1440	3160
15	364	575	565	1840	2180	10800	843	1380	3140
16	389	460	483	1590	3140	13500	785	1100	2330
17	460	540	671	1530	3000	12400	720	960	1870
18	598	640	1030	1800	3850	18700	772	950	1980
19	540	475	693	1800	3700	18000	720	790	1540
20	598	625	1010	1730	3260	15200	843	970	2210
21	620	740	1240	1860	2500	12600	916	900	2230
22	746	1150	2320	1820	2280	11200	901	1120	2720
23	772	1130	2360	1800	3040	14800	872	1390	3270
24	707	1360	2600	1530	2960	12200	901	1460	3550
25	644	1330	2310	1470	2890	11500	720	1450	7000
26	668	1100	1980	1820	3870	19000	707	1240	2370
27	681	800	1470	1630	3420	15100	872	1310	3080
28	681	1040	1910	1690	2340	10700	901	1380	3360
29	772	1240	2580	1780	2120	10200	886	1580	3780
30	644	1030	1790	1840	4600	22900	886	1280	3060
31	540	1280	1870	---	---	---	930	1280	3210
TOTAL	15726	--	38515	48069	--	358330	28350	--	127610

RIO GRANDE BASIN

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08330000 RIO GRANDE AT ALBUQUERQUE, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	920	1230	3660	949	1230	3150	1140	1650	5080
2	900	1430	3470	1120	1480	4480	994	1330	3570
3	880	1760	4180	1070	1230	3550	872	1230	2900
4	700	2280	4310	1070	1580	4560	746	1160	2340
5	500	950	1280	1120	1430	4320	707	1470	2810
6	250	550	371	1040	1300	3650	733	1570	3110
7	130	330	193	1060	1460	4180	843	1610	3660
8	130	280	98	1030	1440	4000	814	1560	3430
9	190	500	256	901	1460	3550	746	1060	2140
10	300	925	749	916	1120	2770	746	1230	2480
11	450	1080	1310	901	1220	2970	843	1200	2730
12	814	1180	2590	962	1080	2810	946	1090	2780
13	828	1280	2860	930	1070	2690	1010	1330	3630
14	785	1460	3090	916	1230	3040	1030	1460	4060
15	746	1730	3480	886	910	2180	1030	1330	3700
16	694	1410	2640	858	1020	2360	1010	1210	3300
17	632	1080	1840	800	1020	2200	901	1410	3430
18	632	1320	2250	1040	1150	3230	785	1280	2710
19	858	2240	5190	1180	1150	3660	655	1140	2020
20	962	2180	5660	1340	1150	4160	644	940	1630
21	946	1850	4730	1250	1280	4320	962	1220	3340
22	843	2280	5190	1180	1500	4780	1120	1000	3020
23	840	2400	5440	1010	1390	3790	901	1000	2430
24	800	2440	5270	872	975	2300	800	900	1940
25	772	1580	3290	946	1080	2760	1090	1430	4210
26	694	1400	2620	1070	1440	4160	1390	1580	5930
27	632	1420	2420	1230	2080	6910	1410	3960	15100
28	694	1450	2720	1360	1820	6680	1690	6350	29000
29	720	1420	2760	--	--	--	1990	4340	23300
30	800	1330	2870	--	--	--	2430	4200	27600
31	828	1380	3090	--	--	--	2550	5090	35000
TOTAL	20870	--	89277	29007	--	103210	33528	--	212380
DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2650	5650	40400	962	765	1990	200	230	124
2	2150	4050	23500	800	640	1380	171	190	88
3	1840	3600	17900	552	530	790	210	240	136
4	1550	2600	10900	655	710	1260	334	325	293
5	1450	2650	10400	1070	1010	2920	220	280	166
6	1380	2230	8310	1120	870	2630	125	250	84
7	1410	2260	8600	1110	859	2570	147	375	149
8	1450	2280	8930	800	765	1650	167	315	142
9	1030	1210	3370	720	850	1650	97	127	33
10	843	1000	2280	800	635	1370	67	210	38
11	901	1000	2430	872	680	1600	51	208	29
12	828	890	1990	707	690	1320	44	212	25
13	540	700	1020	632	595	1020	60	370	60
14	406	500	548	720	820	1590	58	255	40
15	432	460	537	720	1010	1960	35	185	17
16	574	405	628	668	769	1390	20	125	6.8
17	655	540	955	668	672	1210	112	772	283
18	620	659	1100	563	493	749	326	595	524
19	785	660	1400	563	535	813	335	415	375
20	694	440	824	772	686	1430	350	375	354
21	978	1010	2670	681	568	1040	330	355	316
22	1110	1510	4530	552	445	663	122	205	68
23	901	1220	2970	490	400	529	50	120	16
24	901	994	2420	510	350	482	35	130	12
25	1140	3250	10000	450	370	450	31	120	10
26	930	1180	2960	285	275	212	7.8	95	2.0
27	872	950	2240	299	418	337	7.8	125	2.6
28	1030	980	2730	175	260	123	7.8	100	2.1
29	1410	1340	5100	171	295	136	7.6	100	2.1
30	1200	950	3080	163	320	141	7.4	100	2.0
31	--	--	--	190	200	103	--	--	--
TOTAL	32660	--	184722	19440	--	35508	3735.4	--	3399.6

RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE. N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

JULY				AUGUST				SEPTEMBER			
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)		
1	7.2	100	1.9	514	7750	10800	86	5300	1230		
2	7.0	100	1.9	263	8150	5790	58	2900	454		
3	214	9400	8560	54	1800	262	71	1200	230		
4	334	15400	13900	36	1750	170	44	460	55		
5	389	4000	4200	29	1800	141	35	370	35		
6	320	1590	1370	141	6030	4570	11	300	8.9		
7	135	740	270	474	18900	24200	11	290	8.6		
8	58	580	91	296	6250	5000	5.0	79	3.6		
9	39	390	41	303	12300	10100	0	0	0		
10	27	160	12	137	14200	5250	0	0	0		
11	21	160	9.1	502	17200	25700	0	0	0		
12	17	250	11	351	9800	11000	0	0	0		
13	15	1730	70	938	19100	54300	0	0	0		
14	13	975	34	465	11100	13900	0	0	0		
15	11	320	9.5	297	10000	8020	0	0	0		
16	9.0	195	4.7	203	7200	3950	0	0	0		
17	7.0	200	3.8	129	2600	906	0	0	0		
18	5.0	100	1.4	130	5780	2840	0	0	0		
19	4.2	100	1.1	192	34100	17700	1.0	580	1.6		
20	492	36700	89400	878	39400	93300	7.3	1300	26		
21	385	45500	91600	381	29300	30100	16	2470	107		
22	295	20900	28000	249	14700	9880	7.8	1080	23		
23	818	26800	94800	694	26400	51900	29	1530	120		
24	960	29200	106000	440	28000	33300	94	3800	964		
25	614	23500	39000	306	25300	20900	86	2670	620		
26	346	8800	11200	185	11700	5840	102	1420	391		
27	2780	31200	275000	75	7000	1420	122	1400	461		
28	1020	24800	68300	35	6200	586	91	1300	319		
29	677	23300	46900	24	2380	154	66	1260	225		
30	494	20300	32300	54	1900	277	187	18700	16400		
31	278	5750	5520	88	4150	986	--	--	--		
TOTAL	10791.4	--	916612.4	8863	--	453242	1130.1	--	21682.7		
OCTOBER				NOVEMBER				DECEMBER			
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)		
1	1270	38500	132000	960	3370	8740	850	2200	5050		
2	1600	32300	140000	919	2700	6700	841	2620	5950		
3	1330	15400	55300	907	2080	5090	808	3000	6540		
4	650	7840	13800	860	1700	3950	795	2870	6160		
5	579	6800	10600	1430	5720	22100	755	2450	4990		
6	792	6720	14400	1600	6840	29500	775	2050	4290		
7	1030	5670	15800	1850	10100	50400	780	1950	4110		
8	872	3550	8360	1760	7000	33300	804	1950	4230		
9	751	2840	5760	1710	6550	30200	859	1550	3590		
10	678	1950	3570	1690	6800	31000	887	2400	5750		
11	622	2080	3490	1630	6700	29500	761	2300	4730		
12	561	1830	2770	1610	6570	28600	841	1450	3290		
13	512	1620	2240	1650	5350	23800	850	1950	4480		
14	449	1580	1920	1690	5050	23000	910	1850	4550		
15	406	1650	1810	1720	4950	23000	900	2000	4860		
16	430	1590	1850	1860	4500	22600	827	1680	3750		
17	590	1720	2740	1800	5120	24900	779	1650	3470		
18	620	2200	3680	1400	4000	15100	633	3600	6150		
19	586	2970	4700	1150	3050	9470	596	1300	2090		
20	495	2270	3030	935	2750	6940	675	1700	3100		
21	414	1540	1720	915	2650	6550	714	2500	4820		
22	405	1270	1390	987	4320	11500	619	2000	3340		
23	364	1510	1480	938	2350	5950	700	2050	3870		
24	347	2020	1890	1070	2540	7340	815	2250	4950		
25	867	8050	18800	1050	2150	6100	947	3100	7930		
26	1200	11300	36600	1020	2250	6200	923	4050	10100		
27	980	10800	28600	1000	2650	7160	999	4950	13400		
28	920	6320	15700	1040	2350	6600	1090	4300	12700		
29	950	4470	11500	978	2400	6340	1100	4350	12900		
30	895	2780	6720	877	2500	5920	954	3600	9270		
31	952	3250	8350	--	--	--	893	3650	8800		
TOTAL	23117	--	560570	39006	--	497550	25680	--	183210		
TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)									252169.9		
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)									2544488.7		
TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)									247827.9		
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)									3261363.7		

08330000 RIO GRANDE AT ALBUQUERQUE, N. MEX.--Continued

INSTANTANEOUS SUSPENDED--SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70326)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70327)
OCT., 1970									
12...	0830	11.0	341	474	436	30	--	36	--
NOV.									
05...	1530	12.0	1140	1110	3420	18	--	20	--
11...	0915	7.0	2310	2600	16200	--	--	--	--
11...	0930	7.0	2310	3460	21600	9	--	10	--
23...	1350	10.5	1950	3430	18100	7	--	8	--
DEC.									
04...	1030	2.0	1170	1370	4330	9	--	11	--
14...	0950	1.0	812	1660	3640	6	--	6	--
JAN., 1971									
18...	1515	12.0	550	1270	1890	8	--	9	--
FEB.									
01...	1400	9.0	1020	1240	3410	7	--	9	--
16...	1200	13.5	865	1220	2850	7	--	8	--
MAR.									
08...	1410	14.0	871	1970	4630	15	--	19	--
29...	1615	18.5	2130	3530	20300	15	--	18	--
APR.									
12...	1115	15.0	833	865	1940	18	--	21	--
26...	1200	12.0	913	1080	2660	32	--	37	--
JUNE									
01...	1200	19.0	216	196	114	43	--	50	--
18...	1400	25.5	336	480	435	41	--	53	--
JULY									
06...	1100	22.0	302	1430	1170	53	--	67	--
20...	1100	23.0	1410	76600	292000	45	--	60	--
27...	1100	17.5	5460	39900	588000	34	--	51	--
AUG.									
16...	1400	25.5	214	6360	3680	60	1	75	6
SEP.									
21...	1100	25.0	28	2900	219	76	--	91	--
OCT.									
01...	1330	17.0	1010	30700	83700	55	--	67	--
16...	1900	16.0	389	1600	1680	33	--	42	--
26...	1400	10.0	1300	12600	44200	16	--	17	--
NOV.									
08...	1250	10.0	1720	5020	23300	17	--	22	--
16...	0900	6.0	1800	4640	22600	11	--	14	--
26...	1300	8.0	1040	2040	5730	14	--	16	--
DEC.									
06...	1400	6.5	786	1680	3560	10	--	11	--
27...	1100	7.5	1080	2060	6010	14	--	16	--
DATE		SUS. SED. FALL DIAM. % FINER THAN .008 MM (70339)	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70328)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70329)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70341)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70330)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)
OCT., 1970									
12...	--	--	--	43	--	--	--	58	--
NOV.									
05...	--	--	--	29	--	--	--	58	--
11...	--	--	--	--	--	--	--	--	80
11...	--	--	--	18	--	--	--	51	--
23...	--	--	--	11	--	--	--	28	--
DEC.									
04...	--	--	--	14	--	--	--	34	--
14...	--	--	--	8	--	--	--	25	--
JAN., 1971									
18...	--	--	--	10	--	--	--	27	--
FEB.									
01...	--	--	--	15	--	--	--	35	--
16...	--	--	--	11	--	--	--	26	--
MAR.									
08...	--	--	--	24	--	--	--	34	--
29...	--	--	--	25	--	--	--	51	--
APR.									
12...	--	--	--	23	--	--	--	36	--
26...	--	--	--	43	--	--	--	58	--
JUNE									
01...	--	--	--	59	--	--	--	71	--
18...	--	--	--	67	--	--	--	78	--
JULY									
06...	--	--	--	94	--	--	--	97	--
20...	--	--	--	90	--	--	--	97	--
27...	--	--	--	73	--	--	--	92	--
AUG.									
16...	87	33	95	96	99	96	99	--	100
SEP.									
21...	98	--	--	--	--	--	--	100	--
OCT.									
01...	--	--	--	90	--	--	--	96	--
16...	--	--	--	61	--	--	--	85	--
26...	--	--	--	27	--	--	--	88	--
NOV.									
08...	--	--	--	31	--	--	--	70	--
16...	--	--	--	20	--	--	--	55	--
26...	--	--	--	23	--	--	--	60	--
DEC.									
06...	--	--	--	17	--	--	--	41	--
27...	--	--	--	22	--	--	--	60	--

RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	SUS. SED. SIEVE DIAM. % FINER THAN (70332)	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. SIEVE DIAM. % FINER THAN (70333)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. SIEVE DIAM. % FINER THAN (70334)	SUS. SED. FALL DIAM. % FINER THAN (70346)	SUS. SED. SIEVE DIAM. % FINER THAN (70335)	SUS. SED. SIEVE DIAM. % FINER THAN (70336)
OCT., 1970								
12...	--	96	--	100	--	--	--	--
NOV.								
05...	--	96	--	100	--	--	--	--
11...	--	--	--	--	--	--	--	--
11...	--	97	--	100	--	--	--	--
23...	--	96	--	100	--	--	--	--
DEC.								
04...	--	93	--	100	--	--	--	--
14...	--	86	--	97	--	100	--	--
JAN., 1971								
18...	--	93	--	100	--	--	--	--
FEB.								
01...	--	94	--	100	--	--	--	--
16...	--	95	--	100	--	--	--	--
MAR.								
08...	--	98	--	100	--	--	--	--
29...	--	91	--	100	--	--	--	--
APR.								
12...	--	97	--	100	--	--	--	--
26...	--	99	--	100	--	--	--	--
JUNE								
01...	--	100	--	--	--	--	--	--
18...	--	99	--	100	--	--	--	--
JULY								
06...	--	100	--	--	--	--	--	--
20...	--	100	--	--	--	--	--	--
27...	--	99	--	100	--	--	--	--
AUG.								
16...	--	--	--	--	--	--	--	--
SEP.								
21...	--	--	--	--	--	--	--	--
OCT.								
01...	--	99	--	100	--	--	--	--
16...	--	99	--	100	--	--	--	--
26...	--	99	--	100	--	--	--	--
NOV.								
08...	--	98	--	100	--	--	--	--
16...	--	95	--	100	--	--	--	--
26...	--	99	--	100	--	--	--	--
DEC.								
06...	--	98	--	100	--	--	--	--
27...	--	100	--	--	--	--	--	--

PARTICLE SIZE OF SURFACE BED MATERIAL, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PEN- DED SED- IMENT (MG/L) (80154)	SUS- PEN- DED SED- IMENT 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 (80163)
OCT., 1970											
05...	1530	--	--	--	--	1	4	59	93	98	100
12...	0830	11.0	341	474	436	0	1	33	84	97	100
20...	0900	--	--	--	--	6	25	88	100	--	--
NOV.											
05...	1530	12.0	1140	1110	3420	1	2	51	95	99	100
12...	1155	--	--	--	--	1	3	54	97	100	--
23...	1350	10.5	1950	3430	18100	3	19	81	99	100	--
DEC.											
04...	1030	2.0	1170	1370	4330	4	20	68	94	97	100
07...	0845	--	--	--	--	2	15	82	100	--	--
14...	0950	1.0	812	1660	3640	2	7	55	89	97	100
JAN., 1971											
18...	1515	12.0	550	1270	1890	1	6	80	99	100	--
FEB.											
01...	1400	9.0	1020	1240	3410	1	4	59	98	100	--
16...	1200	13.5	865	1220	2850	1	9	63	97	100	--
MAR.											
08...	1410	14.0	871	1970	4630	1	5	52	94	100	--
29...	1615	18.5	2130	3530	20300	1	3	47	90	98	100
APR.											
12...	1115	15.0	833	865	1940	1	7	61	94	97	100
26...	1200	12.0	913	1080	2660	0	5	66	94	100	--
JUNE											
18...	1400	25.5	336	480	435	2	7	61	93	99	100
JULY											
06...	1100	22.0	302	1430	1170	2	10	49	89	99	100
27...	1100	17.5	5460	39900	588000	3	5	32	84	97	100
AUG.											
16...	1400	25.5	214	6360	3680	3	8	63	95	100	--
OCT.											
01...	1300	--	--	--	--	2	6	59	95	100	--
NOV.											
08...	1250	10.0	1720	5020	23300	2	10	62	90	99	100
DEC.											
06...	1400	6.5	786	1680	3560	7	25	72	98	100	--

RIO GRANDE BASIN

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08330000 RIO GRANDE AT ALBUQUERQUE, N. MEX.--Continued

TOTAL SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	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., 1970									
12...	0830	11.0	341	474	436	773	168	1.0	1.9
NOV.									
05...	1530	12.0	1140	1110	3420	5050	295	1.6	2.4
23...	1350	10.5	1950	3430	18100	28400	255	2.1	4.4
DEC.									
04...	1030	2.0	1170	1370	4330	8520	255	1.7	2.7
14...	0950	1.0	812	1660	3640	7080	192	1.5	2.5
JAN., 1971									
18...	1515	12.0	550	1270	1890	3140	170	1.5	2.2
FEB.									
01...	1400	9.0	1020	1240	3410	5820	245	1.6	2.7
16...	1200	13.5	865	1220	2850	5390	253	1.4	2.4
MAR.									
08...	1410	14.0	871	1970	4630	6850	176	2.0	2.5
29...	1615	18.5	2130	3530	20300	29400	295	2.0	3.7
APR.									
12...	1115	15.0	833	865	1940	3560	290	1.3	2.2
26...	1200	12.0	913	1080	2660	4160	280	1.4	2.2
JUNE									
18...	1400	25.5	336	480	435	706	196	.97	1.8
JULY									
06...	1100	22.0	302	1430	1170	1270	165	1.0	1.7
27...	1100	17.5	5460	39900	588000	609000	300	3.9	4.6
AUG.									
16...	1400	25.5	214	6360	3680	3750	152	.87	1.6
OCT.									
01...	1330	17.0	1010	30700	83700	86400	243	1.6	2.7
NOV.									
08...	1250	10.0	1720	5020	23300	29100	271	2.0	3.2
DEC.									
06...	1400	6.5	786	1680	3560	5790	225	1.3	2.7

RIO GRANDE BASIN

08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, N. MEX.

LOCATION.--Lat 34°24'52", long 106°48'11", Socorro County, in Sevilleta or Belen Grant, at gaging station, 0.2 mile south of U.S. Highway 60, 1.8 miles east of Bernardo, about 3 miles upstream from floodway, and 4 miles upstream from Rio Puerco.

PERIOD OF RECORD.--Chemical analyses: October 1956 to December 1971.

Specific conductance: October 1956 to December 1971.

Water temperatures: October 1958 to December 1971.

Sediment records: October 1947 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum daily, 1,760 micromhos Aug. 1, 1971; minimum daily, 333 micromhos Apr. 5, 1971.

Water temperatures: Maximum 32°C Aug. 18, 1971; minimum, freezing point on several days during January and December, 1971.

Sediment concentrations: Maximum 36,200 mg/l Oct. 2, 1971; minimum daily, no flow on many days during June, July, and September, 1971.

Sediment discharge: Maximum daily, 87,000 tons Oct. 3, 1971; minimum daily, 0 tons on many days during June, July, and September, 1971.

EXTREMES, 1964-71.--Specific conductance: Maximum daily, 2,250 micromhos Aug. 4, 1966; minimum daily, 287 micromhos June 6, 1968.

Water temperatures: Maximum, 39°C July 13, 1968; minimum, freezing point on several days during 1967, 1970, and 1971.

Sediment concentrations: Maximum daily, 47,900 mg/l Aug. 4, 1966; minimum daily, no flow on many days in 1964, 1966-71.

Sediment discharge: Maximum daily, 150,000 tons Aug. 3, 1966; minimum daily, 0 tons on many days in 1964, 1966-71.

REMARKS.--Records prior to 1965 water year were published as 08332000 Rio Grande near Bernardo, N. Mex., a composite of 08331990 Rio Grande Conveyance Channel near Bernardo, 08332010 Rio Grande Floodway near Bernardo, and 08332050 Bernardo Interior Drain at Bernardo. No flow June 9 to July 21, Sept. 2-17, 1971. Sediment samples obtained by automatic pump sampler (PS-66 type-developed by Federal Interagency Sedimentation Project, St. Anthony Falls Hydraulics Laboratory) were analyzed for sand grain size (>.062 MM) only. These analyses were made primarily to calibrate the pump sampler.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	OIS- CHANGE (000600)	OIS- SOLVED SILICA (SI02) (MG/L)	OIS- SOLVED IRON (FE) (UG/L)	OIS- SOLVED CAL- CIUM (CA) (MG/L)	OIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	OIS- SOLVED SODIUM (NA) (MG/L)	OIS- SOLVED SODIUM PLUS POTAS- SIUM (K) (MG/L)	OIS- SOLVED POTAS- SIUM (K) (MG/L)
OCT., 1970									
22...	0900	418	26	--	62	9.8	--	54	--
NOV.									
05...	1030	1170	25	--	56	8.9	--	41	--
23...	0845	1470	19	--	50	7.5	--	33	--
DEC.									
01...	1200	1570	24	--	53	8.0	--	40	--
08...	1100	703	28	--	54	9.6	41	--	4.1
JAN., 1971									
07...	1430	125	31	--	57	10	61	--	4.9
20...	1130	998	30	--	50	9.4	44	--	5.0
FEB.									
03...	1545	998	29	--	47	9.0	39	--	4.6
16...	1600	948	28	--	55	9.2	37	--	4.9
MAR.									
01...	1100	998	28	--	51	9.5	37	--	4.2
22...	1450	310	29	--	54	9.5	44	--	5.3
APR.									
03...	1200	801	24	--	37	6.5	25	--	3.8
19...	1330	225	27	20	63	10	59	--	6.8
MAY									
03...	1330	493	26	--	58	9.9	48	--	4.8
17...	1400	295	27	60	72	11	60	--	4.8
JUNE									
01...	0900	33	30	--	95	17	110	--	6.1
JULY									
22...	2000	4.0	30	--	170	23	50	--	6.2
AUG.									
23...	1140	24	29	--	110	14	96	--	7.0
SEP.									
20...	1100	34	33	--	80	11	60	--	6.3
OCT.									
02...	0815	412	24	20	100	14	63	--	7.0
NOV.									
17...	1100	1350	25	--	54	8.6	33	--	4.3
DEC.									
30...	1300	941	26	--	56	7.9	43	--	5.2

08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	BICAR- BUNATE (HCO ₃) (MG/L) (00440)	CAR- BUNATE (CO ₃) (MG/L) (00445)	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 NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (N) (MG/L) (71851)	DIS- SOLVED NITRATE PLUS NITRATE (N) (MG/L) (00651)	DIS- SOLVED NITRATE PLUS NITRATE (N) (MG/L) (00671)
OCT., 1970									
22...	178	6	116	22	.6	.54	2.4	--	--
NOV.									
05...	168	2	95	15	.5	.70	3.1	--	--
23...	152	0	80	12	.5	.54	2.4	--	--
DEC.									
01...	164	0	90	15	.5	.68	3.0	--	--
08...	182	0	93	19	.7	--	--	.66	--
JAN., 1971									
07...	234	0	120	27	.7	--	--	.90	2.9
20...	176	0	76	24	.8	--	--	.00	--
FEB.									
05...	166	0	61	17	.6	--	--	.00	--
16...	175	0	75	20	.8	--	--	.90	--
MAR.									
01...	177	0	77	18	.5	--	--	.70	--
22...	183	0	100	21	.8	--	--	.80	--
APR.									
03...	131	0	53	11	.4	--	--	1.0	--
19...	185	0	120	33	.4	--	--	.20	--
MAY									
03...	187	0	120	23	--	--	--	.68	--
17...	214	0	130	27	.5	--	--	.45	--
JUNE									
01...	285	0	230	51	.3	--	--	.00	--
JULY									
22...	255	0	400	16	.7	--	--	1.6	--
AUG.									
23...	266	0	300	48	.5	--	--	.45	--
SEP.									
20...	226	0	140	29	.5	--	--	3.6	--
OCT.									
02...	316	0	150	33	.4	--	--	.19	--
NOV.									
17...	170	0	87	17	.5	--	--	1.0	--
DEC.									
30...	179	0	92	26	.4	--	--	1.4	--

DATE	DIS- SOLVED SULFATES (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00951)	SPE- CIFIC CON- DUCTI- VANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
OCT., 1970								
22...	387	195	39	1.7	592	8.5	12.0	--
NOV.								
05...	330	176	35	1.3	513	8.3	8.0	--
23...	279	156	32	1.2	440	7.9	4.0	--
DEC.								
01...	314	165	30	1.4	490	7.7	6.0	--
08...	342	170	25	1.4	508	7.8	4.0	--
JAN., 1971								
07...	440	180	0	2.0	710	7.8	.0	--
20...	330	160	16	1.5	470	7.5	5.0	--
FEB.								
03...	290	150	14	1.4	432	7.7	7.0	--
16...	320	180	36	1.2	506	7.8	13.5	--
MAR.								
01...	315	170	25	1.2	492	7.8	3.5	--
22...	357	170	20	1.5	534	7.6	15.0	--
APR.								
03...	230	120	13	1.0	372	7.7	11.0	--
19...	411	200	48	1.8	640	7.7	11.0	150
MAY								
03...	387	190	32	1.5	600	7.6	19.0	--
17...	440	220	50	1.7	633	8.0	20.0	130
JUNE								
01...	680	310	73	2.7	995	7.9	15.0	--
JULY								
22...	828	520	310	1.0	1070	7.6	27.0	--
AUG.								
23...	737	330	110	2.3	1100	7.0	26.0	--
SEP.								
20...	487	240	60	1.7	727	7.7	13.0	--
OCT.								
02...	548	310	48	1.6	872	7.3	12.5	190
NOV.								
17...	317	170	31	1.1	497	7.6	8.0	--
DEC.								
30...	351	170	26	1.4	538	7.9	5.0	--

RIO GRANDE BASIN

08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, N. MEX.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	628	---	442	512	490	474	378	---	934	---	1760	---	---	568	---
2	683	545	446	---	491	494	334	---	884	---	---	---	680	---	508
3	---	498	479	---	481	498	334	589	854	---	595	---	667	563	503
4	---	514	480	544	480	482	338	---	858	---	651	---	619	---	---
5	623	507	---	536	485	534	333	727	---	---	---	---	618	575	---
6	623	513	---	622	---	---	381	---	---	---	---	---	630	524	---
7	---	---	493	694	---	---	389	626	---	---	---	---	587	---	531
8	665	---	493	725	474	496	431	---	---	682	---	---	588	500	448
9	665	464	487	---	---	512	413	---	---	700	---	---	---	486	527
10	---	453	509	---	483	519	481	605	---	693	---	---	---	---	531
11	---	450	504	604	484	496	---	---	---	728	---	---	---	466	---
12	679	426	---	565	479	512	500	445	---	717	---	---	---	474	---
13	670	450	---	515	---	---	532	---	---	638	---	---	514	---	---
14	666	---	485	520	---	---	612	423	---	670	---	---	---	---	524
15	647	---	476	512	---	494	674	---	---	---	---	---	590	---	334
16	606	433	477	---	479	497	626	---	---	---	754	---	---	---	534
17	---	488	503	---	484	502	---	660	---	---	715	---	---	458	---
18	---	455	523	538	489	518	---	---	---	758	---	---	---	457	541
19	594	448	---	522	482	509	628	670	---	---	---	---	427	520	---
20	596	450	---	523	---	---	542	---	---	---	---	694	---	---	517
21	619	---	516	538	---	---	553	720	---	---	---	754	---	---	530
22	604	---	511	550	456	534	572	---	---	1070	---	532	694	505	528
23	604	439	525	---	472	489	532	---	---	---	1040	487	---	---	534
24	---	446	523	---	477	533	---	705	---	---	637	590	---	525	---
25	---	418	---	508	491	546	---	---	---	620	1040	---	---	---	---
26	576	445	---	486	517	545	537	757	---	613	---	---	---	519	---
27	589	437	---	519	---	---	528	766	---	640	752	414	760	---	523
28	560	---	523	485	---	---	572	819	---	515	---	675	---	---	551
29	562	---	543	483	---	480	---	---	---	584	---	694	634	---	500
30	549	439	535	---	---	---	572	---	---	666	798	---	---	517	510
31	---	---	526	---	---	400	---	---	---	627	---	---	---	---	---
MONTH	---	---	---	---	---	---	491	---	---	---	---	---	---	---	---

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

[illegible]

RIO GRANDE BASIN

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08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	273	2000	1470	740	3990	7970	1640	5540	24500
2	258	2160	1500	830	3970	8900	1410	5020	19100
3	271	2780	2030	985	4130	11000	1180	4300	13700
4	250	2500	1690	1230	4400	14600	1060	3600	10300
5	246	2850	1890	1170	3830	12100	1050	4210	11900
6	305	1000	824	1140	4120	12700	871	3450	8110
7	266	1090	783	1360	5080	18700	843	3250	7400
8	181	1560	762	1420	4950	19000	878	3740	8870
9	168	1440	653	1380	4020	15000	878	3300	7820
10	178	1550	745	1380	4310	16100	892	3800	9150
11	161	1510	656	1410	4520	17200	864	3250	7580
12	183	1490	736	1470	4820	19100	927	3200	8010
13	174	600	282	1430	4590	17700	976	3330	8780
14	153	500	207	1480	3380	13500	976	3400	8960
15	167	960	433	1390	3650	13700	962	3280	8520
16	370	1630	1630	1360	4390	16100	896	2890	6990
17	376	1830	1860	1430	5370	20700	843	2900	6600
18	418	1850	2090	1440	4680	18200	759	2450	5020
19	584	1800	2840	1520	4300	17600	794	2920	6260
20	479	1340	1730	1530	5170	21400	731	3220	6360
21	401	1330	1440	1520	4520	18600	808	3920	8550
22	417	1930	2170	1510	5330	21700	815	3700	8140
23	399	2150	2320	1520	5700	23400	815	3270	7200
24	553	1950	2910	1590	5350	23000	871	3410	8020
25	510	1580	2180	1550	5400	22600	885	3210	7670
26	484	1380	1800	1530	3350	13800	794	3190	6840
27	431	1830	2130	1650	5700	25400	787	3120	6630
28	521	1870	2630	1650	5180	23100	766	2760	5710
29	680	1930	3540	1630	4950	21800	773	2930	6120
30	898	2080	5040	1610	5000	21700	808	4370	9530
31	760	3630	7450	--	--	--	780	5210	11000
TOTAL	11515	--	58421	41855	--	526370	28332	--	279340
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	829	3780	8460	873	2400	5660	853	2820	6490
2	857	3810	8820	930	2910	7310	750	2720	5510
3	871	3810	8960	987	3810	10200	644	2050	3560
4	520	3810	5350	983	4220	11200	642	2010	3480
5	330	3300	2940	981	3250	8610	502	2360	3200
6	175	1330	628	1050	2830	8020	621	3590	6020
7	125	440	148	975	3480	9160	416	3470	3900
8	130	810	284	878	4010	9510	570	2990	4600
9	155	1280	536	888	3420	8200	570	1970	3030
10	230	1200	745	883	2800	6680	483	2130	2780
11	388	1150	1200	856	2510	5800	476	1590	2040
12	549	1920	2850	823	2580	5730	694	1500	2810
13	1050	2950	8360	888	3120	7480	583	1750	2750
14	1010	4150	11300	900	3500	8510	600	2100	3400
15	972	3930	10300	844	2920	6650	777	1850	3880
16	906	3570	8730	905	2250	5500	852	1800	4140
17	899	3420	8300	891	2490	5990	767	1570	3250
18	913	3380	8330	920	2790	6930	752	1270	2580
19	983	3640	9660	956	3810	9830	710	1200	2300
20	1140	4520	13900	1060	3990	11400	628	1060	1800
21	1210	3970	13000	1250	4710	15900	387	750	784
22	1230	3860	12800	1150	4580	14200	412	1030	1150
23	1250	3700	12500	1130	4180	12800	944	1250	3190
24	1170	3940	12400	910	2700	6630	532	2010	2890
25	1010	3450	9410	753	2530	5140	310	1320	1100
26	977	3290	8680	861	2730	6350	265	950	680
27	934	2930	7390	925	2960	7390	640	2000	3460
28	956	2990	7720	956	2920	7540	500	1550	2090
29	946	3300	8430	--	--	--	1090	1980	5830
30	921	3000	7460	--	--	--	1320	3900	13900
31	909	2700	6630	--	--	--	984	--	--
TOTAL	24545	--	226221	26406	--	234320	20274	--	106594

RIO GRANDE BASIN

08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	964	3430	8930	857	1660	3840	27	70	5.1
2	854	3150	7260	424	1160	1330	26	65	4.6
3	808	2850	6220	458	910	1130	7.7	67	1.4
4	768	2790	5790	143	380	147	1.3	65	.23
5	773	2820	5890	116	190	60	.78	60	.13
6	766	2120	4380	170	300	138	.67	60	.11
7	878	2050	4860	376	870	883	.64	55	.10
8	871	2120	4990	412	1060	1180	.30	50	.04
9	780	1850	3900	412	980	1090	0	0	0
10	404	1090	1190	332	520	466	0	0	0
11	620	1300	2180	159	210	90	0	0	0
12	654	980	1730	283	550	420	0	0	0
13	370	1130	1130	457	870	1070	0	0	0
14	194	700	367	187	260	131	0	0	0
15	90	260	63	144	150	58	0	0	0
16	79	250	53	177	170	81	0	0	0
17	124	475	159	286	360	278	0	0	0
18	124	545	182	189	350	179	0	0	0
19	209	1160	655	156	210	88	0	0	0
20	369	950	946	142	190	73	0	0	0
21	350	1300	1230	134	215	78	0	0	0
22	607	1240	2030	130	202	71	0	0	0
23	1140	2180	6710	138	207	77	0	0	0
24	1040	1540	4320	139	158	59	0	0	0
25	615	1620	2690	91	87	21	0	0	0
26	886	1470	3520	107	142	41	0	0	0
27	778	1110	2330	87	77	18	0	0	0
28	295	760	605	72	69	13	0	0	0
29	250	710	479	36	72	7.0	0	0	0
30	724	1450	2830	32	65	5.6	0	0	0
31	--	--	--	23	52	3.2			
TOTAL	17384	--	87619	6869	--	13125.8	64.39	--	11.71
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	121	14600	5970	1.5	400	1.6
2	0	0	0	53	5600	801	0	0	0
3	0	0	0	39	5500	579	0	0	0
4	0	0	0	11	1400	42	0	0	0
5	0	0	0	1.9	1600	8.2	0	0	0
6	0	0	0	.48	600	.78	0	0	0
7	0	0	0	.18	300	.15	0	0	0
8	0	0	0	102	14400	4910	0	0	0
9	0	0	0	90	13600	3300	0	0	0
10	0	0	0	30	5800	470	0	0	0
11	0	0	0	36	6100	593	0	0	0
12	0	0	0	59	10700	1700	0	0	0
13	0	0	0	138	10800	4020	0	0	0
14	0	0	0	289	17400	13200	0	0	0
15	0	0	0	103	13500	3750	0	0	0
16	0	0	0	111	5700	1710	0	0	0
17	0	0	0	47	3600	457	0	0	0
18	0	0	0	15	2000	81	8.3	685	21
19	0	0	0	5.7	1000	15	5.8	340	5.3
20	0	0	0	2.2	500	3.0	12	1050	65
21	0	0	0	44	4120	10600	.90	120	.29
22	.93	16300	970	74	14800	3040	3.2	710	6.1
23	.75	34700	70	23	16100	1000	23	8190	756
24	.02	14500	.78	97	19700	5600	55	9710	1980
25	110	23000	7400	140	16200	6120	88	360	86
26	23	18200	1130	109	13200	3880	67	180	33
27	145	15500	907	43	9600	1110	67	180	33
28	888	31600	81000	16	4400	190	64	130	22
29	125	22000	7430	91	4450	10200	23	100	6.2
30	52	11300	1590	86	11600	4730	2.5	20	.14
31	96	11700	3270	6.1	800	13	--	--	--
TOTAL	1440.70	--	103767.78	1983.56	--	88093.13	421.20	--	3015.63

08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	4.8	919	311	830	6900	15500	1020	1750	4820
2	755	36200	73600	828	6400	14300	967	1880	4910
3	1020	31600	87000	663	6000	10700	928	1980	4960
4	673	16700	30300	682	4700	8650	946	1970	5030
5	167	10800	4870	673	3300	6000	896	1890	4570
6	128	9400	3250	1280	5300	18300	804	1550	3360
7	229	10400	6430	1310	4800	17000	767	1400	2900
8	237	8200	5250	1350	5200	19000	773	1360	2840
9	214	8200	4740	1420	6200	23800	746	1450	2920
10	167	7500	3380	1440	6100	23700	759	1520	3110
11	181	7200	3520	1420	5800	22200	780	1580	3330
12	141	4500	1710	1380	3600	13400	640	1460	2520
13	86	3300	766	1220	3300	10900	640	1350	2330
14	90	2000	486	1080	2500	7290	787	1430	3040
15	98	1500	397	1100	3600	10700	766	1650	3410
16	69	1500	279	1300	5300	18600	750	1560	3160
17	47	1500	190	1350	5800	21100	730	1420	2800
18	114	3000	923	1230	4400	14600	730	1310	2580
19	172	3200	1490	1190	4800	15400	730	1350	2660
20	231	3700	2310	1120	4000	12100	690	2250	4190
21	191	2800	1440	1010	2500	6820	647	2460	4300
22	147	2600	1030	913	1800	4440	745	2460	4950
23	124	2800	937	945	2680	6840	717	2760	5340
24	136	3000	1100	880	2420	5750	766	2730	5650
25	205	4200	2320	908	2180	5340	857	3030	7010
26	756	21900	44700	893	1570	3790	864	2890	6740
27	1040	15200	42700	921	1650	4100	990	2880	7700
28	705	8300	15800	923	1850	4610	1030	3510	9760
29	502	6500	8810	931	1920	4830	1040	3560	10000
30	584	9500	15000	950	1690	4330	971	3460	9070
31	552	8200	12200	--	--	--	918	3210	7960
TOTAL	9765.8	--	377239	32140	--	354090	25394	--	147920

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

181089.85

1726899.05

166687.65

1742017.05

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDIMENT (MG/L) (80154)	SUS- PENDED SEDIMENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)
OCT., 1970							
05...	1015	14.0	285	5510	4240	34	46
30...	1445	11.0	815	1870	4110	19	24
NOV.							
09...	1230	8.5	1380	3920	14600	15	19
12...	0645	6.0	1490	5010	20100	15	18
DEC.							
01...	1200	6.0	1570	5550	23500	8	10
08...	1245	5.7	920	3480	8640	6	7
31...	0930	1.0	724	4080	7980	5	6
JAN., 1971							
19...	1645	9.0	1100	3630	10800	5	7
FEB.							
17...	1415	12.0	955	2390	6160	7	9
MAR.							
17...	1200	10.0	654	1150	2030	22	26
31...	0900	12.0	934	3290	8300	22	27
APR.							
06...	1130	11.0	829	2060	4610	20	23
26...	0915	12.0	1130	1630	4970	16	22
MAY							
07...	0915	13.0	400	626	676	26	30
JULY							
22...	2000	27.0	4.0	54400	588	70	91
AUG.							
13...	1115	23.5	159	9630	4130	53	73
23...	1145	26.0	24	20400	1320	77	94
OCT.							
02...	1230	14.5	410	31500	34900	62	76
NOV.							
11...	1215	12.0	1360	6240	22900	24	26
15...	1345	10.0	1010	3050	8320	34	41
30...	1415	8.0	941	1580	4010	32	40
DEC.							
20...	1045	1.5	710	2270	4350	14	18
29...	1130	6.5	1050	3530	10000	21	23
30...	1300	5.0	941	3460	8790	22	26

RIO GRANDE BASIN

08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	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)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. FALL DIAM. % FINER THAN (70346)	SUS. SED. FALL DIAM. % FINER THAN (70347)
OCT., 1970							
05...	69	72	77	88	98	100	--
30...	33	40	60	94	100	--	--
NOV.							
09...	29	42	60	90	100	--	--
12...	27	41	56	87	100	--	--
DEC.							
01...	16	31	52	82	96	98	100
08...	11	19	36	71	87	99	100
31...	8	13	25	61	89	100	--
JAN., 1971							
19...	10	22	41	76	97	100	--
FEB.							
17...	13	30	54	88	100	--	--
MAR.							
17...	34	47	72	94	100	--	--
31...	40	68	83	96	100	--	--
APR.							
06...	29	50	77	96	100	--	--
26...	29	47	74	97	100	--	--
MAY							
07...	37	52	72	99	100	--	--
JULY							
22...	100	--	--	--	--	--	--
AUG.							
13...	89	96	98	100	--	--	--
23...	100	--	--	--	--	--	--
OCT.							
02...	90	95	96	99	100	--	--
NOV.							
11...	42	55	68	89	100	--	--
15...	70	92	99	100	--	--	--
30...	65	92	99	100	--	--	--
DEC.							
20...	33	50	66	92	100	--	--
29...	41	64	74	93	100	--	--
30...	42	65	76	94	100	--	--

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971
(SAMPLES FROM AUTOMATIC PUMP SAMPLER)

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDE DIAM. (MG/L) (80154)	SUS- PENDE DIAM. (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN (70331)
OCT., 1970						
01...	1000	15.5	280	1190	900	67
04...	1430	--	210	938	532	87
08...	1030	9.5	143	507	196	93
14...	1330	--	143	449	173	76
20...	1330	14.0	451	1090	1330	58
23...	1215	11.0	364	1050	1030	57
27...	1130	9.0	388	1330	1390	62
30...	1440	11.0	815	1160	2550	67
NOV.						
03...	1145	9.0	998	1890	5090	71
06...	0930	7.5	1126	1990	6050	61
09...	1225	8.5	1380	2410	8900	66
12...	0640	6.0	1490	2650	10200	80
16...	1515	8.0	1360	2300	8450	68
18...	1530	8.5	1410	1910	7300	80
23...	0845	4.0	1470	2460	9760	66
30...	1130	8.0	1610	2220	9650	74
DEC.						
01...	1205	6.0	1570	2500	10900	69

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, N. MEX.

LOCATION.--Lat 34°25'01", long 106°48'00", Socorro County, in Belen or Sevilleta Grant, at gaging station on U.S. Highway 60, 5 miles downstream from heading of conveyance channel, and 2 miles east of Bernardo.

DRAINAGE AREA.--19,230 sq mi, approximately (includes 2,940 sq mi in closed basin in San Luis Valley, Colo.).

PERIOD OF RECORD.--Chemical analyses: October 1956 to December 1971.

Specific conductance: October 1956 to December 1971.

Water temperatures: October 1964 to December 1971.

Sediment records: October 1964 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum daily, 563 Dec. 29, 1971; minimum daily, 321 Apr. 4, 1971.

Water temperatures: Maximum, 23°C Apr. 28, 1971; minimum, freezing point Feb. 23, 1971.

Sediment concentrations: Maximum daily, 22,200 mg/l July 28, 1971; minimum daily, no flow on many days.

Sediment discharge: Maximum daily, 21,100 tons July 28, 1971; minimum daily, 0 tons on many days.

EXTREMES, 1964-71.--Specific conductance: Maximum daily, 1,330 micromhos Aug. 10, 1967; minimum daily, 281 micromhos May 27, 1965.

Water temperatures: Maximum, 30°C June 27, 1968; minimum (1964-71), freezing point Feb. 23, 1971.

Sediment concentrations: Maximum daily, not determined; minimum daily, no flow on many days each year.

Sediment discharge: Maximum daily, 356,000 tons Aug. 11, 1967; minimum daily, 0 tons on many days each 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. No flow Oct. 1 to Nov. 6, Dec. 5-31, 1970; Jan. 1-12, 15-19, Jan. 25 to Feb. 14, 18-20, Feb. 25 to Mar. 28, Apr. 13-21, 25, 29, May 2 to July 26, July 29 to Aug. 28, Aug. 30 to Oct. 1, Oct. 4 to Nov. 5, 22-26, Dec. 6-26, 1971. Chemical analysis on April 1 performed on native water used in sediment particle size analysis.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L) (00930)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L) (00933)	DIS- SOLVED PU- TAS- SIUM (K) (00935)
NOV., 1970									
09...	1315	87	28	--	52	7.7	--	37	--
12...	0915	416	24	--	47	7.2	--	33	--
DEC.									
02...	1100	56	24	--	50	6.8	--	34	--
JAN., 1971									
21...	1100	.05	29	--	37	9.3	52	--	5.5
FEB.									
22...	1130	4.0	27	--	46	8.7	33	--	4.1
MAR.									
31...	0830	766	25	--	43	7.0	27	--	4.4
APR.									
01...	0900	1270	25	--	47	6.5	26	--	5.5
JULY									
28...	1015	216	27	--	71	10	29	--	5.4
OCT.									
03...	1445	.20	21	20	91	12	58	--	6.3
DEC.									
30...	1245	489	27	--	53	8.1	44	--	4.6

DATE	BICAR- BONATE (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 NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRATE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED SULFATES (MAG- NATE) DUE AT 180 C (MG/L) (70300)
NOV., 1970									
09...	160	0	82	14	.5	.93	4.1	--	--
12...	146	0	74	13	.5	.63	2.8	--	--
DEC.									
02...	150	0	81	12	.4	.61	2.7	--	--
JAN., 1971									
21...	167	0	68	35	.7	--	--	.00	--
FEB.									
22...	166	0	76	15	.7	--	--	.70	--
MAR.									
31...	144	0	67	11	.7	--	--	.60	--
APR.									
01...	149	0	63	11	.4	--	--	.61	286
JULY									
28...	240	0	87	11	.6	--	--	.30	--
OCT.									
03...	288	0	160	21	.6	--	--	.31	--
DEC.									
30...	178	0	90	25	.5	--	--	1.2	--

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, N. MEX.--Continued

CHEMICAL ANALYSES. OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SULFUR (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (00900)	NON- CAL- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SUMP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BURN- (B) (UG/L) (01020)
NOV., 1970								
09...	304	161	30	1.3	463	8.0	11.0	--
12...	274	147	28	1.2	425	8.2	6.0	--
DEC.								
02...	285	153	30	1.2	434	7.4	3.0	--
JAN., 1971								
21...	320	130	0	2.0	498	7.6	7.0	--
FEB.								
22...	295	150	14	1.2	461	7.8	9.0	--
MAR.								
31...	260	140	22	1.0	404	7.3	12.0	--
APR.								
01...	259	140	22	.9	403	8.0	8.0	--
JULY								
28...	360	220	22	.9	539	7.1	22.0	--
OCT.								
03...	513	280	40	1.5	776	7.4	19.0	170
DEC.								
30...	345	170	20	1.5	538	7.5	5.5	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

[illegible]

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

[illegible]

RIO GRANDE BASIN

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08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1				0	0	0	65	1020	179
2				0	0	0	58	990	155
3				0	0	0	18	454	22
4				0	0	0	.50	278	.38
5				0	0	0	0	0	0
6				0	0	0	0	0	0
7				28	1630	180	0	0	0
8				90	1740	440	0	0	0
9				76	1330	273	0	0	0
10				100	1240	335	0	0	0
11				226	1510	1130	0	0	0
12				440	2310	2740	0	0	0
13				336	1360	1230	0	0	0
14				352	1390	1320	0	0	0
15				448	1540	1860	0	0	0
16				249	870	585	0	0	0
17				113	700	214	0	0	0
18				76	800	164	0	0	0
19				148	1010	404	0	0	0
20				87	850	200	0	0	0
21				79	880	188	0	0	0
22				148	1120	448	0	0	0
23				156	1070	451	0	0	0
24				56	1020	154	0	0	0
25				44	760	90	0	0	0
26				32	890	77	0	0	0
27				54	840	122	0	0	0
28				74	1000	200	0	0	0
29				120	1090	353	0	0	0
30				87	1070	251	0	0	0
31				--	--	--	0	0	0
TOTAL	0	--	0	3619	--	13409	141.50	--	356.38
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	46	920	903	0	0	0	0	0	0
14	5.4	505	44	0	0	0	0	0	0
15	0	0	0	2.2	194	1.2	0	0	0
16	0	0	0	6.7	210	3.8	0	0	0
17	0	0	0	2.4	63	4.9	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	1.6	62	2.4	0	0	0	0	0	0
21	9.2	313	7.8	5.0	330	4.5	0	0	0
22	13	328	12	4.0	365	3.9	0	0	0
23	34	269	25	3.0	283	2.3	0	0	0
24	57	232	36	2.1	120	.68	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	--	--	--	4.5	250	20
30	0	0	0	--	--	--	674	3410	6540
31	0	0	0	--	--	--	1210	3320	11300
TOTAL	166.2	--	1030.2	25.4	--	21.28	1888.5	--	17860

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE. OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1550	3430	14400	2.0	134	.72			
2	1450	2900	11400	0	0	0			
3	930	2850	7160	0	0	0			
4	658	2760	4900	0	0	0			
5	480	750	972	0	0	0			
6	205	850	470	0	0	0			
7	30	540	44	0	0	0			
8	111	700	210	0	0	0			
9	182	730	359	0	0	0			
10	17	318	15	0	0	0			
11	15	212	8.6	0	0	0			
12	7.4	175	3.5	0	0	0			
13	0	0	0	0	0	0			
14	0	0	0	0	0	0			
15	0	0	0	0	0	0			
16	0	0	0	0	0	0			
17	0	0	0	0	0	0			
18	0	0	0	0	0	0			
19	0	0	0	0	0	0			
20	0	0	0	0	0	0			
21	0	0	0	0	0	0			
22	6.8	92	7.2	0	0	0			
23	40	309	33	0	0	0			
24	25	262	18	0	0	0			
25	0	0	0	0	0	0			
26	5.7	227	3.5	0	0	0			
27	1.0	198	.53	0	0	0			
28	1.0	138	.37	0	0	0			
29	0	0	0	0	0	0			
30	.62	25	.32	0	0	0			
31	--	--	--	0	0	0			
TOTAL	5715.52	--	40005.02	2.0	--	.72	0	--	0
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0			
2	0	0	0	0	0	0			
3	0	0	0	0	0	0			
4	0	0	0	0	0	0			
5	0	0	0	0	0	0			
6	0	0	0	0	0	0			
7	0	0	0	0	0	0			
8	0	0	0	0	0	0			
9	0	0	0	0	0	0			
10	0	0	0	0	0	0			
11	0	0	0	0	0	0			
12	0	0	0	0	0	0			
13	0	0	0	0	0	0			
14	0	0	0	0	0	0			
15	0	0	0	0	0	0			
16	0	0	0	0	0	0			
17	0	0	0	0	0	0			
18	0	0	0	0	0	0			
19	0	0	0	0	0	0			
20	0	0	0	0	0	0			
21	0	0	0	0	0	0			
22	0	0	0	0	0	0			
23	0	0	0	0	0	0			
24	0	0	0	0	0	0			
25	0	0	0	0	0	0			
26	0	0	0	0	0	0			
27	6.0	100	1.6	0	0	0			
28	146	22200	21100	0	0	0			
29	0	0	0	.91	2500	6.1			
30	0	0	0	0	0	0			
31	0	0	0	0	0	0			
TOTAL	152.0	--	21101.6	.91	--	6.1	0	--	0

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	25	1320	89
2	.47	278	2.8	0	0	0	26	1000	70
3	.88	1540	3.7	0	0	0	17	820	38
4	0	0	0	0	0	0	11	940	28
5	0	0	0	0	0	0	2.8	840	6.4
6	0	0	0	219	1860	2380	0	0	0
7	0	0	0	260	3000	2110	0	0	0
8	0	0	0	192	2930	1520	0	0	0
9	0	0	0	314	3320	2810	0	0	0
10	0	0	0	240	3170	2050	0	0	0
11	0	0	0	190	3080	1580	0	0	0
12	0	0	0	200	2510	1360	0	0	0
13	0	0	0	250	2160	1460	0	0	0
14	0	0	0	300	2340	1900	0	0	0
15	0	0	0	570	2670	4110	0	0	0
16	0	0	0	456	2680	3300	0	0	0
17	0	0	0	498	2750	3700	0	0	0
18	0	0	0	498	2730	3670	0	0	0
19	0	0	0	128	2130	736	0	0	0
20	0	0	0	31	1720	144	0	0	0
21	0	0	0	2.2	1350	8.0	0	0	0
22	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	.44	1340	1.6	7.6	518	21
28	0	0	0	4.2	1350	15	107	1620	468
29	0	0	0	5.3	1230	18	308	2340	1950
30	0	0	0	7.3	1280	25	448	2690	3250
31	0	0	0				416	2670	3000
TOTAL	1.35	--	6.5	4365.44	--	32897.6	1368.4	--	8920.4

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

11711.03

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

93790.3

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

13685.72

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

121849.42

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT (T/DAY) (80155)	SUS, SED, FALL DIAM, % FINER THAN (70337)	SUS, SED, FALL DIAM, % FINER THAN (70326)	SUS, SED, FALL DIAM, % FINER THAN (70338)	SUS, SED, FALL DIAM, % FINER THAN (70327)	SUS, SED, FALL DIAM, % FINER THAN (70339)	SUS, SED, FALL DIAM, % FINER THAN (70328)
NOV., 1970											
12...	0915	6.0	416	2330	2620	31	--	39	--	--	--
FEB., 1971											
22...	1130	9.0	4.0	366	4.0	68	--	78	--	--	--
APR.,											
01...	0900	8.0	1270	2950	10100	22	8	25	19	29	27
06...	1300	14.5	260	1180	828	38	--	43	--	--	--
23...	1045	14.0	24	283	18	65	--	72	--	--	--
JULY											
28...	1015	22.0	216	31100	18100	55	--	72	--	97	--
DEC,											
02...	1145	4.0	34	1080	99	50	--	68	--	--	--
DATE											
		SUS, SED, FALL DIAM, % FINER THAN (70340)	SUS, SED, FALL DIAM, % FINER THAN (70329)	SUS, SED, FALL DIAM, % FINER THAN (70341)	SUS, SED, FALL DIAM, % FINER THAN (70330)	SUS, SED, FALL DIAM, % FINER THAN (70342)	SUS, SED, FALL DIAM, % FINER THAN (70331)	SUS, SED, FALL DIAM, % FINER THAN (70343)	SUS, SED, FALL DIAM, % FINER THAN (70332)	SUS, SED, FALL DIAM, % FINER THAN (70333)	SUS, SED, FALL DIAM, % FINER THAN (70334)
NOV., 1970											
12...	58	--	--	--	--	73	--	87	--	100	--
FEB., 1971											
22...	96	--	--	--	--	97	--	99	--	100	--
APR.,											
01...	40	41	56	58	74	--	92	--	100	--	--
06...	52	--	--	--	72	--	92	--	100	--	--
23...	81	--	--	--	--	83	--	88	--	97	100
JULY											
28...	--	--	--	--	--	99	--	100	--	--	--
DEC,											
02...	95	--	--	--	--	99	--	100	--	--	--

RIO GRANDE BASIN

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08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, N. MEX.--Continued

TOTAL SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDE- SEDIMENT (MG/L) (80154)	SUS- PENDE- SEDIMENT (T/DAY) (80155)	TOTAL SEDIMENT (T/DAY) (80156)	STREAM WIDTH (FT) (00004)	STREAM DEPTH (FT) (00064)	STREAM VELOCITY (FPS) (00055)
NOV., 1970									
12,...	0915	6.0	416	2330	2520	5750	104	1.4	2.8
JULY, 1971									
28,...	1015	22.0	216	51100	18100	46300	186	1.1	2.7

PARTICLE SIZE OF SURFACE BED MATERIAL, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDE- SEDIMENT (MG/L) (80154)	SUS- PENDE- SEDIMENT (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 (80163)
APR., 1971											
23,...	1045	14.0	24	283	18	1	3	72	98	100	--

RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, N. MEX.

LOCATION.--Lat 34°24'33", long 106°51'09", in SE¼ sec.8, T.2 N., R.1 E., Socorro County, at gaging station on former U.S. Highway 85, and 0.2 mile upstream from Interstate Highway 25, 1.2 miles southwest of Bernardo, 3 miles upstream from mouth, and 18 miles south of Belen.

DRAINAGE AREA.--7,350 sq mi, approximately, of which at least 1,130 sq mi does not contribute directly to surface runoff.

PERIOD OF RECORD.--Chemical analyses: July 1956 to December 1971.

Specific conductance: July 1956 to December 1971.

Water temperatures: October 1964 to December 1971.

Sediment records: October 1947 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum daily, 4,240 micromhos July 26, 1971; minimum daily, 796 micromhos Aug. 14, 1971.

Water temperatures: Maximum, 29°C Aug. 14, 18, 1971; minimum freezing point Dec. 30, 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- CHARGE (CFS) (000000)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (MG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- AS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCU3) (MG/L) (00440)	CAR- BONATE (CU3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)	DIS- SOLVED FLUOR- IDE (F) (MG/L) (00950)
OCT., 1970												
06...	40	15	--	322	55	312	--	242	0	1200	182	--
07...	13	16	--	255	45	173	--	190	0	890	60	--
08...	5.0	15	--	260	44	152	--	178	0	875	72	--
JAN., 1971												
22...	5.0	15	--	200	62	430	11	238	0	1000	350	--
JULY												
25...	121	19	--	260	54	370	9.1	242	0	1300	67	.8
26...	153	17	10	450	94	500	9.5	297	0	2200	88	.8
27...	40	15	--	550	74	460	9.0	222	0	1800	69	.8
AUG.												
07-09	250	18	10	170	36	210	9.2	251	0	670	110	.8
10-12	39	15	--	120	21	130	8.4	188	0	460	40	.8
16...	50	14	--	290	60	340	9.6	188	0	1500	47	.8
19-25	259	13	--	180	39	240	8.0	180	0	950	37	.9
26-31	58	15	--	210	43	270	9.9	293	0	920	46	.3
SEP.												
10...	80	17	--	180	41	350	8.6	362	0	900	76	.5
20...	25	16	--	220	53	420	11	169	0	1300	75	.4
OCT.												
01...	2720	12	40	160	39	270	9.3	252	0	910	36	.6
02...	878	12	--	140	31	220	8.9	229	0	760	31	.7
DEC.												
04...	10	6.3	--	110	69	370	10	153	0	910	260	1.2
30...	76	15	--	150	57	370	12	276	0	850	260	.9
CALENDAR YEAR												
MTD. AVG.	--	13	--	175	40	258	9.0	234	0	910	49	.7
TIME MTD.												
AVG.	245	15	--	196	45	281	9.2	232	0	966	78	.7
TONS												
PER DAY	--	8.9	--	116	26	171	5.9	155	0	602	32	.5
WATER YEAR												
MTD. AVG.	--	15	--	197	42	256	8.7	222	0	950	60	.8
TIME MTD.												
AVG.	128	15	--	212	44	270	9.1	230	0	984	72	.7
TONS												
PER DAY	--	5.2	--	68	15	89	5.3	77	0	329	21	.3

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (000000)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- AS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCU3) (MG/L) (00440)	CAR- BONATE (CU3) (MG/L) (00445)
AUG., 1971								
19...	1030	281	250	52	290	9.7	265	0

RIO GRANDE BASIN

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08353000 RIO PUERCO NEAR BERNARDO, N. MEX.--Continued

EXTREMES, 1970-71--Continued

Sediment concentrations: Maximum daily, 218,000 mg/l Aug. 21, 1971; minimum daily, no flow on many days.

Sediment discharge: Maximum daily, 1,320,000 tons Oct. 1, 1971; minimum daily, 0 tons on many days.

EXTREMES, 1947-71.--Specific conductance (1964-71): Maximum daily, 11,400 micromhos June 10, 1968; minimum daily, 238 micromhos July 30, 1969.

Water temperatures (1964-71): Maximum, 30.5°C on Aug. 3, 1970; minimum, freezing point 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 discharge: Maximum daily, 2,240,000 tons Aug. 7, 1957; minimum daily, 0 tons on many days of each year.

REMARKS.--Chemical analyses are run on composite samples collected during the day or period indicated. Additional chemical analysis on August 19, 1971, performed on native water used in sediment particle-size analysis. No flow Oct. 1-5, Oct. 9 to Dec. 31, 1970; Jan. 1-21, Jan. 26 to June 30, July 3-22, July 31 to Aug. 6, 1971. Averages are computed on flow periods analyzed.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (000631)	DIS- SOLVED NITRATE PHOS- PHORUS (P) (MG/L) (000671)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CATIONS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TUNTS PER AC=FT) (MG/L) (70302)	NON- CAR- BONATE NESS (CA,MG) (MG/L) (00900)	SODIUM AD- SORP- TION RATIO (MG/L) (00902)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS) (00095)	PH (UNITS) (00400)
UCT., 1970										
06...	--	--	--	--	2210	3.01	239	1030	832	7.4
07...	--	--	--	--	1550	2.11	54.4	820	864	7.5
08...	--	--	--	--	1510	2.05	20.4	830	884	7.6
JAN., 1971										
22...	.00	--	--	--	2200	2.99	29.7	760	565	7.7
JULY										
25...	.31	--	--	--	2200	2.99	719	870	670	7.9
26...	.20	--	430	--	3490	4.75	1250	1500	1200	7.8
27...	.50	--	--	--	2890	3.93	312	1200	1000	7.9
AUG.										
07-09	.84	--	390	--	1350	1.84	911	570	370	7.4
10-12	2.0	--	--	--	897	1.22	94.5	390	230	7.5
16...	1.0	--	--	--	2360	3.21	319	970	820	7.7
19-25	1.2	--	--	--	1560	2.12	1090	610	460	7.6
26-31	.04	--	--	--	1660	2.26	394	700	460	7.8
SEP.										
10...	.19	--	--	--	1750	2.38	378	620	320	7.4
20...	.07	--	--	--	2180	2.96	147	770	630	7.4
UCT.										
01...	.15	--	200	--	1560	2.12	11500	560	350	8.0
02...	.26	--	--	--	1320	1.80	816	480	290	8.2
DEC.										
09...	.04	--	--	--	1810	2.46	48.9	560	430	8.2
30...	.82	--	--	--	1850	2.52	50.0	610	380	7.6
CALENDAR YEAR										
WTD. AVG.	.53	--	--	--	1570	2.14	--	602	407	7.8
TIME WTD.										
AVG.	.69	--	--	--	1710	2.32	--	675	481	7.7
TUNTS										
PER DAY	.35	--	--	--	1040	--	--	--	--	--
WATER YEAR										
WTD. AVG.	.88	--	--	--	1640	2.23	--	666	482	7.6
TIME WTD.										
AVG.	.75	--	--	--	1720	2.34	--	714	523	7.6
TUNTS										
PER DAY	.33	--	--	--	569	--	--	--	--	--

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (000631)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (MG/L) (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
AUG., 1971							
19...	.04	840	620	4.4	2440	7.7	21.5

RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, N. MEX.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

[illegible]

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	---	---	---	---	---	---	---	---	---	---	19.5	15.5	---	---
2	---	---	---	---	---	---	---	---	---	---	---	22.5	13.0	---	---
3	---	---	---	---	---	---	---	---	---	---	---	26.0	14.0	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---	15.0	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---	16.0	---	---
6	14.5	---	---	---	---	---	---	---	---	---	---	---	14.5	---	---
7	13.0	---	---	---	---	---	---	---	---	---	17.5	---	14.0	---	---
8	8.0	---	---	---	---	---	---	---	---	---	20.5	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	12.5	---	---	---	4.0
10	---	---	---	---	---	---	---	---	---	---	24.5	20.0	---	---	5.0
11	---	---	---	---	---	---	---	---	---	---	22.5	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	24.0	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	23.0	27.0	---	---	---
14	---	---	---	---	---	---	---	---	---	---	29.0	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	24.0	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	29.0	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	22.0	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	22.0	12.0	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	13.0	---	---	---
22	---	---	---	8.0	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	21.0	11.5	---	---	---
24	---	---	---	---	---	---	---	---	---	---	21.5	14.0	---	---	---
25	---	---	---	5.0	---	---	---	---	---	25.0	22.0	---	---	---	---
26	---	---	---	---	---	---	---	---	---	22.5	24.0	---	---	---	---
27	---	---	---	---	---	---	---	---	---	22.0	21.0	16.0	7.0	---	---
28	---	---	---	---	---	---	---	---	---	25.0	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	27.5	---	---	9.0	---	---
30	---	---	---	---	---	---	---	---	---	---	26.0	---	---	9.0	0.0
31	---	---	---	---	---	---	---	---	---	---	23.0	---	---	---	---

08353000 RIO PUERCO NEAR BERNARDO, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0						
2	0	0	0						
3	0	0	0						
4	0	0	0						
5	0	0	0						
6	40	94200	10200						
7	13	62000	2180						
8	5.0	51000	688						
9	0	0	0						
10	0	0	0						
11	0	0	0						
12	0	0	0						
13	0	0	0						
14	0	0	0						
15	0	0	0						
16	0	0	0						
17	0	0	0						
18	0	0	0						
19	0	0	0						
20	0	0	0						
21	0	0	0						
22	0	0	0						
23	0	0	0						
24	0	0	0						
25	0	0	0						
26	0	0	0						
27	0	0	0						
28	0	0	0						
29	0	0	0						
30	0	0	0						
31	0	0	0						
TOTAL	58.0	--	13068	0	--	0	0	--	0

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0						
2	0	0	0						
3	0	0	0						
4	0	0	0						
5	0	0	0						
6	0	0	0						
7	0	0	0						
8	0	0	0						
9	0	0	0						
10	0	0	0						
11	0	0	0						
12	0	0	0						
13	0	0	0						
14	0	0	0						
15	0	0	0						
16	0	0	0						
17	0	0	0						
18	0	0	0						
19	0	0	0						
20	0	0	0						
21	0	0	0						
22	5.0	8000	108						
23	5.0	9700	131						
24	2.0	2800	15						
25	1.0	1070	2.9						
26	0	0	0						
27	0	0	0						
28	0	0	0						
29	0	0	0						
30	0	0	0						
31	0	0	0						
TOTAL	13.0	--	256.9	0	--	0	0	--	0

RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
TOTAL	0	--	0	0	--	0	0	--	0

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	17	8000	367	0	0	0	58	106000	16600
2	14	137000	5180	0	0	0	37	114000	11400
3	0	0	0	0	0	0	14	147000	5560
4	0	0	0	0	0	0	7.6	141000	2890
5	0	0	0	0	0	0	2.2	90000	535
6	0	0	0	0	0	0	1.1	46000	137
7	0	0	0	293	79800	71200	.70	25000	47
8	0	0	0	159	84200	35000	.34	20000	18
9	0	0	0	298	91000	73200	53	29300	24600
10	0	0	0	72	66000	12800	80	138000	29800
11	0	0	0	23	40500	2520	20	68000	3670
12	0	0	0	22	50200	4000	10	50200	1360
13	0	0	0	100	65000	17600	0	0	0
14	0	0	0	25	28000	1890	0	0	0
15	0	0	0	68	72000	13200	0	0	0
16	0	0	0	50	129000	17500	0	0	0
17	0	0	0	18	103000	7030	7.1	35500	1480
18	0	0	0	50	188000	25400	1.0	51000	138
19	0	0	0	277	142000	112000	0	0	0
20	0	0	0	28	140000	10600	25	94000	6340
21	0	0	0	386	218000	227000	7.2	55000	1070
22	0	0	0	153	159000	65700	16	23500	5890
23	42	37300	33500	234	158000	108000	22	55500	3300
24	169	167000	76200	496	156000	356000	26	70000	4910
25	121	141000	46100	239	150000	96800	20	62000	3350
26	133	209000	75100	225	144000	87500	13	55000	1930
27	40	174000	18800	148	159000	63500	10	72500	1960
28	10	160000	4320	80	155000	33500	7.6	61000	1250
29	3.0	146000	1180	20	197000	10600	7.2	47500	923
30	2.0	91000	491	10	195000	5260	14	46000	1740
31	0	0	0	47	200000	25400	--	--	--
TOTAL	551.0	--	261238	3521	--	1483200	460.04	--	130898

RIO GRANDE BASIN

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08353000 RIO PUERCO NEAR BERNARDO, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2720	168000	1320000	0	0	0	6.0	3000	49
2	878	159000	385000	0	0	0	7.0	3200	60
3	331	99000	90900	0	0	0	8.0	3400	73
4	128	79000	27300	0	0	0	9.0	3800	92
5	50	76000	10300	0	0	0	10	4000	108
6	23	76000	4720	0	0	0	10	4000	108
7	15	67000	2710	0	0	0	10	4200	113
8	5.0	60000	810	0	0	0	10	4200	113
9	1.0	56000	151	1.0	2000	5.4	10	4400	119
10	0	0	0	2.0	4000	22	10	5690	154
11	0	0	0	2.5	3500	24	9.0	4500	109
12	0	0	0	3.0	3200	26	8.0	3800	82
13	0	0	0	3.0	3000	24	7.0	3400	64
14	0	0	0	3.0	2800	23	6.0	3200	52
15	0	0	0	3.0	2600	21	5.0	3000	41
16	0	0	0	3.0	2500	20	4.0	2900	31
17	1.0	5000	54	3.0	2500	20	3.0	2800	23
18	0	0	0	3.0	2500	20	2.0	2700	15
19	0	0	0	3.0	2500	20	1.0	2600	7.0
20	0	0	0	3.0	2500	20	1.0	2500	6.8
21	0	0	0	3.0	2500	20	1.0	2500	6.8
22	0	0	0	3.0	2500	20	1.0	2500	6.8
23	0	0	0	3.0	2500	20	1.0	2500	6.8
24	0	0	0	3.0	2500	20	1.0	2500	6.8
25	0	0	0	3.0	2500	20	1.0	2500	6.8
26	0	0	0	3.0	2500	20	1.0	2500	6.8
27	170	168000	81300	3.5	3200	30	3.0	4000	32
28	128	148000	52900	3.5	3000	28	5.0	5000	68
29	40	83000	8960	4.0	3000	32	6.0	5000	81
30	5.0	56000	756	4.7	2840	36	76	38600	9640
31	1.0	10000	27				45	20000	2430
TOTAL	4496.0	--	1985888	66.2	--	491.4	277.0	--	13711.6

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

4603.04

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

1888660.9

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

9384.24

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

3875683.9

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PENDED SEDIMENT (MG/L)	SUS- PENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70326)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70327)
AUG., 1971									
19...	1030	21.5	281	130000	98600	54	2	64	3
27...	1000	21.0	158	159000	67800	47	--	58	--
SEP.									
02...	1215	22.5	55	100000	149000	63	--	82	--
24...	1130	14.0	39	50500	5320	67	--	79	--
OCT.									
01...	1740	16.0	3320	118000	1060000	47	--	55	--
03...	1500	14.0	236	93800	60000	56	--	63	--
29...	1100	9.0	30	81600	4180	62	--	77	--

RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70339)	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70328)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70329)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70341)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70330)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)
AUG., 1971									
19...	69	8	81	84	92	92	96	--	99
27...	--	--	80	--	--	--	94	--	99
SEP.									
02...	--	--	94	--	--	--	100	--	--
24...	--	--	92	--	--	--	98	--	100
OCT.									
01...	--	--	70	--	--	--	86	--	95
03...	--	--	83	--	--	--	93	--	100
29...	--	--	96	--	--	--	--	100	--

DATE	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM (70332)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM (70333)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70345)	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM (70334)	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM (70346)	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM (70335)	SUS. SED. SIEVE DIAM. % FINER THAN 2.00 MM (70336)
AUG., 1971								
19...	--	100	--	--	--	--	--	--
27...	--	100	--	--	--	--	--	--
SEP.								
02...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
OCT.								
01...	--	99	--	100	--	--	--	--
03...	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--

08354000 RIO SALADO NEAR SAN ACACIA, N. MEX.

LOCATION.--Lat 34°17'50", long 106°53'59", in NW¼ sec.24, T.1 N., R.1 W., Socorro County, at gaging station at former bridge site, 0.3 mile upstream from bridge on Interstate Highway 25, 3.1 miles upstream from mouth, 2.9 miles north of San Acacia, and 15 miles north of Socorro.

DRAINAGE AREA.--1,380 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: July to September 1956, June 1966 to December 1971.
Sediment records: July 1948 to December 1971.

REMARKS.--Samples are collected when flow is observed on this ephemeral stream.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00950)	DIS- SOLVED POT- ASSIUM (K) (MG/L) (00935)	DIS- SOLVED BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED CAL- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
JULY, 1971											
09...	1030	10	--	320	190	66	320	11	500	0	430
22...	1000	73	45	--	110	27	190	7.0	522	0	120
22...	1500	94	25	10	370	88	480	9.8	423	0	1500
22...	2100	73	24	--	200	42	250	6.8	462	0	640
23...	1200	7.3	22	--	150	33	220	6.6	326	0	420
28...	0800	46	20	--	150	31	160	5.9	286	0	490
AUG,											
13...	0930	386	22	--	230	37	460	12	223	0	620
25...	1500	318	17	10	96	19	120	6.2	181	0	370

DATE	TIME	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)	DIS- SOLVED FLUOR- IDE (F) (MG/L) (00950)	DIS- SOLVED NITRIT- E (NO2) (MG/L) (00631)	DIS- SOLVED NITRIT- E (NO2) (MG/L) (00631)	DIS- SOLVED NITRIT- E (NO2) (MG/L) (00631)	DIS- SOLVED NITRIT- E (NO2) (MG/L) (00631)	DIS- SOLVED NITRIT- E (NO2) (MG/L) (00631)	DIS- SOLVED NITRIT- E (NO2) (MG/L) (00631)	DIS- SOLVED NITRIT- E (NO2) (MG/L) (00631)	DIS- SOLVED NITRIT- E (NO2) (MG/L) (00631)
JULY, 1971											
09...	--	0.8	--	--	750	340	5.1	2370	7.6	22.0	--
22...	190	0.8	0.64	949	390	0	4.2	1530	7.6	26.0	--
22...	320	0.8	0.32	3000	1300	940	5.8	3910	7.5	28.5	420
22...	80	0.8	0.39	1470	670	290	4.2	2150	7.5	21.0	--
23...	200	0.7	0.02	1210	510	240	4.2	1840	7.6	31.0	--
28...	77	0.7	0.47	1080	500	270	3.1	1530	7.6	15.0	--
AUG,											
13...	620	0.7	0.46	2110	730	540	7.4	3350	7.8	20.5	--
25...	50	0.9	0.89	772	320	170	2.9	1160	7.5	28.0	200

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDIM- ENT (MG/L) (80154)	SUS- PENDED SEDIM- ENT (MG/L) (80155)	SUS- SED. FALL DIAM. (0002 MM) (70337)	SUS- SED. FALL DIAM. (0004 MM) (70338)	SUS- SED. FALL DIAM. (0006 MM) (70340)	SUS- SED. FALL DIAM. (0008 MM) (70342)	SUS- SED. FALL DIAM. (0012 MM) (70343)	SUS- SED. FALL DIAM. (0025 MM) (70344)	SUS- SED. FALL DIAM. (0050 MM) (70345)
JULY, 1971												
09...	1030	22.0	10	149000	40200	--	--	--	--	--	--	--
22...	1000	26.0	73	96100	18900	--	--	--	--	--	--	--
22...	1500	28.5	94	184000	46700	--	--	--	--	--	--	--
22...	2100	21.0	73	141000	27800	--	--	--	--	--	--	--
23...	1200	31.0	7.3	71400	1410	--	--	--	--	--	--	--
28...	0800	15.0	48	63500	8230	51	66	89	94	97	100	--
AUG,												
05...	1700	23.5	120	120000	38900	--	--	--	--	--	--	--
07...	0915	16.0	76	144000	29500	60	69	89	95	97	100	--
11...	1500	22.0	10	59400	1600	--	--	--	--	--	--	--
13...	0930	20.5	386	44500	43400	--	--	--	--	--	--	--
14...	1500	29.0	200	83000	44800	--	--	--	--	--	--	--
25...	1500	28.0	318	134000	115000	--	--	--	--	--	--	--
30...	1400	30.0	36	69700	6770	--	--	--	--	--	--	--
31...	1315	30.0	113	56700	17300	--	--	--	--	--	--	--
SEP,												
02...	1430	24.5	99	117000	31300	--	--	--	--	--	--	--
09...	0830	18.0	359	242000	235000	31	37	48	71	86	97	100
18...	1230	11.0	624	127000	214000	--	--	--	--	--	--	--
23...	1100	11.0	1090	74500	219000	--	--	--	--	--	--	--
30...	1130	17.0	431	92200	107000	--	--	--	--	--	--	--

RIO GRANDE BASIN

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, N. MEX.

LOCATION (revised).--Lat 34°14'54", long 106°54'04", in SW¼ sec.1, T.1 S., R.1 W., Socorro County, about 100 ft downstream from gaging station, at downstream side of railway crossing, 0.5 mile south of San Acacia, and 1.2 miles downstream from San Acacia diversion dam.

PERIOD OF RECORD.--Specific conductance: October 1964 to December 1971.

Water temperatures: May 1959 to December 1971

Sediment records: January 1959 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum daily, 2,870 micromhos Aug. 7, 1971; minimum daily, 374 micromhos April 3, 1971.

Water temperatures: Maximum, 35°C July 13, 1971; minimum, freezing point Jan. 4-8, 1971.

Sediment concentrations: Maximum daily, 110,000 mg/l Oct. 2, 1971; minimum daily, no flow on many days during July and

September, 1971.

Sediment discharge: Maximum daily, 451,000 tons Oct. 2, 1971; minimum daily, 0 tons on many days during July and September 1971.

EXTREMES, 1959-71.--Specific conductance (1964-71): Maximum daily, 3,840 micromhos Oct. 8, 1964; minimum daily, 136 micromhos June 19, 1967.

Water temperatures: Maximum, 36°C July 13, 1970; minimum, freezing point on several days during 1967, 1968, 1969, and 1971.

Sediment concentrations: Maximum daily, 141,000 mg/l Aug. 10, 1959; minimum daily, no flow on many days during most years.

Sediment discharge: Maximum daily, 503,000 tons Aug. 10, 1967; minimum daily, 0 tons on many days during most years.

REMARKS.--No flow July 4-18, Sept. 5-8, 13-17, 1971.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C). OCTOBER 1970 TO DECEMBER 1971

CONDUCTIVITY (MICROMHOS AT 25 DEG. C) , RANDOM (INSTANTANEOUS)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	635	---	483	608	585	565	422	---	919	---	---	1630	1800	673	---
2	650	587	482	---	575	562	377	---	946	---	---	1350	1300	628	589
3	---	654	515	---	568	591	374	660	982	---	958	1420	865	---	602
4	---	569	534	623	567	578	383	696	943	---	964	---	757	643	---
5	1830	570	---	590	483	603	459	801	---	---	1210	---	830	671	---
6	720	580	---	760	---	---	429	806	---	945	1190	---	792	612	---
7	720	---	562	1070	---	---	455	770	996	1370	2870	1260	737	587	628
8	720	---	565	984	563	593	482	---	1010	1430	1330	---	---	545	656
9	706	516	---	---	---	561	435	---	1050	1380	1250	2670	---	538	---
10	---	502	---	---	562	577	568	675	1050	---	1560	1980	---	---	626
11	---	498	---	755	572	577	---	713	1140	---	867	---	---	525	---
12	696	472	---	683	604	590	544	758	---	1480	902	---	659	518	---
13	694	487	---	524	---	---	602	700	---	1470	769	---	677	---	542
14	704	---	---	604	---	---	660	692	1130	1460	827	---	---	---	614
15	729	---	---	581	---	570	737	---	1370	1470	---	---	840	518	622
16	650	486	---	---	565	545	780	---	1410	1510	977	---	---	---	---
17	---	496	593	---	563	561	---	703	1380	---	875	---	---	509	---
18	---	496	612	602	547	579	---	725	1410	---	1010	1110	755	515	618
19	633	485	---	594	548	---	682	720	---	1550	2760	---	655	516	---
20	630	489	---	572	---	---	675	784	---	1480	1700	1390	642	---	620
21	640	---	620	610	---	---	631	777	1430	1480	---	---	658	---	629
22	653	---	609	603	507	596	625	---	1400	1410	---	930	685	577	617
23	645	476	611	---	510	557	610	---	---	1780	1610	918	---	578	618
24	---	477	603	---	531	562	---	712	1360	---	1840	1000	---	602	---
25	---	477	---	568	568	616	---	770	1320	1840	1400	---	---	---	---
26	625	479	---	562	594	632	630	853	---	2310	1120	---	673	603	---
27	633	477	---	561	---	---	614	---	---	1470	1400	872	776	---	596
28	633	---	612	553	---	---	652	829	1380	916	---	867	---	---	601
29	606	---	628	561	---	562	664	---	1450	718	---	854	868	---	592
30	612	474	627	---	---	491	721	---	1330	945	956	1220	---	615	591
31	---	---	---	---	---	654	---	---	---	---	1080	---	---	---	---
MONTH	---	---	---	---	---	---	568	---	---	---	---	---	---	---	---

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	19.0	---	8.5	0.5	7.0	3.0	10.0	---	22.0	---	---	25.0	18.0	7.0	---
2	18.0	8.0	4.0	---	5.5	2.0	14.5	---	23.0	---	---	24.5	16.0	4.0	5.0
3	---	6.5	7.0	---	5.5	5.5	14.5	18.0	23.0	---	30.0	29.0	15.5	---	6.0
4	---	10.0	4.0	0.0	2.0	10.5	12.0	16.0	11.0	---	23.0	---	17.5	10.0	---
5	12.0	8.0	---	0.0	7.5	5.5	10.0	14.0	---	---	25.0	---	14.5	7.0	---
6	14.5	7.0	---	0.0	---	---	10.0	15.5	---	27.0	22.0	---	13.5	10.0	---
7	15.5	---	5.0	0.0	---	---	14.0	13.5	13.0	26.0	19.5	17.5	12.0	10.0	5.0
8	11.0	---	5.0	0.0	2.0	12.0	14.0	---	14.5	24.0	---	---	---	8.0	2.0
9	9.0	7.5	---	---	---	8.5	14.0	---	27.0	26.0	18.5	19.0	---	10.0	---
10	---	10.0	---	---	3.5	8.0	16.0	13.0	28.0	---	20.0	20.0	---	---	5.0
11	---	8.0	---	1.5	6.5	11.0	---	16.0	19.5	---	20.0	---	---	13.0	---
12	18.0	9.5	1.0	4.0	16.0	13.5	18.5	---	33.5	19.0	---	---	14.0	10.0	---
13	16.0	8.0	---	1.5	---	---	18.0	15.5	---	35.0	20.5	---	18.5	---	4.5
14	13.0	---	---	1.0	---	---	14.5	21.5	28.0	20.0	25.0	---	---	4.0	---
15	10.0	---	---	4.0	---	14.0	15.0	---	31.0	21.0	---	---	15.0	12.0	7.0
16	8.0	8.0	---	---	14.5	7.0	12.0	---	25.0	23.5	23.0	---	---	---	2.5
17	---	8.0	3.0	---	12.0	9.5	---	---	17.5	---	31.0	---	---	8.0	---
18	---	8.0	7.0	8.5	8.0	11.5	---	16.5	22.5	---	26.0	10.5	8.5	7.0	---
19	10.5	7.0	---	9.5	4.5	---	10.0	14.5	---	29.5	24.0	---	11.5	5.0	---
20	15.5	6.0	---	5.0	---	---	11.5	17.5	---	33.0	25.0	8.0	8.0	---	1.0
21	13.0	---	4.0	5.0	---	---	11.5	15.0	32.5	25.0	---	---	9.0	---	1.5
22	11.5	---	3.5	7.5	3.0	12.0	14.0	---	30.0	35.0	---	10.5	11.0	5.0	2.0
23	11.5	6.0	4.5	---	7.0	17.0	10.5	---	---	33.0	20.5	11.0	---	10.0	2.5
24	---	4.5	3.0	---	5.5	13.5	---	21.0	22.0	---	23.0	11.0	---	7.0	---
25	---	5.0	---	7.0	10.0	14.5	---	16.0	24.0	30.0	29.0	---	---	---	---
26	14.0	7.0	---	3.0	3.0	14.5	11.5	21.5	---	21.5	26.5	---	15.0	8.0	---
27	9.0	8.0	---	5.0	---	---	11.0	18.0	---	20.5	23.0	17.5	7.0	---	5.0
28	6.0	---	6.5	8.5	---	---	18.5	17.0	33.5	20.0	---	18.0	---	---	8.0
29	6.0	---	3.5	6.0	---	---	13.5	18.0	---	30.0	25.5	---	16.5	11.0	6.0
30	11.0	7.5	1.0	---	---	14.5	11.5	---	24.0	20.5	18.0	17.5	---	7.0	4.5
31	---	---	---	---	---	13.5	---	---	---	---	22.0	---	---	---	---
MONTH	---	---	---	---	---	---	13.0	---	---	---	---	---	---	---	---

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	299	2370	1910	860	6600	15300	1750	4800	22700
2	280	1700	1290	979	7400	19600	1660	5280	23700
3	288	4200	3270	1020	7100	19600	1250	4150	14000
4	324	4700	4110	1130	5830	17800	1140	3700	11400
5	366	35300	40600	1110	5570	16700	1100	3800	11300
6	357	12200	11800	1080	6490	18900	991	3250	8700
7	319	6600	5680	1270	7800	26700	923	3150	7850
8	261	2800	1970	1410	7990	30400	927	3950	9890
9	212	2770	1590	1420	7050	27000	933	4150	10500
10	180	2720	1320	1450	6100	23900	958	4200	10900
11	161	3320	1440	1510	7250	29600	927	4650	11600
12	175	3250	1540	1780	7350	35300	984	4880	13000
13	188	1500	761	1730	6400	29900	1020	5000	13800
14	141	2250	857	1720	6300	29300	1060	5050	14500
15	166	2700	1210	1720	6000	27900	1030	4700	13100
16	421	9180	12100	1590	4500	19300	929	4100	10300
17	555	10300	15400	1510	6550	26700	865	3700	8640
18	477	8200	10600	1480	5850	23400	789	2400	5110
19	455	6800	8350	1610	5550	24100	791	2800	5980
20	408	3480	3830	1610	6000	26100	794	3450	7400
21	373	3450	3470	1600	5950	25700	807	2300	5010
22	353	2800	2670	1630	6180	27200	856	2450	5660
23	350	3220	3040	1680	6600	29900	839	2050	4640
24	397	3450	3700	1690	6830	31200	874	3250	7670
25	414	3850	4300	1650	5150	22900	940	3400	8630
26	408	3300	3640	1590	3600	15500	869	4000	9390
27	414	7020	7850	1690	5100	23300	818	4500	9940
28	423	7700	8790	1730	5200	24300	777	5700	12000
29	455	3950	4850	1750	5500	26000	772	5050	10500
30	519	3800	5320	1740	5300	24900	846	4000	9140
31	692	6850	12800	--	--	--	839	5100	11600
TOTAL	10831	--	190058	44739	--	738400	30058	--	328550

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	870	4850	11400	882	2500	5950	876	2550	6030
2	926	5000	12500	926	2800	7000	740	2950	5890
3	916	4000	9890	1010	3500	9540	608	2250	3690
4	600	2850	4620	1010	5000	13600	610	1750	2880
5	411	5200	5770	1030	4050	11300	474	1190	1520
6	340	6470	5940	1050	2950	8360	514	848	1150
7	290	1300	1020	1020	2570	7080	445	614	764
8	219	2050	1210	939	2650	6720	556	700	1050
9	218	2550	1500	884	2550	6090	544	827	1210
10	295	4950	3940	931	2650	6660	522	700	987
11	475	4700	6030	875	2700	6380	514	665	923
12	579	3650	5710	830	3600	8070	532	600	862
13	674	3450	6280	871	3700	8700	509	555	763
14	878	5150	12200	895	3800	9180	525	575	815
15	962	5300	13800	884	3000	7160	615	690	1150
16	901	5100	12400	880	2050	4870	674	972	1770
17	894	4700	11300	891	2500	6010	576	1110	1730
18	908	4300	10500	907	1990	4870	521	1010	1420
19	955	3600	9280	973	1200	3150	455	880	1080
20	1080	3120	9100	980	1700	4500	489	637	841
21	1170	3990	12600	1100	2400	7130	360	555	539
22	1170	3300	10400	1150	2900	9000	348	515	484
23	1210	3200	10500	1170	3250	10300	537	612	870
24	1240	3180	10600	1010	3100	8450	472	1320	1680
25	1030	4520	12600	772	2450	5110	323	640	558
26	974	3450	9070	865	3750	8760	262	433	306
27	943	3300	8400	978	3700	9770	402	1020	1340
28	949	2700	6920	1010	3100	8450	610	1600	2640
29	998	2370	6390	--	--	--	801	1800	3940
30	956	3800	9810	--	--	--	1180	4500	14900
31	937	2900	7340	--	--	--	1550	5590	23400
TOTAL	24968	--	259020	26723	--	212160	18144	--	87182

RIO GRANDE BASIN

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1700	4870	22400	474	1620	2070	2.6	14	.10
2	1720	4200	19500	303	970	794	2.1	7	.04
3	1600	4800	20700	286	420	324	1.9	20	.10
4	1470	4650	18500	138	350	130	1.8	6	.03
5	1270	3850	13200	67	220	40	1.7	9	.04
6	1020	2800	7710	44	251	30	1.6	13	.06
7	883	2140	5100	156	438	184	1.6	16	.07
8	802	2050	4440	180	500	243	1.6	6	.03
9	887	3000	7180	226	600	366	1.5	40	.16
10	522	1500	2110	244	752	495	1.4	10	.04
11	362	849	873	139	428	161	1.1	9	.03
12	514	2040	2910	98	273	72	1.1	10	.03
13	284	1990	1530	239	914	590	1.0	10	.03
14	160	1040	449	160	475	205	1.0	9	.02
15	98	560	148	86	475	110	.88	245	.58
16	62	225	38	60	1170	190	1.0	477	1.3
17	132	860	307	140	850	321	1.0	18	.05
18	174	700	329	136	520	191	.97	9	.02
19	276	1300	969	127	730	250	.84	7	.02
20	345	1480	1380	64	170	29	.84	8	.02
21	399	925	997	64	180	31	.89	11	.03
22	406	1020	1120	73	170	34	.70	13	.02
23	678	2080	3810	74	195	39	1.0	17	.05
24	744	3030	6090	113	335	102	1.5	24	.10
25	433	1860	2170	43	183	21	1.6	56	.24
26	467	1760	2220	32	120	10	1.5	30	.12
27	480	1540	2000	47	165	21	1.5	21	.09
28	280	780	590	15	47	1.9	1.6	8	.03
29	218	690	406	4.0	25	.27	1.5	10	.04
30	292	900	710	3.1	20	.17	1.1	16	.05
31	--	--	--	2.9	15	.12	--	--	--
TOTAL	18678	--	149886	3838.0	--	7055.46	40.42	--	3.54
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.70	12	.02	109	28100	10400	15	36000	1460
2	.42	8	.01	12	5000	162	212	60100	56900
3	.10	5	0	2.5	1100	7.4	1.6	1600	6.9
4	0	0	0	8.6	9290	785	2.4	270	1.7
5	0	0	0	8.0	20900	546	0	0	0
6	0	0	0	3.3	5200	46	0	0	0
7	0	0	0	141	44200	29000	0	0	0
8	0	0	0	210	55900	38400	0	0	0
9	0	0	0	618	53100	97200	79	70400	28700
10	0	0	0	116	25500	7990	83	73300	23700
11	0	0	0	106	21600	7510	2.4	1000	6.5
12	0	0	0	54	6150	897	1.9	750	3.8
13	0	0	0	303	20700	16900	0	0	0
14	0	0	0	334	24400	26200	0	0	0
15	0	0	0	132	15500	5520	0	0	0
16	0	0	0	188	26500	13500	0	0	0
17	0	0	0	92	17000	4220	0	0	0
18	0	0	0	34	15500	1420	62	41200	11900
19	.45	28	.03	228	76700	67900	8.7	820	19
20	.50	49	.07	32	70000	6050	2.4	20300	132
21	.50	12	.02	294	77100	82000	1.1	25000	74
22	.80	1670	3.6	397	64000	68600	17	51600	5910
23	.60	4350	7.0	474	81000	113000	259	86000	60100
24	2.0	7500	41	522	67900	123000	115	32000	9940
25	37	36000	5380	733	78900	161000	123	30000	9960
26	73	36300	8970	559	62200	93900	108	45000	13100
27	220	44800	52900	283	78000	59600	113	7700	2350
28	846	38700	114000	50	32000	4320	77	5600	1160
29	144	21500	8360	100	33200	16400	55	7700	1140
30	9.0	10200	248	192	34000	31200	290	42800	51600
31	130	33900	23700	22	16300	968	--	--	--
TOTAL	1465.07	--	213609.75	6357.4	--	1088641.4	1628.5	--	278163.9

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	990	86600	348000	867	8400	19700	1070	2950	8520
2	1690	110000	451000	934	8000	20200	1080	3070	8950
3	1690	71500	326000	765	4500	9290	1070	5080	14700
4	1170	30000	94800	762	6800	14000	1060	4520	12900
5	321	27000	23400	732	6100	12100	1040	4100	11500
6	176	14700	6990	1130	9310	29500	960	3520	9120
7	298	14500	11700	1220	8400	27700	898	3350	8120
8	278	21000	15800	1660	13200	59200	814	2750	6040
9	280	22500	17000	1630	10200	44900	814	2850	6260
10	195	15000	7900	1670	11300	51000	796	3550	7630
11	204	7500	4130	1580	8700	37100	867	4000	9360
12	205	3870	2140	1540	6700	27900	745	3000	6630
13	152	2100	862	1520	6300	25900	684	2000	3690
14	123	2500	830	1530	6700	27700	827	3320	7410
15	110	1200	356	1600	7500	32400	821	4200	9310
16	111	1000	300	1660	7200	32300	815	4190	9220
17	85	1100	252	1720	7400	34400	798	4300	9260
18	123	1790	594	1680	6200	28100	784	4050	8570
19	232	3400	2130	1380	5600	20900	805	3850	8370
20	272	2700	1980	1180	5200	16600	802	3600	7800
21	272	2850	2090	1100	4300	12800	775	4450	9310
22	235	2700	1710	978	3750	9900	821	3000	6650
23	198	2700	1440	1010	4500	12300	770	4500	9360
24	156	2300	969	957	3900	10100	770	4280	8900
25	495	14200	27100	960	3900	10100	870	4850	11400
26	765	13000	26500	952	4300	11100	890	4400	10600
27	1040	26000	80500	993	4800	12900	991	4400	11800
28	912	25300	62300	975	4950	13000	1130	4700	14300
29	588	17500	27800	990	4800	12800	1200	4950	16000
30	678	19000	34800	999	3470	9360	1300	4800	16800
31	690	14900	27800	--	--	--	1220	4600	15200
TOTAL	14734	--	1609173	36674	--	685250	28287	--	303080

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

187470.39

3552730.05

181537.39

4893225.05

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	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 .002 MM (70326)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70327)
NOV., 1970									
13...	1330	8.0	1700	6300	28900	15	--	18	--
30...	1030	8.0	1760	5410	25700	13	--	15	--
DEC.									
18...	1345	7.0	753	1980	4030	11	--	13	--
JAN., 1971									
06...	1430	.0	351	6520	6180	3	--	4	--
25...	1445	7.0	1040	5810	16300	9	--	10	--
FEB.									
22...	1315	6.0	1250	3010	10200	12	--	15	--
MAR.									
31...	1215	14.0	1450	3790	14800	23	--	28	--
APR.									
06...	1400	14.0	1070	2430	7020	21	--	25	--
MAY									
03...	1515	22.5	312	495	416	43	--	49	--
JULY									
26...	0900	21.5	163	80700	35500	71	--	86	--
AUG.									
09...	1330	24.0	582	39600	62200	57	--	69	--
23...	1330	25.0	630	116000	197000	54	--	61	--
SEP.									
18...	1145	10.5	195	93400	49200	51	--	61	--
28...	1215	18.0	96	5120	1330	62	--	74	--
OCT.									
02...	0745	13.5	1510	94000	383000	49	--	57	--
07...	0845	12.0	366	14400	14200	55	--	68	--
21...	0900	9.0	225	2980	1810	43	--	41	--
NOV.									
12...	1230	10.0	1560	7160	30200	26	--	37	--
DEC.									
02...	1415	5.0	1270	3240	11100	23	--	27	--
29...	1100	6.0	1320	5480	19500	15	--	16	--

RIO GRANDE BASIN

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	SUS. SED. FALL DIAM. % FINER THAN (70339)	SUS. SED. FALL DIAM. % FINER THAN (70328)	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. FALL DIAM. % FINER THAN (70329)	SUS. SED. FALL DIAM. % FINER THAN (70341)	SUS. SED. FALL DIAM. % FINER THAN (70330)	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. FALL DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70343)
NOV., 1970									
13...	--	--	28	--	--	--	50	--	72
30...	--	--	21	--	--	--	42	--	68
DEC.									
18...	--	--	17	--	--	--	35	--	58
JAN., 1971									
06...	--	--	4	--	--	--	8	--	34
25...	--	--	13	--	--	--	26	--	58
FEB.									
22...	--	--	21	--	--	--	43	--	69
MAR.									
31...	--	--	42	--	--	--	68	--	87
APR.									
06...	--	--	32	--	--	--	51	--	76
MAY									
03...	--	--	59	--	--	--	--	80	--
JULY									
26...	--	--	97	--	--	--	98	--	99
AUG.									
09...	--	--	87	--	--	--	94	--	97
23...	--	--	76	--	--	--	93	--	97
SEP.									
18...	--	--	79	--	--	--	94	--	97
28...	--	--	86	--	--	--	--	99	--
OCT.									
02...	--	--	72	--	--	--	91	--	96
07...	--	--	82	--	--	--	90	--	93
21...	--	--	67	--	--	--	84	--	95
NOV.									
12...	--	--	52	--	--	--	85	--	97
DEC.									
02...	--	--	47	--	--	--	76	--	90
29...	--	--	33	--	--	--	56	--	74

DATE	SUS. SED. FALL DIAM. % FINER THAN (70332)	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. FALL DIAM. % FINER THAN (70333)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. FALL DIAM. % FINER THAN (70334)	SUS. SED. FALL DIAM. % FINER THAN (70346)	SUS. SED. FALL DIAM. % FINER THAN (70335)	SUS. SED. FALL DIAM. % FINER THAN (70336)
NOV., 1970								
13...	--	94	--	100	--	--	--	--
30...	--	91	--	100	--	--	--	--
DEC.								
18...	--	92	--	99	--	100	--	--
JAN., 1971								
06...	--	94	--	100	--	--	--	--
25...	--	93	--	100	--	--	--	--
FEB.								
22...	--	94	--	100	--	--	--	--
MAR.								
31...	--	99	--	100	--	--	--	--
APR.								
06...	--	96	--	100	--	--	--	--
MAY								
03...	95	--	99	--	100	--	--	--
JULY								
26...	--	100	--	--	--	--	--	--
AUG.								
09...	--	99	--	100	--	--	--	--
23...	--	100	--	--	--	--	--	--
SEP.								
18...	--	100	--	--	--	--	--	--
28...	100	--	--	--	--	--	--	--
OCT.								
02...	--	100	--	--	--	--	--	--
07...	--	99	--	100	--	--	--	--
21...	--	100	--	--	--	--	--	--
NOV.								
12...	--	100	--	--	--	--	--	--
DEC.								
02...	--	100	--	--	--	--	--	--
29...	--	95	--	100	--	--	--	--

LOCATION.--Lat 34°15'23", long 106°53'18", Socorro County, in Sevilleta Grant, at gaging station, 0.2 mile below San Acacia diversion dam, 0.3 mile east of San Acacia, and 2 miles downstream from Rio Salado.

PERIOD OF RECORD.--Chemical analyses: July to December 1937, March 1939 to September 1956.

Specific conductance: July to December 1937, March 1939 to September 1956, October 1964 to December 1971.

Water temperatures: October 1947 to August 1956, January 1959 to December 1971.

Sediment records: July 1946 to June 1956, January 1959 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum daily, 2,050 micromhos Aug. 7, 1971; minimum daily, 373 micromhos Apr. 2, 1971.

Water temperatures: Maximum, 34.5°C July 13, 1971; minimum, 1°C Oct. 27, 1971.

Sediment concentrations: Maximum daily, 78,700 mg/l Oct. 1, 1971; minimum daily, no flow July 29-31, 1971.

Sediment discharge: Maximum daily, 443,000 tons Oct. 1, 1971; minimum daily, 0 tons July 29-31, 1971.

EXTREMES, 1937, 1939-56, 1959-71.--Specific conductance (1937, 1939-56, 1964-71): Maximum daily, 3,700 micromhos July 14, 1940; minimum daily, 236 micromhos May 17, 1942.

Water temperatures (1947-56, 1959-71): Maximum, 34.5°C July 13, 1971; minimum (1947-56, 1959-62, 1964-71), freezing point on many days during winter months.

Sediment concentrations (1946-56, 1959-71): Maximum daily, 223, 000 mg/l Aug. 11 1946; minimum daily, no flow on many days of most years.

Sediment discharge (1946-56, 1959-71): Maximum daily, 1,760,000 tons Aug. 12, 1955, minimum daily, 0 tons on many days of most years.

REMARKS.--Additional sediment total discharge determinations were made bi-weekly when needed. No flow July 29-31, 1971.
Chemical analysis performed on native water used in sediment particle-size analysis.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SIU2) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PUM- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAN- BONATE (CUS) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)
JULY, 1971 28...	0845	907	31	120	20	75	5.9	315	0	260	20

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HAND- NESS (CA, MG) (MG/L) (00900)	NUN- CAN- BUNATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CUN- DUCTI- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
JULY, 1971										
28...	.5	.79	728	699	380	120	1.7	1030	7.4	19.0

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	740	---	860	859	858	617	440	---	803	---	---	986	1960	892	---
2	697	620	820	---	848	642	373	---	790	---	---	1050	1470	879	840
3	---	635	856	---	848	632	337	764	780	---	840	1110	---	---	---
4	---	664	657	---	928	627	546	797	810	---	835	---	882	760	---
5	815	682	---	752	890	690	520	791	---	---	865	---	903	---	---
6	981	729	---	788	---	---	563	771	---	---	880	---	830	670	---
7	---	---	771	796	---	---	665	770	902	903	2050	1040	762	---	846
8	754	---	774	788	864	687	660	---	994	838	---	---	---	860	920
9	724	812	596	---	---	655	644	---	1030	899	1090	1410	---	---	---
10	---	869	793	---	877	624	794	698	989	---	---	1880	---	---	894
11	---	696	800	782	897	638	---	751	996	---	915	---	---	---	---
12	729	509	---	745	800	649	678	781	---	950	865	---	808	889	---
13	711	829	---	725	---	---	744	716	---	1020	837	1140	852	---	---
14	728	---	820	757	---	---	737	730	980	915	1420	1160	---	---	894
15	750	---	849	796	---	---	787	---	1060	945	---	1090	---	596	829
16	714	840	742	---	837	656	801	---	1010	933	955	1110	---	---	823
17	---	803	---	---	846	625	---	736	973	---	920	1120	---	---	---
18	---	790	863	825	854	543	---	751	942	---	---	---	807	---	---
19	698	797	---	836	843	648	711	758	---	1010	2010	---	---	860	---
20	719	811	---	804	---	---	711	775	---	1030	1550	850	813	---	839
21	739	---	776	820	---	---	530	776	960	1030	---	880	830	---	897
22	678	---	642	821	593	675	569	---	968	1010	---	980	---	---	894
23	686	788	683	---	627	664	722	---	---	976	1600	---	---	930	864
24	---	803	692	---	653	634	---	758	973	---	1030	865	---	927	---
25	---	782	---	832	614	684	---	774	933	1540	1420	---	---	---	---
26	674	803	---	830	662	677	676	757	---	1470	1050	---	750	930	---
27	690	797	---	835	---	---	675	788	---	1700	1060	945	821	---	986
28	690	---	780	849	---	---	731	778	938	1050	---	822	---	---	922
29	682	---	804	853	---	---	612	755	962	773	---	885	---	---	872
30	692	820	805	---	---	---	524	721	---	894	882	900	1270	869	889
31	---	---	837	---	---	554	---	---	---	---	955	---	---	---	---
MONTH	---	---	---	---	---	---	652	---	---	---	---	---	---	---	---

RIO GRANDE BASIN

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, N. MEX.--Continued

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	24.0	---	17.0	6.0	11.0	9.5	11.5	---	25.5	---	---	26.0	18.0	8.0	---
2	18.5	10.0	11.0	---	11.0	4.5	14.0	---	23.5	---	---	24.0	13.0	5.0	6.0
3	---	7.0	16.5	---	12.0	9.0	19.0	23.0	24.0	---	29.0	28.0	---	---	---
4	---	14.0	7.5	---	4.0	12.5	15.5	22.0	18.0	---	23.0	---	18.5	10.0	---
5	13.0	9.5	---	---	12.0	10.0	14.0	19.0	---	---	26.5	---	21.0	---	---
6	21.5	8.0	---	5.5	---	---	14.0	24.0	---	---	21.0	---	16.0	10.0	---
7	19.5	---	11.0	7.0	---	---	16.0	14.5	16.0	26.0	20.0	19.0	13.0	---	7.0
8	12.0	---	10.0	3.0	11.0	14.0	17.0	---	20.5	24.0	---	---	---	10.0	5.0
9	8.5	14.0	14.0	---	---	---	18.5	---	22.0	26.0	20.0	19.0	---	---	---
10	---	18.0	7.0	---	7.5	12.0	18.0	15.0	29.5	---	24.5	---	---	---	13.0
11	---	13.0	10.0	10.0	11.0	15.0	---	22.0	24.0	---	23.5	---	---	---	---
12	20.0	7.0	---	6.5	7.0	16.0	14.0	16.5	---	33.0	19.0	---	23.0	12.0	---
13	18.0	12.0	---	7.0	---	---	19.0	17.0	---	34.5	23.0	18.5	19.0	---	---
14	14.0	---	13.0	4.0	---	---	19.5	22.5	30.0	23.0	30.0	30.0	---	---	4.0
15	10.0	---	9.0	12.0	---	---	18.0	---	31.5	22.0	---	27.0	---	10.0	---
16	9.0	14.0	9.0	---	18.5	16.5	17.5	---	25.5	25.0	24.0	28.5	---	---	6.0
17	---	18.0	---	---	16.5	13.0	---	20.5	18.0	---	32.0	14.0	---	---	---
18	---	15.5	13.0	14.5	9.0	12.5	---	15.5	25.0	---	---	---	8.5	---	---
19	11.0	13.0	---	14.0	7.0	---	12.0	18.5	---	29.5	28.5	---	---	6.0	---
20	18.0	13.5	---	9.0	---	---	12.5	20.0	---	24.0	26.0	11.0	14.5	---	4.0
21	17.0	---	12.5	9.0	---	---	12.5	19.0	34.0	27.0	---	23.0	9.5	---	8.0
22	12.0	---	11.0	12.5	5.0	16.0	17.0	---	31.5	30.5	---	11.0	---	---	6.5
23	17.0	11.5	8.0	---	11.0	21.0	14.0	---	---	29.0	21.0	---	---	15.0	7.0
24	---	10.5	7.5	---	9.5	16.0	---	26.5	22.5	---	20.0	14.0	---	14.0	---
25	---	12.0	---	14.5	12.5	18.0	---	20.0	25.0	32.0	30.0	---	---	---	---
26	15.5	12.5	---	9.0	4.0	18.5	12.0	24.5	---	22.0	31.0	---	12.0	10.0	---
27	13.5	15.0	---	10.5	---	---	14.0	25.0	---	22.0	29.5	21.0	1.0	---	6.0
28	8.0	---	11.0	15.0	---	---	22.0	22.0	32.0	19.0	---	31.5	---	---	16.0
29	9.5	---	9.5	15.0	---	15.5	21.0	---	31.0	30.5	---	17.5	---	9.0	---
30	17.0	13.0	6.0	---	---	18.0	12.5	---	23.0	21.0	18.5	18.0	---	14.0	11.5
31	---	---	6.0	---	---	15.0	---	---	---	---	24.0	---	---	---	---
MONTH	---	---	---	---	---	---	16.0	---	---	---	---	---	---	---	---

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	5.2	540	7.6	3.7	560	6.2	1.8	15	.07
2	4.1	460	5.1	7.9	1110	28	1.5	15	.06
3	10	580	27	4.4	1080	13	1.2	10	.03
4	2.5	30	.20	3.3	975	8.7	2.5	235	1.8
5	12	2170	114	1.8	3250	16	2.3	217	1.3
6	5.2	3780	85	1.8	465	2.3	1.5	157	.64
7	3.7	1630	16	2.5	500	3.4	1.2	132	.43
8	12	1570	51	6.4	658	30	1.0	138	.37
9	12	1200	39	1.2	225	.73	1.0	148	.40
10	8.7	600	14	1.2	125	.40	1.5	156	.63
11	5.2	480	6.7	3.3	520	4.6	1.0	100	.27
12	12	560	51	35	3060	634	1.2	100	.32
13	9.4	510	13	6.0	52	.84	1.5	120	.49
14	7.2	750	15	4.8	43	.56	1.5	132	.53
15	5.2	480	6.7	3.7	40	.40	1.5	72	.29
16	12	760	25	3.3	37	.33	1.2	98	.32
17	14	720	27	2.5	23	.16	1.2	70	.23
18	10	475	13	2.5	27	.18	1.2	47	.15
19	24	1860	121	3.7	89	1.0	3.7	60	.60
20	18	645	31	2.3	44	.27	4.1	42	.46
21	35	545	52	2.0	36	.19	2.9	134	1.0
22	18	760	37	3.3	58	.85	9.4	473	22
23	8.7	760	18	1.8	62	.30	6.4	320	5.5
24	15	963	105	1.5	51	.21	6.0	699	24
25	10	820	22	1.5	50	.20	4.0	480	5.2
26	6.0	700	11	1.5	77	.31	2.5	131	.88
27	4.4	525	6.2	1.5	98	.40	1.8	120	.58
28	3.3	655	5.8	1.2	74	.24	1.0	96	.26
29	2.5	480	3.2	1.5	63	.26	.80	106	.23
30	5.6	533	11	2.5	48	.32	.80	75	.16
31	12	887	50	---	---	---	.66	53	.09
TOTAL	312.9	--	989.50	119.6	--	754.35	69.86	--	69.29

RIO GRANDE BASIN

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08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.62	39	.07	1.2	46	.15	9.4	340	8.6
2	.62	40	.07	1.2	31	.10	10	360	9.7
3	.58	36	.06	1.5	220	.89	10	400	11
4	2.3	101	1.1	1.5	1100	4.5	10	410	11
5	1.8	130	.63	1.0	93	.25	9.4	590	15
6	1.5	185	.75	1.2	34	.11	10	630	17
7	.90	170	.41	1.0	35	.09	6.0	470	7.6
8	.90	98	.24	1.2	37	.12	7.9	360	7.7
9	.73	70	.14	1.2	27	.09	13	352	15
10	.80	56	.02	1.5	35	.14	12	330	11
11	1.2	57	.18	2.3	99	.61	10	320	8.6
12	6.4	157	2.7	1.8	150	.73	7.9	300	6.4
13	70	439	612	1.8	83	.40	8.7	380	8.9
14	178	1090	1600	1.8	78	.38	35	523	69
15	2.3	117	.73	1.8	57	.28	9.4	330	8.4
16	1.2	63	.20	2.3	54	.34	16	370	21
17	1.0	60	.16	2.3	59	.37	14	450	17
18	1.2	60	.19	2.9	87	.68	7.9	320	6.8
19	1.8	50	.24	2.3	148	.92	6.4	325	5.6
20	2.5	37	.25	2.3	94	.58	4.8	290	3.8
21	2.3	46	.29	8.7	292	11	4.8	300	3.9
22	2.3	48	.30	7.2	330	6.4	5.2	220	3.1
23	2.3	42	.26	4.4	250	3.0	12	299	9.7
24	2.3	41	.25	3.3	200	1.8	7.2	280	5.4
25	1.8	23	.11	44	373	96	6.4	210	3.6
26	1.8	16	.08	8.7	250	5.9	5.6	200	3.0
27	1.5	23	.09	5.2	180	2.5	18	307	18
28	1.5	17	.07	12	363	18	5.6	250	3.8
29	1.5	24	.10	--	--	--	7.9	305	7.5
30	1.2	30	.10	--	--	--	12	380	12
31	1.2	39	.13	--	--	--	220	2250	1710
TOTAL	296.05	--	2221.92	127.6	--	156.33	522.5	--	2049.1
DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	650	2920	5360	4.1	82	.91	2.1	76	.43
2	336	2340	2120	3.7	65	.65	1.8	64	.31
3	28	750	124	3.7	64	.64	2.1	67	.38
4	10	620	17	4.5	94	1.1	1.8	57	.28
5	11	532	21	2.5	146	.99	1.8	68	.33
6	14	510	19	2.3	71	.44	2.1	84	.48
7	14	356	20	2.9	78	.61	2.1	94	.53
8	15	301	17	2.9	67	.52	2.3	79	.49
9	4.5	220	2.7	16	94	6.2	2.3	72	.45
10	1.8	80	.39	9.4	141	3.6	2.3	67	.42
11	27	135	28	6.4	138	2.4	2.1	66	.37
12	5.2	166	2.3	7.2	120	2.3	2.1	65	.37
13	4.5	196	2.4	7.9	64	1.4	2.1	67	.38
14	3.7	142	1.4	7.9	102	2.2	2.1	69	.39
15	4.1	103	1.1	9.4	72	1.8	2.1	73	.41
16	2.9	98	.77	12	74	2.4	2.1	147	.83
17	5.2	107	1.5	12	110	3.6	1.5	92	.37
18	13	102	3.6	8.7	525	12	1.0	92	.25
19	6.0	152	2.5	8.7	174	4.1	.80	83	.18
20	4.8	146	1.9	10	117	3.2	.80	75	.16
21	4.1	134	1.5	9.4	88	2.2	.73	69	.14
22	4.1	125	1.4	8.7	75	1.8	.73	95	.19
23	3.7	158	1.6	8.7	91	2.1	.90	101	.25
24	3.7	127	1.3	5.2	64	.90	1.0	105	.28
25	13	134	6.3	4.1	66	.73	.80	122	.26
26	11	190	5.6	4.1	42	.46	.80	102	.22
27	5.2	176	2.5	4.8	49	.64	.90	92	.22
28	4.8	149	1.9	3.7	65	.65	1.0	84	.23
29	5.2	118	1.7	2.9	62	.49	.90	69	.17
30	6.0	112	1.8	3.7	55	.55	.80	56	.12
31	--	--	--	2.1	61	.35	--	--	--
TOTAL	1221.5	--	7772.16	199.6	--	61.93	45.96	--	9.89

RIO GRANDE BASIN

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.66	75	.13	.02	7500	6.4	.12	450	.15
2	.66	72	.13	.02	3200	1.7	.65	31200	9240
3	.62	70	.12	.02	74	.04	.11	38500	11
4	.62	66	.11	.02	53	.03	.02	10500	5.7
5	.58	67	.10	.02	117	.06	.02	5000	2.7
6	.58	127	.20	.02	37	.02	.02	3300	1.8
7	.62	133	.22	4.1	10400	554	.02	3100	1.7
8	.62	88	.15	2.1	11200	251	.02	3000	1.6
9	.62	66	.11	110	19900	11500	22	2450	544
10	.66	63	.11	1.5	29000	117	2.3	53700	449
11	.66	59	.11	1.8	3000	15	.80	20000	43
12	.66	54	.10	4.5	1130	14	.62	16000	27
13	.73	58	.11	7.2	2300	45	.73	32000	63
14	.80	78	.17	49	3410	142	.66	42000	75
15	.80	74	.16	4.1	12800	142	.62	1600	2.7
16	.90	101	.25	2.5	15300	103	.62	900	1.5
17	.90	96	.23	2.5	20000	135	13	2700	95
18	1.3	91	.32	3.7	20900	209	6.0	33100	1020
19	1.0	71	.19	54	43500	6340	.73	2000	3.9
20	1.3	53	.19	.62	18800	31	.90	350	.85
21	1.0	54	.15	20	31900	4670	.73	300	.59
22	.90	33	.08	8.7	22500	1230	6.0	6930	182
23	.66	57	.10	6.4	23400	700	3.3	16300	267
24	.58	26	.04	7.9	29900	1570	11	18500	549
25	.73	138	.27	1.3	21700	223	7.2	13000	253
26	1.3	21500	75	.02	8900	4.8	2.9	1900	15
27	185	39300	27700	.02	10800	1.8	1.8	27800	135
28	86	38900	15900	.02	3500	1.9	1.8	9100	44
29	0	0	0	91	2670	2290	1.3	750	2.6
30	0	0	0	12	1760	167	35	15100	7150
31	0	0	0	.32	779	3.1	--	--	--
TOTAL	291.46	--	43678.85	395.42	--	30467.85	185.34	--	20187.79

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1510	78700	443000	2.6	470	3.3	2.1	43	.24
2	285	37900	39100	2.3	500	3.1	2.2	88	.52
3	34	12900	1740	5.0	990	13	2.1	93	.53
4	6.6	1700	30	3.0	1320	11	2.0	76	.41
5	3.4	2800	26	2.4	950	6.2	2.0	67	.36
6	3.1	1710	14	15	1700	219	1.9	60	.31
7	14	1260	24	14	1070	78	1.9	52	.27
8	5.3	890	13	47	1610	573	2.0	68	.37
9	3.6	870	8.5	3.7	210	2.1	1.9	56	.29
10	3.3	690	6.1	7.2	852	30	1.9	34	.17
11	2.7	670	4.9	3.4	80	.73	1.8	28	.14
12	3.1	700	5.9	3.1	60	.50	1.7	28	.13
13	2.4	390	2.5	2.9	93	.41	1.6	26	.11
14	2.6	320	2.2	2.8	93	.70	1.8	26	.13
15	2.8	410	3.1	6.1	325	13	1.6	37	.16
16	3.5	470	4.4	4.7	184	2.3	1.5	62	.25
17	6.5	834	20	4.0	184	2.0	1.5	65	.26
18	6.2	730	12	3.5	177	1.7	1.5	64	.26
19	4.9	630	8.3	2.8	116	.88	1.5	72	.29
20	4.1	580	6.4	2.6	154	1.1	1.3	69	.24
21	3.4	510	4.7	2.4	108	.70	1.3	30	.11
22	4.9	710	9.4	2.3	73	.45	1.4	27	.10
23	5.5	680	10	2.1	62	.35	1.4	33	.12
24	8.3	1070	24	2.0	67	.36	1.3	40	.14
25	24	1450	139	2.0	54	.29	1.4	40	.15
26	13	1760	56	1.9	45	.23	1.5	44	.18
27	12	2160	82	2.0	44	.24	1.4	50	.19
28	4.3	810	9.4	2.0	42	.23	1.5	29	.12
29	8.0	941	15	2.1	42	.24	1.6	20	.09
30	4.6	960	12	2.0	32	.17	1.7	17	.08
31	4.8	890	12	--	--	--	1.7	15	.07
TOTAL	1999.9	--	484404.8	158.9	--	965.28	52.0	--	6.79

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

3787.79

108418.96

5496.73

591982.69

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, N. MEX.--Continued
INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDE SEDIMENT (MG/L) (80154)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN (70337)	SUS. SED. FALL DIAM. % FINER THAN (70326)	SUS. SED. FALL DIAM. % FINER THAN (70338)	SUS. SED. FALL DIAM. % FINER THAN (70327)
NOV., 1970									
12...	0550	5.0	102	5800	1600	20	--	25	--
DEC.									
23...	1400	8.0	6.0	301	5.0	79	--	81	--
MAR., 1971									
01...	1015	5.0	24	492	32	--	--	--	--
31...	1130	15.0	102	14900	4100	14	--	17	--
APR.									
07...	1145	16.0	3.0	218	2.0	--	--	--	--
JULY									
28...	0845	19.0	907	77500	190000	57	1	71	4
AUG.									
18...	1115	28.0	.01	33500	21	77	--	90	--
24...	1600	23.5	1.0	90100	243	54	--	69	--
SEP.									
09...	0930	19.0	106	200000	57200	38	--	47	--
27...	1200	21.0	1.4	84800	321	67	--	77	--
NOV.									
15...	1150	10.0	13	2530	89	46	--	59	--

DATE	SUS. SED. FALL DIAM. % FINER THAN (70339)	SUS. SED. FALL DIAM. % FINER THAN (70328)	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. FALL DIAM. % FINER THAN (70329)	SUS. SED. FALL DIAM. % FINER THAN (70341)	SUS. SED. FALL DIAM. % FINER THAN (70330)	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. FALL DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70343)
NOV., 1970									
12...	--	--	40	--	--	--	63	--	94
DEC.									
23...	--	--	95	--	--	--	--	99	--
MAR., 1971									
01...	--	--	--	--	--	--	--	99	--
31...	--	--	31	--	--	--	85	--	99
APR.									
07...	--	--	--	--	--	--	--	100	--
JULY									
28...	77	18	89	90	95	94	97	--	99
AUG.									
18...	--	--	100	--	--	--	--	--	--
24...	--	--	86	--	--	--	98	--	99
SEP.									
09...	--	--	65	--	--	--	94	--	98
27...	--	--	96	--	--	--	--	100	--
NOV.									
15...	--	--	90	--	--	--	100	--	--

DATE	SUS. SED. SIEVE DIAM. % FINER THAN (70332)	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. SIEVE DIAM. % FINER THAN (70333)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. SIEVE DIAM. % FINER THAN (70334)	SUS. SED. FALL DIAM. % FINER THAN (70346)	SUS. SED. SIEVE DIAM. % FINER THAN (70335)	SUS. SED. SIEVE DIAM. % FINER THAN (70336)
------	--	---	--	---	--	---	--	--

NOV., 1970								
12...	--	100	--	--	--	--	--	--
DEC.								
23...	100	--	--	--	--	--	--	--
MAR., 1971								
01...	100	--	--	--	--	--	--	--
31...	--	100	--	--	--	--	--	--
APR.								
07...	--	--	--	--	--	--	--	--
JULY								
28...	--	100	--	--	--	--	--	--
AUG.								
18...	--	--	--	--	--	--	--	--
24...	--	100	--	--	--	--	--	--
SEP.								
09...	--	100	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--
NOV.								
15...	--	--	--	--	--	--	--	--

TOTAL SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDE SEDIMENT (MG/L) (80154)	SUS- PENDE SEDIMENT CHARGE (T/DAY) (80155)	TOTAL SEDIMENT DIS- CHARGE (T/DAY) (80156)	STREAM WIDTH (FT) (00004)	MEAN DEPTH (FT) (00064)	STREAM VELOC- ITY (FPS) (00055)
JULY, 1971									
28...	0845	19.0	907	77500	190000	191000	82	2.9	3.8

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, N. MEX.
(Irrigation and surveillance network station)

LOCATION.--Lat 33°41'07", long 106°59'40", Socorro County, in Pedro Armendaris Grant No. 34, at gaging station 0.4 mile northwest of Atchison, Topeka and Santa Fe Railway Co. bridge over floodway channel, 1.0 mile southwest of former site of San Marcial, 3.5 miles downstream from railroad bridge near Tiffany siding and 51 miles downstream from heading at San Acacia.

PERIOD OF RECORD.--Chemical analysis: March 1954 to December 1971.

Specific conductance: March 1954 to December 1971.

Water temperatures: March 1954 to December 1971.

Sediment records: March 1954 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum daily, 2,160 micromhos July 27, 1971; minimum daily, 404 micromhos Apr. 4, 1971. Water temperatures: Maximum, 35°C June 24, 1971; minimum, freezing point on several days during January and December 1971. Sediment concentrations: Maximum daily, 144,000 mg/l Sept. 19, 1971; minimum daily, no flow on many days during June and July 1971. Sediment discharge: Maximum daily, 562,000 tons Oct. 2, 1971; minimum daily, 0 tons on many days during June and July 1971.

EXTREMES, 1954-71.--Dissolved solids (1954-70): Maximum, 2,010 mg/l Aug. 2-8, 1956; minimum, 240 mg/l Jan. 8-13, 1963.

Hardness (1954-70): Maximum, 948 mg/l Aug. 2-8, 1956; minimum, 108 mg/l Jan. 8-13, 1963.

Specific conductance: Maximum daily, 2,860 micromhos Oct. 25, 1956; minimum daily, 353 micromhos Jan. 8, 1963.

Water temperatures: Maximum, 35°C on several days during 1955, 1963, and 1971; minimum, freezing point 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 1956, 1958, 1963, 1964, 1968, 1969, and 1971.

Sediment discharge: Maximum daily, 562,000 tons Oct. 2, 1971; minimum daily, 0 tons on many days during 1956, 1958, 1963, 1964, 1968, 1969, and 1971.

REMARKS.--Bacteria and aquatic biology analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey. Additional sediment total discharge determinations were made bi-weekly when needed. No flow June 28 to July 26, 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (000600)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANGANESE (MN) (UG/L) (01056)	DIS- SOLVED CALCIUM (CA) (MG/L) (00915)	DIS- SOLVED MAGNESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SU4) (MG/L) (00945)	
UCI, 1970													
12...	1200	292	28	0	--	74	13	77	5.3	210	6	168	
NOV.													
10...	1200	1750	24	10	--	50	7.8	42	3.7	157	0	95	
DEC.													
14...	1200	1120	27	120	--	60	9.9	53	4.2	162	0	108	
JAN., 1971													
10...	1230	950	38	40	--	63	11	56	4.8	194	0	110	
FEB.													
10...	1200	915	30	1100	--	54	10	58	5.1	179	0	96	
MAR.													
08...	1200	830	29	100	--	57	11	62	5.6	195	0	98	
APR.													
20...	1230	535	30	10	--	66	12	84	6.0	213	0	140	
MAY													
17...	0945	258	26	20	--	74	14	80	5.8	221	0	170	
JUNE													
21...	1300	2.8	29	10	--	87	17	160	8.6	248	0	240	
AUG.													
17...	1100	364	22	20	--	86	14	97	6.9	247	0	250	
SEP.													
20...	1115	58	15	10	--	82	14	120	4.8	352	0	290	
UCI,													
20...	1330	208	28	10	--	65	12	66	5.3	202	0	140	
NOV.													
14...	1315	1480	--	--	--	--	--	--	--	--	--	--	
16...	1100	1650	24	20	30	54	8.9	43	4.0	172	0	110	
DATE		DIS- SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUORIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITROGEN (N) (MG/L) (00608)	ORGANIC NITROGEN (N) (MG/L) (00605)	TOTAL NITROGEN (N) (MG/L) (00600)	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHOPHOSPHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)
UCI, 1970													
12...	47	.6	.86	3.8	.02	--	.10	.72	1.7	.37	--	534	
NOV.													
10...	25	.6	.70	3.1	--	--	--	--	--	.27	--	330	
DEC.													
14...	32	.6	.68	3.0	--	--	--	--	--	.30	--	386	
JAN., 1971													
10...	36	.7	.29	1.3	--	1.3	--	--	--	--	--	394	
FEB.													
10...	33	.7	--	--	--	.20	--	--	--	.62	--	404	
MAR.													
08...	42	.6	--	--	--	.40	--	--	--	.78	--	456	
APR.													
20...	50	.6	.20	--	.00	.20	.00	--	--	.10	.21	488	
MAY													
17...	55	.6	--	--	--	.05	--	--	--	--	.20	560	
JUNE													
21...	150	.5	--	--	--	.00	--	--	--	--	.12	786	
AUG.													
17...	34	.9	--	--	--	1.6	--	--	--	--	.05	698	
SEP.													
20...	69	.8	--	--	--	1.2	--	--	--	--	.03	568	
UCI,													
20...	36	.7	.80	3.5	.00	.79	.10	1.6	2.5	2.0	.34	476	
NOV.													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	22	.4	--	--	--	.35	--	--	--	--	.19	378	

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SULFUR (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (60900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION MATIO (00931)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHMS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00060)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED BORON (B) (UG/L) (01620)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970												
12...	526	244	72	2.1	793	8.3	12.0	--	--	170	--	--
NOV.,												
16...	529	160	32	1.4	511	7.8	6.5	--	--	130	--	--
DEC.,												
14...	388	184	35	1.7	579	7.8	3.5	--	--	150	--	--
JAN., 1971												
18...	440	200	41	1.8	627	7.5	6.0	--	--	0	--	--
FEB.,												
16...	380	180	33	1.9	543	7.5	11.0	--	--	150	--	--
MAR.,												
08...	400	190	30	2.0	677	7.8	9.0	10	110	140	--	--
APR.,												
20...	495	210	35	2.5	764	7.8	12.0	--	--	190	--	--
MAY,												
17...	535	240	61	2.2	878	7.8	18.0	--	--	140	--	--
JUNE,												
21...	815	290	84	4.1	1230	8.5	30.0	--	--	240	--	--
AUG.,												
17...	640	270	70	2.6	982	7.3	24.0	--	--	220	--	--
SEP.,												
20...	774	260	0	3.2	1160	7.1	14.5	--	--	160	--	--
OCT.,												
20...	457	210	46	2.0	726	7.5	11.0	--	--	140	--	--
NOV.,												
14...	--	--	--	--	551	--	16.0	--	--	--	--	--
16...	354	170	30	1.4	543	7.5	7.0	--	--	100	2	30

TRACE ELEMENT AND RADIOCHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CAD- MIUM (CU) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	HEXA- VALENT CHRO- MIUM (CR6) (UG/L) (01032)
OCT., 1970										
12...	1200	--	<10	--	--	--	--	0	--	0
MAY, 1971										
17...	0945	56	--	100	<1	<5	140	<47	<10	--
OCT.,										
20...	1330	110	--	73	<2	<6	140	<85	<6	--
NOV.,										
16...	1100	--	2	300	--	--	100	0	--	0

DATE	DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED GALLIUM (GA) (UG/L) (01120)	DIS- SOLVED GERM- ANIUM (GE) (UG/L) (01125)	DIS- SOLVED INDI- UM (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	DIS- SOLVED MANG- ANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (01900)
OCT., 1970										
12...	1	--	--	--	--	--	0	--	--	--
MAY, 1971										
17...	<5	8	<3	<5	20	--	<5	60	2	--
OCT.,										
20...	<6	3	<2	<9	10	--	<6	70	<4	--
NOV.,										
16...	--	2	--	--	20	50	--	--	30	1.0

DATE	DIS- SOLVED MERCURY (HG) (UG/L) (01890)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED RUBI- DIUM (RB) (UG/L) (01135)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED TIN (SN) (UG/L) (01100)	DIS- SOLVED TAN- IUM (TI) (UG/L) (01150)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)
OCT., 1970										
12...	<5	--	--	--	--	--	--	--	--	--
MAY, 1971										
17...	--	10	<10	2	<1	--	650	<100	<5	5.0
OCT.,										
20...	--	16	<6	--	<1	--	710	<9	9	8.0
NOV.,										
16...	--	--	--	--	0	6	--	--	--	--

RIO GRANDE BASIN

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, N. MEX.--Continued

TRACE ELEMENT AND RADIOCHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED ZINC (UG/L) (01090)	DIS- SOLVED ZIR- CONIUM (ZM) (01160)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- SOLVED GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS AS SR90 (Y90) (PC/L) (80050)	SUS- SOLVED GROSS BETA AS AS SR90 (Y90) (PC/L) (80060)	DIS- SOLVED RA-226 (RADDON) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
OCT., 1970										
12...	30	--	--	--	--	--	--	--	--	--
MAY, 1971										
17...	<470	<22	--	--	--	--	--	--	--	--
OCT.										
20...	<390	<20	--	--	--	--	--	--	--	--
NOV.										
16...	30	--	11	460	8.0	250	6.7	200	.10	2.8

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970							
12...	1200	292	795	8.4	12.0	21.0	10
NOV.							
10...	1200	1750	521	8.4	6.5	15.5	10
DEC.							
14...	1200	1120	599	8.3	3.5	9.5	4
JAN., 1971							
10...	1230	950	604	8.5	6.0	19.0	16
FEB.							
10...	1200	915	604	8.4	11.0	20.0	40
MAR.							
08...	1200	830	--	8.1	9.0	18.5	65
APR.							
20...	1230	535	742	8.6	12.0	16.0	160
MAY							
17...	0945	258	870	8.6	18.0	23.0	20
JUNE							
21...	1300	2.8	1200	8.7	30.0	33.0	7
AUG.							
17...	1100	364	920	7.7	24.0	27.5	25
SEP.							
20...	1115	58	1050	8.0	14.5	17.0	20
OCT.							
20...	1330	208	730	8.4	11.0	17.5	10
NOV.							
16...	1100	1650	500	8.2	7.0	7.0	20

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL, PER (31501)	FECAL COLI- FORM (COL, PER (31616)	STREP- TOCUCI (COL- ONIES PER (31679)
OCT., 1970							
12...	380	8.8	5	3.6	--	1240	100
NOV.							
16...	600	10.0	7	4.7	E30000	4400	800
DEC.							
14...	285	10.4	20	4.0	E5000	400	130
JAN., 1971							
10...	150	11.9	9	6.0	3100	1620	100
FEB.							
16...	160	10.4	14	2.6	31000	1200	300
MAR.							
08...	190	9.5	5	3.2	85000	1900	400
APR.							
20...	180	9.2	10	4.2	7800	620	110
MAY							
17...	80	8.8	6	5.0	2000	600	30
JUNE							
21...	4	7.0	13	1.0	<100	<10	<10
AUG.							
17...	9800	6.5	20	6.3	--	--	--
SEP.							
20...	16000	8.1	11	6.9	--	--	--
OCT.							
20...	1500	9.6	12	5.4	--	1600	400
NOV.							
16...	1500	10.0	8	4.9	1000	800	300

E ESTIMATED

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, N. MEX.--Continued

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: June 6, 1970 (Revised)
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Ephemeroptera: Baetidae; Traverella sp., 8
 Isonychia sp., 1
 Heptageniidae; Cinygma sp., 2
 Trichoptera: Hydropsychidae: Hydropsyche sp., 3
 Cheumatopsyche sp., 1

Date: April 20, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Crustacea: Isopoda, Armadillidae, 1 (not an aquatic form)
 Oligochaeta: Lumbriculidae, 1

Date: May 17, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Ephemeroptera: Baetidae (Baetinae), 5
 Heptageniidae: Cinygma sp., 16
 Plecoptera: Perlodidae, 18

Date: June 21, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Diptera: Chironomidae, 1 larva
 Simuliidae, 1 larva
 Ephemeroptera: Baetidae; Traverella sp., 218; Baetinae, 2
 Isonychia sp., 6
 Tricorythodes sp., 1
 Heptageniidae, 2
 Plecoptera: Perlodidae; Isoperla sp., 1
 Trichoptera: Hydropsychidae; Hydropsyche sp., 13
 Leptoceridae; Oecetis sp., 1

Date: August 17, 1971
 Method of sampling: Surber (3 square feet)
 No macroinvertebrates in sample

PESTICIDE ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	ALDRIN (UG/L) (39330)	CHLOR- DANE (UG/L) (39550)	DDD (UG/L) (39300)	DDE (UG/L) (39565)	DUE IN BUTION DE- PUSITS (UG/KG) (39368)	DDT (UG/L) (39370)	DI- AZINON (UG/L) (39570)	DI- ELDRIN (UG/L) (39580)	ENDRIN (UG/L) (39390)
APR., 1971										
20...	1230	.00	.0	.00	.00	--	.00	.00	.00	.00
JUNE										
21...	1300	.00	.0	.00	.00	--	.00	.00	.00	.00
JULY										
27...	0830	.00	.0	.00	.06	.0	.00	--	.00	.00
NOV.										
16...	1100	.00	.0	.01	.01	--	.03	--	.01	.00

DATE	TIME	HEPTA- CHLOR (UG/L) (39410)	HEPTA- CHLOR EPOXIDE (UG/L) (39420)	LINDANE (UG/L) (39340)	MALA- THION (UG/L) (39530)	METHYL PARA- THION (UG/L) (39600)	PARA- THION (UG/L) (39540)	TUX- APHENE (UG/L) (39400)	2,4-D (UG/L) (39730)	2,4,5-T (UG/L) (39740)	SILVEX (UG/L) (39760)
APR., 1971											
20...		.00	.00	.01	.00	.00	.00	.0	.00	.00	.01
JUNE											
21...		.00	.00	.00	.00	.00	.00	--	.00	.00	.00
JULY											
27...		.00	.00	.00	--	--	--	--	.00	.00	.08
NOV.											
16...		.00	.00	.00	--	--	--	--	.00	.00	.00

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANG- NESE (MN) (UG/L) (01056)	DIS- SOLVED CUPPER (CU) (UG/L) (01040)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)	DIS- SOLVED SILIC- NIUM (SI) (UG/L) (01145)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970								
12...	1205	10	2	4	<4	16	<13	27

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20.0	---	7.0	3.5	8.0	3.0	10.5	---	22.0	---	---	29.0	20.0	9.0	8.0
2	16.0	10.0	5.0	---	7.5	4.5	10.0	---	14.5	---	---	29.0	15.5	---	---
3	---	9.5	4.0	---	6.0	3.5	11.0	15.0	16.0	---	21.0	20.0	14.0	9.0	---
4	---	9.0	5.0	0.0	4.0	5.0	12.0	14.5	22.5	---	28.0	---	14.0	---	---
5	18.5	9.0	---	0.0	---	10.0	12.0	18.5	---	---	---	---	14.5	---	---
6	14.0	8.5	---	0.0	6.5	---	11.5	13.0	---	---	29.0	---	13.0	11.0	0.0
7	17.0	---	4.0	0.0	---	---	11.5	16.0	26.5	---	---	28.0	17.0	5.0	---
8	11.0	---	4.5	0.0	1.0	6.5	14.0	---	21.0	---	---	18.0	---	---	5.0
9	14.0	6.5	5.0	---	---	8.0	15.0	---	17.5	---	19.5	32.0	---	10.0	---
10	---	7.0	5.0	---	---	3.5	8.5	16.0	19.5	16.0	---	21.0	20.0	---	3.0
11	---	8.5	5.0	---	5.0	9.5	---	14.5	24.5	---	19.5	---	14.5	10.0	5.0
12	9.0	8.5	---	0.0	---	10.5	17.0	14.0	---	---	27.0	---	---	9.0	---
13	18.0	7.0	---	4.0	---	---	15.5	21.0	---	---	26.0	29.0	---	---	2.0
14	11.0	---	4.0	3.0	---	---	14.0	17.0	20.0	---	---	18.5	14.5	16.0	4.0
15	10.5	---	4.0	---	---	11.0	13.5	---	18.5	---	---	18.0	17.0	---	---
16	8.0	---	2.5	---	---	11.5	17.5	---	21.0	---	33.0	13.0	---	8.0	0.0
17	---	5.0	2.5	---	10.0	10.0	---	17.5	33.0	---	25.5	17.5	---	---	---
18	---	7.0	4.0	4.0	9.0	8.0	---	14.0	28.0	---	29.5	---	12.0	8.0	0.0
19	12.5	6.0	---	8.5	7.5	6.0	10.5	17.5	---	---	29.0	---	11.5	5.0	---
20	11.0	6.5	---	6.0	---	---	8.5	14.0	---	---	22.0	21.0	13.5	---	3.0
21	11.5	---	4.0	6.0	---	---	11.0	16.5	23.0	---	---	---	11.5	---	3.0
22	13.5	---	4.0	8.0	2.5	9.5	10.0	---	22.5	---	---	---	---	---	3.0
23	11.0	7.5	1.0	---	5.0	11.0	14.5	---	---	---	26.5	---	---	6.0	4.0
24	---	5.0	1.0	---	4.5	13.5	---	14.0	35.0	---	22.0	16.5	10.0	9.0	---
25	---	5.0	---	3.0	9.5	16.0	---	15.5	---	---	20.0	---	---	14.0	---
26	12.0	7.0	---	6.0	---	---	16.0	16.5	---	---	25.0	---	9.0	---	---
27	9.0	8.0	---	7.0	---	---	13.0	15.5	---	19.5	26.0	19.5	---	---	7.5
28	9.5	---	5.0	5.5	---	---	14.0	---	---	26.5	---	---	14.0	---	6.5
29	9.0	---	3.5	5.5	---	17.0	12.0	---	---	23.0	---	20.5	---	6.0	7.0
30	7.0	8.0	12.5	---	---	15.0	17.0	---	---	28.0	26.0	---	---	---	4.0
31	---	---	2.5	---	---	13.5	---	---	---	---	21.0	---	---	---	---
MONTH	---	---	---	---	---	---	13.0	---	---	---	---	---	---	---	---

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	320	2750	2380	795	7400	15900	1680	5320	24100
2	299	2630	2120	870	7050	16600	1860	5900	29600
3	282	2400	1830	930	5770	14500	1300	5750	20200
4	388	2620	2740	1010	5750	15700	1210	4130	13500
5	415	7700	9960	1060	5050	14500	1160	3850	12100
6	332	17700	15900	1010	5280	14400	1100	3650	10800
7	420	13400	15200	1160	7250	22700	990	3700	9890
8	376	6020	6110	1340	8250	29800	1000	3050	8240
9	292	4460	3520	1420	8150	31200	1010	2510	6840
10	273	3300	2430	1460	5620	22200	1000	1850	5000
11	306	3450	2850	1570	7100	30100	975	3090	8130
12	285	2280	1750	1790	7410	35800	980	3550	9390
13	246	1430	950	1840	8400	41700	1030	3820	10600
14	261	1350	951	1820	7000	34400	1080	3700	10800
15	213	1950	1120	1820	6230	30600	1030	3250	9040
16	360	2650	2580	1700	5600	25700	980	2990	7910
17	475	4320	5540	1540	6470	26900	885	1250	2990
18	372	3150	3160	1470	6000	23800	835	2050	4620
19	380	2950	3030	1570	6550	27800	820	1500	3320
20	445	2950	3540	1620	5900	25800	870	2450	5760
21	410	2650	2930	1570	5500	23300	805	2450	5330
22	400	2720	2940	1530	5820	24000	905	2400	5860
23	410	2750	3040	1610	6100	26500	885	2200	5260
24	420	3000	3400	1640	6000	26600	915	1600	3950
25	455	3000	3690	1570	6050	25600	975	2350	6190
26	420	3250	3690	1530	4800	19800	970	2400	6290
27	376	3270	3320	1580	4200	17900	865	1900	4440
28	368	2950	2930	1740	5720	26900	840	2330	5280
29	392	2900	3070	1730	6230	29100	875	2570	6670
30	450	3270	3970	1680	5320	24100	890	1500	3600
31	585	4600	7270	--	--	--	915	2480	6130
TOTAL	11426	--	127911	43975	--	743900	31635	--	271230
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	895	1550	3750	915	2300	5680	955	3250	8380
2	965	1900	4950	915	2500	6180	855	2800	6460
3	945	1900	4850	1020	2800	7710	750	2300	4660
4	700	1700	3210	1060	3050	8730	760	2150	4410
5	460	1750	2170	1080	2800	8160	720	1450	2820
6	300	1620	1310	1120	2130	6440	660	1400	2490
7	200	450	243	1120	2750	8320	690	1570	2920
8	210	100	57	970	3130	8200	635	2700	4630
9	230	100	62	935	2700	6820	720	1800	3500
10	300	100	81	995	2500	6720	690	1460	2720
11	500	570	770	970	2080	5450	620	1620	2710
12	600	1270	2060	910	2100	5160	625	1760	2970
13	800	860	1860	900	2200	5350	640	1900	3280
14	850	2950	6770	930	2250	5650	620	1900	3180
15	955	2400	6190	920	2150	5340	685	2100	3880
16	935	2000	5050	890	2200	5290	745	1650	3320
17	915	1910	4720	935	2550	6440	670	1000	1810
18	910	2620	6440	895	2190	5290	680	2350	4310
19	970	2430	6360	985	2570	6830	600	2700	4370
20	1060	2920	8360	1070	3270	9450	595	2100	3370
21	1270	3400	11700	1250	3600	12200	555	1830	2740
22	1270	3700	12700	1350	3300	12000	550	1550	2300
23	1290	4000	13900	1230	3230	10700	610	1620	2670
24	1380	4480	16700	1110	2830	8480	695	1500	2810
25	1150	4000	12400	800	2100	4540	500	1100	1490
26	1010	3900	10600	800	2280	4920	455	1050	1290
27	1000	3100	8370	990	3260	8710	485	1500	1960
28	975	2650	6980	995	2900	7790	775	1600	3350
29	1040	3020	8480	--	--	--	765	1100	2270
30	1030	2700	7510	--	--	--	1220	3860	12700
31	955	2300	5930	--	--	--	1560	6120	25800
TOTAL	26070	--	184533	28060	--	202550	22085	--	135570

RIO GRANDE BASIN

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1920	5550	28800	570	1660	2550	92	275	68
2	1980	4350	23300	490	1680	2220	60	148	24
3	1980	4230	22600	396	960	1030	54	70	10
4	1760	4100	19500	348	710	667	52	75	11
5	1370	4100	15200	228	370	228	49	67	8.9
6	1200	3080	9980	195	340	179	48	146	19
7	1000	2820	7610	183	350	173	45	168	20
8	900	2400	5830	348	830	780	40	79	8.5
9	1060	2830	8100	324	960	840	39	69	7.3
10	805	2050	4460	392	1120	1190	36	62	6.0
11	480	1430	1850	324	650	569	33	51	4.5
12	670	1600	2890	231	820	511	31	46	3.9
13	360	1180	1150	246	610	405	30	44	3.6
14	258	2200	1530	455	800	983	27	45	3.3
15	212	1950	1120	360	510	496	21	45	2.6
16	202	1780	971	264	410	292	8.4	47	1.1
17	212	1330	761	289	590	460	1.4	24	.09
18	285	1450	1120	380	800	821	1.5	20	.08
19	410	1900	2100	352	1110	1050	1.5	20	.08
20	480	1610	2090	384	520	539	2.0	15	.08
21	460	900	1120	303	560	458	2.5	11	.07
22	384	900	933	273	480	354	1.5	15	.06
23	580	1480	2320	306	460	380	1.5	12	.05
24	855	3100	7160	317	500	428	1.0	11	.03
25	685	2230	4120	384	540	560	.50	10	.01
26	600	1650	2670	249	560	376	25	500	34
27	690	1620	3020	190	480	246	2.0	50	.27
28	565	1290	1970	185	600	300	0	0	0
29	388	790	828	138	499	186	0	0	0
30	435	1000	1170	146	340	134	0	0	0
31	--	--	--	126	370	126	--	--	--
TOTAL	23186	--	186273	9376	--	19531	705.80	--	236.52
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	246	46500	40300	66	43000	7660
2	0	0	0	84	22000	4990	183	33200	32100
3	0	0	0	48	14000	1810	185	67600	33800
4	0	0	0	9.8	4800	127	136	49000	18000
5	0	0	0	4.2	2400	27	76	28000	5750
6	0	0	0	21	2700	153	34	15100	1390
7	0	0	0	22	3400	202	21	3200	181
8	0	0	0	88	39800	11700	2.0	800	4.3
9	0	0	0	390	55200	73000	1.0	470	1.3
10	0	0	0	368	49500	49200	108	127000	43700
11	0	0	0	192	40100	20800	92	88000	21900
12	0	0	0	178	25600	12300	71	46400	8890
13	0	0	0	218	17300	10200	36	31000	3010
14	0	0	0	405	19800	21700	4.2	7200	82
15	0	0	0	475	23600	30300	2.8	1060	8.0
16	0	0	0	252	15900	10800	1.4	460	1.7
17	0	0	0	303	22200	18200	1.4	510	1.9
18	0	0	0	132	16600	5920	7.0	480	9.1
19	0	0	0	122	21300	25400	71	144000	25500
20	0	0	0	243	88500	65100	48	48500	6290
21	0	0	0	144	14000	5440	1.4	10800	41
22	0	0	0	530	82200	134000	2.8	4900	37
23	0	0	0	415	95300	122000	98	28000	7410
24	0	0	0	364	118000	116000	203	43200	27400
25	0	0	0	800	104000	225000	68	27400	5030
26	0	0	0	715	82000	158000	85	22000	5050
27	115	44300	22600	420	62000	70300	132	19500	6950
28	396	87000	85300	306	46000	38000	90	11600	2820
29	605	37000	60400	258	35000	24400	37	5500	549
30	43	28000	3250	310	64400	60100	108	17600	18700
31	25	23000	1550	112	34000	10300	--	--	--
TOTAL	1184	--	173100	8175.0	--	1365769	1972.0	--	282266.3

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	435	67900	134000	876	10100	23900	1040	4100	11500
2	1760	118000	562000	1010	11800	32200	1050	4150	11800
3	1560	75100	316000	737	7700	15300	1030	3500	9730
4	1280	50500	175000	760	9220	18900	998	2650	7140
5	574	29000	44900	717	6800	13200	990	2250	6010
6	181	20100	9820	991	9250	24800	899	1900	4610
7	199	14400	7740	1140	9350	28800	856	1850	4280
8	222	14500	8690	1740	12800	60100	780	2400	5050
9	281	15800	12000	1600	11300	48800	907	4000	9800
10	246	8000	5310	1720	11800	54800	801	3200	6920
11	263	6200	4400	1540	10500	43700	872	3600	8480
12	260	6000	4210	1490	9750	39200	815	3050	6710
13	199	4310	2320	1450	8850	34600	699	1900	3590
14	141	2900	1100	1440	8100	31500	824	2850	6340
15	93	2850	716	1480	8900	35600	901	3000	7300
16	78	2950	621	1600	8800	38000	856	3050	7050
17	63	2900	493	1640	7350	32500	822	4300	9540
18	71	3120	598	1720	7600	35300	829	4050	9070
19	104	2950	828	1420	7450	28600	828	5500	12300
20	189	5100	2600	1170	5800	18300	789	4700	10000
21	209	4650	2620	1070	5050	14600	768	3850	7980
22	202	4500	2450	978	3850	10200	818	4050	8940
23	168	3250	1470	1020	4600	12700	772	3850	8020
24	149	2850	1150	960	4900	12700	752	3650	7410
25	285	2740	2200	944	3950	10100	829	4250	9510
26	849	13300	30500	960	3650	9460	857	3950	9140
27	936	14400	36400	939	4050	10300	901	4050	9850
28	1230	17100	56800	927	3700	9260	1130	4450	13600
29	692	11900	22200	933	3600	9070	1190	4450	14300
30	773	11600	24200	975	3450	9080	1330	4350	15600
31	742	11100	22200	--	--	--	1410	6450	24600
TOTAL	14434	--	1495536	35947	--	765570	28343	--	286170

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

207849.80
3692869.82
199537.80
5097104.82INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	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 .002 MM (70326)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70327)
OCT., 1970									
02...	0845	16.0	320	2640	2280	25	--	28	--
12...	0830	9.0	289	2000	1560	24	--	28	--
20...	0900	11.0	486	2990	3920	24	--	29	--
NOV.									
12...	1430	8.5	1900	7490	38400	18	--	22	--
16...	0845	5.5	1750	5580	26400	15	--	19	--
DEC.									
07...	0845	4.0	915	3160	7810	11	--	14	--
14...	0945	2.5	1070	3170	9160	10	--	14	--
JAN., 1971									
04...	0900	.0	930	1570	3940	15	--	18	--
18...	0845	4.0	950	3230	8280	8	--	10	--
FEB.									
08...	0830	1.0	986	3290	8760	9	--	11	--
16...	0945	9.0	915	2380	5880	9	--	12	--
MAR.									
08...	1000	6.5	640	1710	2950	19	--	23	--
23...	0830	11.0	525	1290	1830	20	--	24	--
APR.									
20...	1230	12.0	535	1680	2430	13	--	16	--
MAY									
04...	0845	14.5	360	866	842	20	--	23	--
17...	0900	17.5	255	615	423	20	--	22	--
AUG.									
10...	0800	21.0	530	53000	75800	58	--	79	--
23...	1600	26.5	359	86300	83600	61	--	74	--
SEP.									
03...	0745	20.0	170	69800	32100	60	--	71	--
20...	1515	21.0	32	50500	4360	65	--	86	--
OCT.									
04...	0830	14.5	1320	47100	168000	52	--	63	--
NOV.									
10...	0900	8.0	1680	10700	48500	27	--	31	--
DEC.									
08...	1400	.0	665	2250	4040	28	--	34	--
22...	1430	3.0	875	3270	7730	13	--	16	--
30...	0830	4.0	1300	3590	12600	26	--	32	--

RIO GRANDE BASIN

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70339)	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70328)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70329)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70341)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70330)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)
OCT., 1970									
02...	--	--	41	--	--	--	74	--	92
12...	--	--	39	--	--	--	65	--	92
20...	--	--	40	--	--	--	69	--	92
NOV.									
12...	--	--	38	--	--	--	63	--	84
16...	--	--	29	--	--	--	51	--	78
DEC.									
07...	--	--	19	--	--	--	35	--	69
14...	--	--	19	--	--	--	36	--	67
JAN., 1971									
04...	--	--	26	--	--	--	51	--	84
18...	--	--	14	--	--	--	30	--	67
FEB.									
08...	--	--	15	--	--	--	29	--	60
16...	--	--	17	--	--	--	39	--	76
MAR.									
08...	--	--	33	--	--	--	51	--	75
23...	--	--	32	--	--	--	50	--	73
APR.									
20...	--	--	22	--	--	--	37	--	63
MAY									
04...	--	--	28	--	--	--	46	--	80
17...	--	--	30	--	--	--	45	--	76
AUG.									
10...	--	--	94	--	--	--	99	--	99
23...	--	--	92	--	--	--	99	--	99
SEP.									
03...	--	--	90	--	--	--	100	--	--
20...	--	--	100	--	--	--	--	--	--
OCT.									
04...	--	--	77	--	--	--	91	--	97
NOV.									
10...	--	--	47	--	--	--	80	--	96
DEC.									
08...	--	--	54	--	--	--	83	--	98
22...	--	--	27	--	--	--	51	--	79
30...	--	--	52	--	--	--	81	--	97

DATE	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM (70332)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM (70333)	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM (70345)	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM (70334)	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM (70346)	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM (70335)	SUS. SED. SIEVE DIAM. % FINER THAN 2.00 MM (70336)
OCT., 1970								
02...	--	100	--	--	--	--	--	--
12...	--	100	--	--	--	--	--	--
20...	--	100	--	--	--	--	--	--
NOV.								
12...	--	98	--	100	--	--	--	--
16...	--	96	--	100	--	--	--	--
DEC.								
07...	--	98	--	100	--	--	--	--
14...	--	97	--	100	--	--	--	--
JAN., 1971								
04...	--	99	--	100	--	--	--	--
18...	--	98	--	100	--	--	--	--
FEB.								
08...	--	92	--	100	--	--	--	--
16...	--	99	--	100	--	--	--	--
MAR.								
08...	--	99	--	100	--	--	--	--
23...	--	100	--	--	--	--	--	--
APR.								
20...	--	90	--	100	--	--	--	--
MAY								
04...	--	100	--	--	--	--	--	--
17...	--	99	--	100	--	--	--	--
AUG.								
10...	--	100	--	--	--	--	--	--
23...	--	100	--	--	--	--	--	--
SEP.								
03...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
OCT.								
04...	--	100	--	--	--	--	--	--
NOV.								
10...	--	100	--	--	--	--	--	--
DEC.								
08...	--	100	--	--	--	--	--	--
22...	--	99	--	100	--	--	--	--
30...	--	100	--	--	--	--	--	--

RIO GRANDE BASIN

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08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, N. MEX.--Continued

PARTICLE SIZE OF SURFACE BED MATERIAL, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDE SEDI- MENT (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)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80163)
OCT., 1970											
12...	0830	9.0	289	2000	1560	2	20	82	100	--	--
NOV.											
12...	1430	8.5	1900	7490	38400	3	9	68	98	100	--
16...	0845	5.5	1750	5580	26400	2	9	67	99	100	--
DEC.											
14...	0945	2.5	1070	3170	9160	2	14	76	100	--	--
JAN., 1971											
04...	0900	.0	930	1570	3940	2	17	81	100	--	--
18...	0845	4.0	950	3230	8280	2	20	72	98	100	--
FEB.											
08...	0830	1.0	986	3290	8760	2	16	74	100	--	--
16...	0945	9.0	915	2380	5880	2	14	68	98	100	--
MAR.											
08...	1000	6.5	640	1710	2950	1	10	60	94	99	100
23...	0830	11.0	525	1290	1830	1	7	65	99	100	--
APR.											
06...	0845	--	--	--	--	1	12	82	100	--	--
19...	0845	--	--	--	--	1	6	81	99	100	--
MAY											
04...	0845	14.5	360	866	842	1	17	88	100	--	--
17...	0900	17.5	255	615	423	0	5	66	99	100	--
JULY											
27...	0830	--	--	--	--	2	4	57	95	99	100
AUG.											
23...	1600	26.5	359	86300	83600	36	86	100	--	--	--
OCT.											
04...	0830	14.5	1320	47100	168000	8	26	75	99	100	--
DEC.											
06...	0830	.0	--	--	--	38	87	100	--	--	--

TOTAL SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	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., 1970									
12...	0830	9.0	289	2000	1560	2380	65	1.5	3.0
NOV.									
12...	1430	8.5	1900	7490	38400	45100	71	4.3	6.2
16...	0845	5.5	1750	5580	26400	31000	65	4.2	6.4
DEC.									
14...	0945	2.5	1070	3170	9160	13700	65	3.1	5.2
JAN., 1971									
04...	0900	.0	930	1570	3940	6610	62	2.9	5.2
18...	0845	4.0	950	3230	8280	13100	64	2.8	5.3
FEB.									
08...	0830	1.0	986	3290	8760	13900	65	2.9	5.4
16...	0945	9.0	915	2380	5880	8940	63	3.0	4.9
MAR.									
08...	1000	6.5	640	1710	2950	4520	63	2.4	4.2
23...	0830	11.0	525	1290	1830	3370	61	2.1	4.1
MAY									
04...	0845	14.5	360	866	842	1790	70	1.6	3.3
17...	0900	17.5	255	615	423	814	67	2.4	2.5
AUG.									
23...	1600	26.5	359	86300	83600	88300	66	1.6	3.3
OCT.									
04...	0830	14.5	1320	47100	168000	178000	63	3.5	6.0

[illegible]

RIO GRANDE BASIN

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08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, N. MEX.--Continued

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	18.0	---	---	---	---	---	17.0	---	---
4	---	---	---	---	---	---	10.0	---	---	---	---	---	15.0	---	---
5	---	---	---	---	---	---	16.0	---	---	---	---	---	10.5	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---	15.0	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	19.0	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0						
2	67	6070	3310						
3	62	6800	1140						
4	11	1380	75						
5	0	0	0						
6	0	0	0						
7	0	0	0						
8	0	0	0						
9	0	0	0						
10	0	0	0						
11	0	0	0						
12	0	0	0						
13	0	0	0						
14	0	0	0						
15	0	0	0						
16	0	0	0						
17	0	0	0						
18	0	0	0						
19	0	0	0						
20	0	0	0						
21	0	0	0						
22	0	0	0						
23	0	0	0						
24	0	0	0						
25	0	0	0						
26	0	0	0						
27	0	0	0						
28	0	0	0						
29	0	0	0						
30	0	0	0						
31	---	---	---						
TOTAL	140	--	4525	0	--	0	0	--	0

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	24	12700	823	4.8	5330	158
2	0	0	0	10	6180	263	0	0	0
3	0	0	0	0	0	0	3.4	3710	150
4	0	0	0	0	0	0	5.2	4900	146
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	1.6	2250	79
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	110	15100	17900	0	0	0	0	0	0
28	36	12500	3130	0	0	0	0	0	0
29	56	16000	4940	0	0	0	0	0	0
30	2.4	1870	76	6.4	1950	537	0	0	0
31	1.8	813	64	30	23500	1900	--	--	--
TOTAL	206.2	--	26110	70.4	--	3523	15.0	--	533

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0						
2	381	48100	119000						
3	137	76500	28300						
4	16	51000	2200						
5	9.5	33000	846						
6	3.2	12500	219						
7	0	0	0						
8	0	0	0						
9	0	0	0						
10	0	0	0						
11	0	0	0						
12	0	0	0						
13	0	0	0						
14	0	0	0						
15	0	0	0						
16	0	0	0						
17	0	0	0						
18	0	0	0						
19	0	0	0						
20	0	0	0						
21	0	0	0						
22	0	0	0						
23	0	0	0						
24	0	0	0						
25	0	0	0						
26	78	10800	4690						
27	11	6600	196						
28	0	0	0						
29	0	0	0						
30	0	0	0						
31	0	0	0						
TOTAL	635.7	--	155451	0	--	0	0	--	0

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

431.6

34691

1067.3

190142

RIO GRANDE BASIN

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08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDE- SEDIMENT (MG/L) (80154)	SUS- PENDE- SEDIMENT (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN (70337)	SUS. SED. FALL DIAM. % FINER THAN (70326)	SUS. SED. FALL DIAM. % FINER THAN (70338)	SUS. SED. FALL DIAM. % FINER THAN (70327)
APR., 1971									
02...	1645	18.0	59	14700	2330	58	--	66	--
OCT.									
02...	1530	17.0	900	11100	27000	71	--	81	--
26...	1200	15.0	293	27800	22000	62	--	78	--

DATE	SUS. SED. FALL DIAM. % FINER THAN (70339)	SUS. SED. FALL DIAM. % FINER THAN (70328)	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. FALL DIAM. % FINER THAN (70329)	SUS. SED. FALL DIAM. % FINER THAN (70341)	SUS. SED. FALL DIAM. % FINER THAN (70330)	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. FALL DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70343)
APR., 1971									
02...	--	--	93	--	--	--	98	--	99
OCT.									
02...	--	--	98	--	--	--	100	--	--
26...	--	--	99	--	--	--	100	--	--

DATE	SUS. SED. SIEVE DIAM. % FINER THAN (70332)	SUS. SED. SIEVE DIAM. % FINER THAN (70344)	SUS. SED. SIEVE DIAM. % FINER THAN (70333)	SUS. SED. SIEVE DIAM. % FINER THAN (70345)	SUS. SED. SIEVE DIAM. % FINER THAN (70334)	SUS. SED. SIEVE DIAM. % FINER THAN (70346)	SUS. SED. SIEVE DIAM. % FINER THAN (70335)	SUS. SED. SIEVE DIAM. % FINER THAN (70336)
APR., 1971								
02...	--	100	--	--	--	--	--	--
OCT.								
02...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--

TOTAL SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDE- SEDIMENT (MG/L) (80154)	SUS- PENDE- SEDIMENT (T/DAY) (80155)	TOTAL SEDIMENT (T/DAY) (80156)	STREAM WIDTH (FOOT) (00004)	MEAN DEPTH (FT) (00064)	STREAM VELOC- ITY (FPS) (00055)
APR., 1971									
02...	1645	18.0	59	14700	2330	2470	23	.81	3.1
OCT.									
26...	1200	15.0	293	27800	22000	22200	105	1.3	2.1

RIO GRANDE BASIN

08363700 TORTUGAS ARROYO NEAR LAS CRUCES, N. MEX.

LOCATION.--Lat 32°17'15", long 106°43'43", Dona Ana County, in Dona Ana Bend Colony Grant, at gaging station, downstream from flood detention dam, 1.2 miles northeast of New Mexico State University, and 3.3 miles southeast of Las Cruces.

DRAINAGE AREA.--20.7 sq mi.

PERIOD OF RECORD.--Sediment records: July 1963 to December 1971.

REMARKS.--Chemical analyses performed on native water used in particle-size analyses. Records of specific conductance and water temperatures available at the district office in Albuquerque, N. Mex.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (000000)	DIS- SOLVED SILICA (SIU2) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	DIS- SOLVED BICAR- BONATE (MCU3) (MG/L) (00440)	DIS- SOLVED CAR- BONATE (CU3) (MG/L) (00445)	DIS- SOLVED SULFATE (SU4) (MG/L) (00945)	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)
JULY, 1971											
26...	1400	.60	24	67	10	5.1	17	249	0	7.6	2.6
AUG.											
18...	1830	.50	17	48	3.3	5.4	5.9	135	0	23	5.0
25...	1800	.24	20	58	5.5	3.1	5.3	180	0	12	2.4

DATE	DIS- SOLVED FLUOR- IDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE PLUS (N) (MG/L) (00631)	DIS- SOLVED DUE AT 180 C (MG/L) (70500)	DIS- SOLVED SOLIDS (SUM OF TUEENTS) (MG/L) (70501)	DIS- SOLVED HARD- NESS (CA, MG) (MG/L) (00900)	DIS- SOLVED BUNATE HARD- NESS (MG/L) (00902)	DIS- SOLVED SODIUM SUMP- TION MATIO (MG/L) (00931)	DIS- SOLVED SPEC- IFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	DIS- SOLVED PH (00400)	DIS- SOLVED TEMPER- ATURE (DEG C) (00010)
JULY, 1971										
26...	.2	6.5	306	284	210	4	.2	461	7.4	24.0
AUG.										
18...	.4	3.2	216	189	150	23	.2	501	7.3	25.0
25...	.4	1.9	202	204	170	20	.1	529	7.4	25.0

SUSPENDED SEDIMENT, OCTOBER 1970 TO DECEMBER 1971

Date	Flow event no.	Flow duration (hours)	Discharge (acre- feet)	Mean discharge for period (cfs)	Mean concent- ration (mg/l)	Outflow sediment load (tons)
July 26, 1971.....	45	1.25	.06	.50	10,000	7
Aug. 18, 1971.....	46	5.50	2.2	4.59	4,070	18
Aug. 25-26, 1971....	47	25.00	13.0	6.35	2,490	98

Particle-size analyses of suspended sediment, October 1970 to December 1971
(C, chemically dispersed; N, native water; P, pipet; S, sieve; V, visual accumulation tube; W, distilled water)

(C, chemically dispersed; N, native water; P, pipe; S, sieve; V, visual accumulation tube; W, distilled water)																		
Date of collection	Time	Water temperature (°C)	Discharge (cfs)	Sediment concentration (mg/l)	Sediment discharge (tons per day)	Suspended Sediment												Method of analysis
						Percent finer than indicated size in millimeters												
						0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1,000	2,000		
July 26, 1971.....	1400	24.0	0.60	53,300	86	0	2	10	30	33	51	93	100	--	--	--	VPN	
July 26, 1971.....	1400	24.0	0.60	53,300	86	5	19	28	31	33	51	93	100	--	--	--	VPWC	
Aug. 18, 1971.....	1830	25.0	0.50	3,480	5	2	8	34	99	99	99	99	99	99	99	100	SFN	
Aug. 18, 1971.....	1830	25.0	0.50	3,480	5	74	95	96	97	98	99	99	99	99	99	100	SFWC	
Aug. 25, 1971.....	1800	25.0	24.0	12,300	797	2	9	32	85	96	97	97	98	99	100	--	VPN	
Aug. 25, 1971.....	1800	25.0	24.0	12,300	797	33	44	71	87	96	97	97	98	99	100	--	VPWC	
Aug. 25, 1971.....	2400	22.0	18.0	2,410	118	69	77	--	78	--	80	81	83	89	94	97*	SFWC	

* Next indicated size of 4.000 is 100 percent.

08377900 RIO MORA NEAR TERRERO, N. MEX.
(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, in Santa Fe National Forest, at gaging station 450 ft upstream from bridge on State Highway 63, 600 ft upstream from mouth, and 2.6 miles north of Terrero.

DRAINAGE AREA.--53.2 sq mi.

PERIOD OF RECORD.--Chemical analyses: November 1962 to December 1971.
Sediment records: August 1967 to December 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANG- NESE (MN) (UG/L) (01056)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- ASSIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
UCT., 1970												
05...	0920	11	6.2	10	--	17	1.8	1.2	.4	52	0	7.6
NOV.												
02...	1510	10	5.9	10	--	18	2.0	1.0	.4	55	0	8.0
DEC.												
09...	1150	4.3	6.1	10	--	20	1.9	1.4	.5	56	0	9.2
JAN., 1971												
13...	1030	2.0	9.0	160	--	22	2.2	1.9	--	62	0	8.2
FEB.												
03...	1010	1.6	6.7	80	--	19	2.4	1.6	.4	64	0	8.5
MAR.												
16...	1130	2.6	6.7	10	--	21	2.2	1.8	.6	65	0	10
APR.												
06...	1100	5.3	6.2	20	--	17	2.0	1.5	.7	50	0	7.8
MAY												
03...	1200	17	6.4	40	--	13	2.0	1.6	.7	47	0	6.8
JUNE												
07...	1700	15	5.7	20	--	14	1.6	1.3	.5	46	0	7.5
JULY												
06...	1615	5.6	6.9	100	--	17	1.6	1.6	.7	57	0	6.8
AUG.												
16...	1520	54	--	--	--	--	--	--	--	--	--	--
SEP.												
08...	1215	32	6.0	40	--	15	1.1	1.7	.7	41	0	6.8
NOV.												
02...	1100	17	8.3	50	--	28	2.9	2.2	.7	91	0	16
DEC.												
07...	1225	10	6.3	10	0	15	1.6	1.4	.7	50	0	9.5

DATE	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)	DIS- SOLVED FLUOR- IDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)
UCT., 1970											
05...	.6	.3	.00	.00	.00	--	.00	.17	.17	.01	--
NOV.											
02...	.6	.2	.00	.00	--	--	--	--	--	.01	--
DEC.											
09...	.5	.2	.02	.10	--	--	--	--	--	.00	--
JAN., 1971											
13...	1.0	.3	--	--	--	--	--	--	--	--	--
FEB.											
03...	4.2	.3	--	--	--	.00	--	--	--	.02	--
MAR.											
16...	1.0	.5	--	--	--	.10	--	--	--	--	.01
APR.											
06...	1.1	.2	--	--	--	.00	--	--	--	--	.00
MAY											
03...	.9	.4	--	--	--	.00	--	--	--	--	.02
JUNE											
07...	.6	.2	--	--	--	.00	--	--	--	--	.01
JULY											
06...	.2	.3	--	--	--	.00	--	--	--	--	.00
AUG.											
18...	--	--	--	--	--	--	--	--	--	--	--
SEP.											
08...	2.3	.1	--	--	--	.01	--	--	--	--	.00
NOV.											
02...	1.4	.2	--	--	--	.03	--	--	--	--	.04
DEC.											
07...	1.6	.2	.05	.20	.00	.05	.00	.17	.22	.07	.01

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

TRACE ELEMENT AND RADIOCHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS-SOLVED COBALT (CU) (UG/L) (01035)	DIS-SOLVED CUPPER (CU) (UG/L) (01040)	DIS-SOLVED GALLIUM (GA) (UG/L) (01120)	DIS-SOLVED GEN- MANIUM (GE) (UG/L) (01125)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED LEAD (PB) (UG/L) (01049)	DIS-SOLVED LITHIUM (LI) (UG/L) (01130)	DIS-SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS-SOLVED MERCURY (RG) (UG/L) (71890)	DIS-SOLVED MULTI- GENUM (MO) (UG/L) (01060)
OCT., 1970										
05...	0	<1	<1	<2	10	0	1	3	<.5	<1
APR., 1971										
06...	<7	<1	<1	<2	20	2	2	<1	--	<1
NOV.										
02...	--	--	--	--	50	--	--	--	--	--

[illegible]

08377900 RIO MORA NEAR TERRERO, N. MEX.--Continued

TRACE ELEMENT AND RADIOCHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	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 SK90 (PC/L) (80050)	SUS- PENDED GROSS BETA AS SK90 (PC/L) (80060)	DIS- SOLVED KA-226 (MADUN METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)	DIS- SOLVED URANIUM (U) (UG/L) (80020)
OCT., 1970									
05...	1.5	<.4	1.4	<.4	1.1	<.4	.04	--	.21
APR., 1971									
06...	--	--	--	--	--	--	--	--	--
NOV.									
02...	1.9	<.4	1.9	<.4	1.5	<.4	.07	.4	.46

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- CUBALT UNITS) (00080)
OCT., 1970							
05...	0920	11	117	7.6	6.0	9.0	4
NOV.							
02...	1310	10	110	8.1	2.0	6.0	2
DEC.							
09...	1150	4.3	102	8.0	.0	10.5	2
JAN., 1971							
13...	1030	2.0	120	8.0	1.0	-5	3
FEB.							
03...	1010	1.6	122	--	.0	1.0	1
MAR.							
16...	1130	2.6	125	8.0	.0	7.0	2
APR.							
06...	1100	5.3	98	8.0	1.5	6.5	2
MAY							
03...	1200	17	100	8.3	14.0	16.0	4
JUNE							
07...	1700	15	95	8.0	14.5	21.5	3
JULY							
06...	1615	5.6	100	8.0	19.0	25.5	5
SEP.							
08...	1215	32	82	7.9	11.5	28.5	5
NOV.							
02...	1100	17	140	8.2	7.0	10.0	6
DEC.							
07...	1225	10	95	8.3	.0	2.0	4

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970							
05...	1	9.0	4	.8	0	0	0
NOV.							
02...	1	6.5	3	.6	0	0	0
DEC.							
09...	3	--	1	.3	A < 100	0	0
JAN., 1971							
13...	2	8.7	3	1.2	0	0	0
FEB.							
03...	1	12.2	3	.4	0	0	5
MAR.							
16...	0	12.8	1	.5	0	0	10
APR.							
06...	0	9.6	1	1.0	2	1	1
MAY							
03...	1	9.3	6	.0	6	3	54
JUNE							
07...	1	8.0	4	.5	5	0	7
JULY							
06...	1	6.9	3	.2	160	6	19
SEP.							
08...	1	8.8	4	.3	5	0	20
NOV.							
02...	2	10.1	3	1.4	41	39	62
DEC.							
07...	1	10.4	4	.0	3	--	1

A BACTERIA ANALYZED BY THE NEW MEXICO ENVIRONMENTAL IMPROVEMENT AGENCY ON SAMPLES COLLECTED BY THE U.S. GEOLOGICAL SURVEY.

RIO GRANDE BASIN

08377900 RIO MORA NEAR TERRERO, N. MEX.--Continued

PESTICIDE ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	ALDRIN (UG/L) (39330)	ALDRIN IN BOTTOM DE- PUSITS (UG/KG) (39333)	CHLOR- DANE (UG/L) (39350)	CHLOR- DANE IN BOTTOM DE- PUSITS (UG/KG) (39351)	DDD (UG/L) (39360)	DDD IN BOTTOM DE- PUSITS (UG/KG) (39363)	DDE (UG/L) (39365)	DDE IN BOTTOM DE- PUSITS (UG/KG) (39368)	DDT (UG/L) (39370)	DDT IN BOTTOM DE- PUSITS (UG/KG) (39373)
OCT., 1970											
05...	0920	.00	<.2	.0	<.1	.00	1.2	.00	2.0	.00	3.5
DEC., 1971											
07...	1225	.00	<.2	.0	<.1	.00	4.6	.00	4.1	.00	2.3

DATE	DI- AZINON (UG/L) (39570)	DI- AZINON IN BOTTOM DE- PUSITS (UG/KG) (39571)	DI- ELDRIN (UG/L) (39380)	DI- ELDRIN IN BOTTOM DE- PUSITS (UG/KG) (39383)	ENDRIN (UG/L) (39390)	ENDRIN IN BOTTOM DE- PUSITS (UG/KG) (39393)	HEPTA- CHLOR (UG/L) (39410)	HEPTA- CHLOR IN BOTTOM DE- PUSITS (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE (UG/L) (39420)	HEPTA- CHLOR EPOXIDE IN BUT- TUM DE- PUSITS (UG/KG) (39423)	LINDANE (UG/L) (39340)
OCT., 1970											
05...	.00	<.2	.00	<.2	.00	<.2	.00	<.2	.00	<.2	.00
DEC., 1971											
07...	.00	--	.00	<.2	.00	<.2	.00	<.2	.00	<.2	.00

DATE	LINDANE IN BOTTOM DE- PUSITS (UG/KG) (39343)	MALA- THIUN (UG/L) (39530)	MALA- THIUN IN BOTTOM DE- PUSITS (UG/KG) (39531)	METHYL PARA- THIUN (UG/L) (39600)	METHYL PARA- THIUN IN BUT- TUM DE- PUSITS (UG/KG) (39601)	PARA- THIUN (UG/L) (39540)	PARA- THIUN IN BOTTOM DE- PUSITS (UG/KG) (39541)	2,4-D (UG/L) (39730)	2,4,5-T (UG/L) (39740)	SILVEX (UG/L) (39760)
OCT., 1970										
05...	<.2	.00	<.2	.00	<.2	.00	<.2	.00	.00	.00
DEC., 1971										
07...	<.2	.00	<.2	.00	<.2	.00	<.2	.00	.00	.00

INSTANTANEOUS SUSPENDED-SEDIMENT,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PEN- DED SED- IMENT (MG/L) (80154)	SUS- PEN- DED SED- IMENT DIS- CHARGE (T/DAY) (80155)
OCT., 1970					
05...	0920	6.0	11	4	.12
NOV.					
02...	1310	2.0	10	2	.05
JAN., 1971					
13	1030	1.0	2.0	10	.05
FEB.					
03...	1010	.0	1.6	1	.00
MAR.					
16...	1130	.0	2.6	1	.01
APR.					
06...	1100	1.5	5.3	1	.01
MAY					
03...	1200	14.0	17	4	.18
JUNE					
07...	1700	14.5	15	2	.08
JULY					
06...	1615	19.0	5.6	5	.08
20...	1430	16.0	21	23	1.3
SEP.					
08...	1215	11.5	32	1	.09
NOV.					
02...	1100	7.0	17	2	.09
29...	1200	5.0	14	2	.08
DEC.					
07...	1225	.0	10	1	.03
24...	1045	.0	12	18	.58

RIO GRANDE BASIN

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08378500 PECOS RIVER NEAR PECOS, N. MEX.

LOCATION.--Lat 35°42'30", long 105°40'55", in NE¼NE¼ sec.17, T.17 N., R.12 E., San Miguel County, in Santa Fe National Forest, at gaging station on left bank at downstream side of bridge on private road, 300 ft upstream from Indian Creek, 2.4 miles downstream from Holy Ghost Creek, and 9.0 miles north of Pecos.

DRAINAGE AREA.--189 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1970 to December 1971.

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (000060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (000095)	TEMPER- ATURE (DEG C) (00010)	CULUM (PLAT- INUM- CUBALT UNITS) (000080)	TUR- BID- ITY (JTU) (00070)
OCT., 1970						
05...	1230	40	185	10.0	2	1
JAN., 1971						
04...	1010	17	205	--	0	1
FEB.						
17...	1505	22	191	--	1	0
APR.						
02...	1100	18	176	5.0	0	0
20...	0950	28	157	--	6	0
MAY						
11...	1205	50	350	7.0	2	3
27...	1030	64	143	7.5	5	1
JUNE						
15...	1150	46	168	12.0	2	1
JULY						
29...	1445	52	137	18.0	5	2
AUG.						
18...	1030	101	138	11.0	5	10
SEP.						
28...	1330	59	168	9.0	3	1
NOV.						
29...	1050	45	176	.0	3	1
DEC.						
21...	1300	42	192	.0	3	1

08379500 PECOS RIVER NEAR ANTON CHICO, N. MEX.

LOCATION.--Lat 35°10'44", long 105°06'30", Guadalupe County in Anton Chico Grant, at gaging station 2.1 miles upstream from Canon Blanco, 2.3 miles southeast of Anton Chico, and 9.7 miles downstream from Tecolote Creek.

DRAINAGE AREA.--1,050 sq mi, approximately (contributing area).

PERIOD OF RECORD.--Chemical analyses: August 1967 to December 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	
		CHARGE (CFS) (00060)	SOLVED SILICA (SIU2) (MG/L) (00955)	SOLVED IRON (FE) (UG/L) (01046)	SOLVED CAL- CIUM (CA) (MG/L) (00915)	SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	SOLVED SODIUM (NA) (MG/L) (00950)	SOLVED SODIUM PLUS POTAS- SIUM (MG/L) (00933)	
OCT., 1970									
09...	1245	41	7.6	--	60	2.1	--	2.8	
28...	1145	49	9.0	--	48	6.0	4.9	--	
NOV.									
16...	1445	32	9.0	10	50	6.1	5.8	--	
DEC.									
16...	1105	32	8.5	--	52	8.2	8.8	--	
JAN., 1971									
19...	1305	20	9.1	--	48	6.4	10	--	
FEB.									
17...	1325	24	6.5	--	54	7.4	12	--	
MAR.									
15...	1410	90	10	--	65	11	9.0	--	
APR.									
21...	1315	5.0	8.4	50	48	8.4	7.7	--	
MAY									
20...	1445	3.9	11	--	49	10	8.5	--	
JULY									
28...	1500	53	12	--	43	5.4	4.1	--	
AUG.									
05...	1450	95	12	--	46	5.3	4.8	--	
25...	1430	306	12	--	43	4.2	5.1	--	
SEP.									
14...	1300	62	8.8	--	51	8.5	6.0	--	
OCT.									
05...	1450	65	9.0	0	42	4.7	5.5	--	
27...	1250	166	8.5	20	38	4.6	6.0	--	
NOV.									
22...	1355	52	8.5	--	47	6.4	9.9	--	
DATE	DIS-	BICAR-	CAR-	DIS-	DIS-	DIS-	DIS-	DIS-	
	SOLVED PU- TAS- SIUM (K) (MG/L) (00935)	BONATE (CO3) (MG/L) (00440)	BONATE (CO3) (MG/L) (00445)	SOLVED SULFATE (SO4) (MG/L) (00945)	SOLVED CHLO- RIDE (CL) (MG/L) (00940)	SOLVED FLUO- RIDE (F) (MG/L) (00950)	SOLVED NITRATE (N) (MG/L) (00618)	SOLVED NITRATE (N) (MG/L) (71851)	SOLVED NITRATE PLUS NITRATE (N) (MG/L) (00631)
OCT., 1970									
09...	--	164	6	17	8	.3	.05	.20	--
28...	1.3	170	0	17	2.0	.3	--	--	.10
NOV.									
16...	1.4	177	0	19	2.0	.3	--	--	.10
DEC.									
16...	1.3	194	0	23	4.0	.4	--	--	.00
JAN., 1971									
19...	1.4	172	0	21	3.3	.4	--	--	.00
FEB.									
17...	1.4	190	0	28	5.2	.5	--	--	.00
MAR.									
15...	2.3	223	0	29	3.1	.2	--	--	.50
APR.									
21...	1.5	199	0	26	2.6	.3	--	--	.20
MAY									
20...	1.6	202	0	23	2.2	.3	--	--	.33
JULY									
28...	2.6	151	0	16	2.3	.3	--	--	.65
AUG.									
05...	2.6	163	0	18	2.5	.4	--	--	.32
25...	2.4	169	0	7.5	--	.1	--	--	.25
SEP.									
14...	2.0	185	0	21	2.1	.3	--	--	.09
OCT.									
05...	1.3	142	0	17	2.2	.2	--	--	.05
27...	1.8	135	0	14	2.4	.2	--	--	.34
NOV.									
22...	1.2	166	0	20	3.5	.2	--	--	.01

RIO GRANDE BASIN

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08379500 PECOS RIVER NEAR ANTON CHICO, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SUMP- TION MILLI (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED SOLIDS (G) (01020)
OCT., 1970								
09...	178	158	14	.1	308	8.5	18.0	--
28...	170	140	1	.2	296	7.6	10.0	--
NOV.								
16...	181	140	0	.2	309	7.7	9.0	0
DEC.								
16...	200	160	1	.3	347	8.3	.0	--
JAN., 1971								
19...	190	150	9	.4	280	7.8	9.0	--
FEB.								
17...	210	160	4	.4	352	8.2	8.0	--
MAR.								
15...	242	210	27	.3	421	8.0	13.0	--
APR.								
21...	202	150	0	.3	364	8.0	20.5	50
MAY								
20...	206	160	0	.3	336	8.0	25.0	--
JULY								
28...	163	130	6	.2	270	7.2	26.0	--
AUG.								
05...	173	140	3	.2	265	7.4	25.0	--
25...	--	120	0	.1	284	7.2	22.0	--
SEP.								
14...	191	160	11	.2	334	8.1	--	--
OCT.								
05...	150	120	8	.1	258	8.0	20.0	10
27...	143	110	3	.2	258	7.6	11.0	20
NOV.								
22...	178	140	8	.4	307	8.0	9.0	--

08383000 PECOS RIVER AT SANTA ROSA, N. MEX.

LOCATION (revised).--Lat 34°56'36", long 104°41'55", in NW¼SE¼ sec.3, T.8 N., R.21 E., Guadalupe County, 0.6 mile downstream from gaging station, at bridge on U.S. Highway 66, in Santa Rosa, and 1.3 miles upstream from El Rito Creek.

DRAINAGE AREA.--2,650 sq mi, approximately (contributing area).

PERIOD OF RECORD.--Chemical analyses: July 1905 to December 1906. November 1970 to December 1971.

Specific conductance: October 1964 to December 1971.

Water temperatures: October 1958 to December 1971.

Sediment records: October 1958 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum daily, 2,180 micromhos July 14-15, 18-19, 1971; minimum daily, 255 micromhos Aug. 25, 1971.

Water temperatures: Maximum, 33°C June 22, 1971, minimum, freezing point Jan. 5-6, 8, 1971.

Sediment concentrations: Maximum daily, 29,400 mg/l Aug. 8, 1971; minimum daily, 9 mg/l Apr. 4, 7, 28, 1971.

Sediment discharge: Maximum daily, 344,000 tons July 30, 1971; minimum daily, 0.28 tons Jan. 5, 1971.

EXTREMES, 1958-71.--Specific conductance (1964-71): Maximum daily, 2,480 micromhos Sept. 18, 1969; minimum daily, 198 micromhos Aug. 6, 1966.

Water temperatures: Maximum (1958-63, 1964-71), 38°C May 11, 1970; minimum, freezing point on several days during winter months of most years.

Sediment concentrations: Maximum daily, 31,400 mg/l Aug. 18, 1961; minimum daily, 4 mg/l Apr. 22, 1967.

Sediment discharge: Maximum daily, 344,000 tons July 30, 1971; minimum daily, 0.28 tons Jan. 5, 1971.

REMARKS.--Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey. Chemical analysis performed on native water used in sediment particle-size analysis.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED CHARGE (CFS) (000600)	DIS- SOLVED SILICA (SIU2) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (MCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SU4) (MG/L) (00945)	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)
AUG., 1971											
10...	1125	524	14	59	6.8	6.2	3.1	135	0	76	5.0

DATE	TIME	DIS- SOLVED FLUOR- IDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00631)	DIS- SOLVED NITRITE (NRS1- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUEENTS) (MG/L) (70301)	HAZAR- DOUS NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HAR- DOUS NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (MG/L) (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH	TEMPER- ATURE (DEG C) (00010)
AUG., 1971											
10...		.3	.59	248	234	180	65	2	377	8.0	20.0

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (000600)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
NOV., 1970								
04...	1015	24	1500	8.5	9.5	36000	14600	500
DEC.								
08...	1230	18	1600	11.0	20.0	500	190	40
JAN., 1971								
12...	1315	30	1500	6.5	15.0	10	<10	<10
FEB.								
01...	0720	21	1600	3.5	4.0	<100	10	<10
MAR.								
03...	1200	12	1600	6.5	2.5	10000	100	430
APR.								
14...	1400	17	2100	23.0	25.0	--	--	--
MAY								
11...	1230	10	2000	21.0	23.0	40000	--	550
JUNE								
15...	1330	17	1800	24.5	30.5	10	<10	10
JULY								
14...	1300	12	2250	24.5	35.0	40	10	180
AUG.								
10...	1125	324	345	20.0	27.5	--	--	--
SEP.								
14...	1120	12	1750	23.0	31.5	--	--	--
OCT.								
15...	1140	11	1850	17.0	18.5	--	--	--
NOV.								
09...	1040	20	1600	10.5	15.5	--	--	--
DEC.								
12...	0820	19	1400	2.0	0.0	--	--	--

E ESTIMATED

RIO GRANDE BASIN

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08383000 PECOS RIVER AT SANTA ROSA, N. MEX.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1420	1470	1580	1590	1660	1700	1770	1770	1960	1820	494	569	1140	825	1630
2	1450	1450	1440	1560	1610	1600	1740	1770	1950	1780	430	810	1490	823	1340
3	1450	1470	1590	1980	1590	1480	1700	1790	1930	1830	561	990	1300	869	1580
4	1410	1480	1510	---	1610	1480	1750	1810	1990	2000	660	1240	960	950	1660
5	1540	1480	1540	1790	1610	1610	1670	1930	1980	1960	967	1510	1020	1070	1730
6	1530	1570	1540	1970	1530	1650	1720	1850	2010	1970	917	1550	1330	1220	1780
7	1370	1500	1550	1830	1620	1650	1760	1810	2020	2030	614	1570	1520	1430	1610
8	1430	1500	1540	2100	1610	1610	1750	1790	1930	1990	312	1640	1610	1540	1730
9	1500	1500	1300	1780	1570	1630	1730	1810	1990	1920	346	1640	1710	1540	1890
10	1500	1500	1670	1240	1570	1690	1740	1840	1980	1950	370	1650	1670	1590	1860
11	---	1480	1520	1240	1640	1670	1720	1850	2010	2030	403	1650	1670	1600	1870
12	1460	1480	1410	1300	1650	1710	1790	1870	1970	2040	459	1690	1710	1700	1720
13	1500	1470	1630	1300	1610	1670	1790	1840	1970	2080	518	1680	1760	1660	1850
14	1500	1440	1500	1240	1620	1730	1760	1850	2020	2180	626	1760	1740	1750	1610
15	1370	1490	1370	1860	1660	1730	1750	1850	1970	2180	450	1770	1730	1680	1790
16	1270	1530	1620	1640	1630	1700	1690	1850	1860	2170	478	1690	1810	1560	1900
17	1370	1540	1330	1620	1630	1650	1690	1890	1950	2160	790	1750	1780	1600	1840
18	1430	1510	1630	1660	1630	1710	1720	1930	1900	2180	1000	1590	1770	1720	1910
19	1440	1520	1510	1630	1710	1690	1780	1850	1910	2180	1130	1530	1740	1690	1920
20	1450	1520	1410	1640	1640	1510	1720	1900	1930	476	855	1670	1750	1440	1740
21	1500	1490	1470	1660	1880	1640	1750	1870	1950	465	983	1800	1710	1500	1820
22	1520	1510	1620	1640	1570	1680	1750	1950	1960	474	987	1810	1750	1600	1680
23	1500	1630	1720	1650	1700	1680	1700	1960	1930	504	796	1640	1750	1680	1740
24	1500	1630	1690	1630	1570	1640	1700	1940	2040	630	997	1370	1780	1720	1730
25	1510	1500	1580	1670	1700	1730	1740	1920	2070	667	255	1630	1590	1730	1730
26	1530	1500	1530	1660	1700	1670	1800	1960	2070	620	409	1690	1030	1780	1750
27	1500	1510	1500	1650	1760	1730	1830	1910	2070	525	455	1800	774	1740	1770
28	1500	1510	1580	1660	1690	1720	1800	1880	1910	545	553	1760	578	1770	1760
29	1480	1510	1720	1640	---	1750	1800	1880	1930	535	---	1730	625	1750	1540
30	1480	1550	1560	1670	---	1730	1760	1920	1950	395	307	1140	732	1740	1090
31	1500	---	1610	1650	---	1800	---	2130	---	484	391	---	775	---	1110
MONTH	1460	1510	1540	1640	1640	1580	1750	1880	1970	1440	617	1540	1430	1510	1700

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	24.0	9.0	10.0	5.0	10.0	10.0	17.0	11.0	26.0	18.0	17.0	24.0	15.0	12.0	8.0
2	25.0	10.0	12.0	5.0	12.0	10.0	17.0	24.0	24.0	27.5	19.0	23.0	16.0	11.0	5.0
3	21.0	11.0	10.0	2.0	10.0	7.0	21.0	28.0	26.0	18.0	27.0	23.0	15.0	10.0	6.0
4	16.0	14.0	8.0	---	8.0	15.0	9.0	19.0	27.0	21.5	28.0	18.0	20.0	11.0	5.0
5	20.0	15.0	10.0	0.0	12.0	14.0	19.0	23.0	27.0	20.5	25.0	18.0	13.0	9.0	4.0
6	20.0	16.0	10.0	0.0	3.0	8.0	21.0	23.0	29.0	28.0	21.0	23.0	16.0	11.0	8.0
7	18.0	11.0	13.0	1.0	6.0	16.0	18.0	16.0	27.0	27.0	19.0	25.0	16.0	7.0	7.0
8	8.0	8.0	10.0	0.0	8.0	14.0	22.0	19.0	29.0	30.0	18.0	28.0	17.0	8.0	2.0
9	12.0	13.0	11.0	3.0	7.0	12.0	15.0	11.0	22.0	29.0	15.0	25.0	23.0	14.0	7.0
10	15.0	14.0	7.0	3.0	10.0	8.0	19.0	27.0	22.0	32.0	20.0	24.0	25.0	16.0	5.0
11	---	15.0	10.0	5.0	13.0	15.0	16.0	21.0	27.0	29.0	21.0	22.0	22.0	11.0	3.0
12	21.0	10.0	7.0	6.5	10.0	18.0	24.0	22.0	25.0	28.0	22.0	25.0	20.0	12.0	5.0
13	20.0	8.0	4.0	10.0	8.0	15.0	22.0	20.0	22.0	32.0	22.0	25.0	18.0	9.0	7.0
14	15.0	10.0	4.0	6.0	13.0	10.0	21.0	24.0	24.0	29.5	20.0	22.0	23.0	9.0	7.0
15	8.0	5.0	5.0	8.0	---	15.0	17.0	20.0	28.0	28.0	25.0	17.0	13.0	11.0	4.0
16	10.0	11.0	8.0	6.0	---	15.0	25.0	19.0	20.0	32.0	26.0	22.0	13.0	12.0	3.0
17	10.0	12.0	12.0	8.0	8.0	15.0	20.0	22.0	25.0	27.0	28.0	3.0	19.0	11.0	6.0
18	11.0	10.0	10.0	12.0	10.0	18.0	18.0	23.0	24.0	19.0	29.0	11.0	13.0	9.0	4.0
19	15.0	10.0	5.0	12.0	7.0	19.0	13.0	26.0	28.0	22.0	30.0	16.0	14.0	6.0	9.0
20	19.0	13.0	5.0	11.0	7.0	14.0	16.0	29.0	23.0	19.0	25.0	21.0	14.0	8.0	5.0
21	15.0	10.0	5.0	13.0	3.0	17.0	17.0	23.0	25.0	25.0	20.0	18.0	19.0	7.0	10.0
22	18.0	8.0	6.0	11.0	3.0	18.0	18.0	21.0	33.0	22.0	20.0	14.0	12.0	8.0	9.0
23	14.0	8.0	4.0	8.0	4.0	19.0	20.0	14.0	21.5	23.0	27.0	11.0	17.0	11.0	12.0
24	15.0	7.0	3.0	5.0	14.0	15.0	20.0	29.0	22.0	26.0	24.0	15.0	14.0	12.0	13.0
25	16.0	---	2.0	13.0	11.0	20.0	16.0	23.0	22.5	20.0	23.0	17.0	14.0	9.0	8.0
26	16.0	10.0	4.0	10.0	5.0	19.0	19.0	20.0	22.0	25.0	25.0	15.0	13.0	12.0	11.0
27	12.0	11.0	8.0	9.0	7.0	20.0	23.0	20.0	19.5	19.0	28.0	17.0	13.0	10.0	11.0
28	16.0	13.0	8.0	---	6.0	14.0	16.0	19.0	28.0	20.0	25.0	15.0	15.0	8.0	7.0
29	15.0	9.0	9.0	10.0	---	20.0	24.0	23.0	22.0	15.5	---	16.0	9.0	8.0	7.0
30	10.0	10.0	8.0	12.0	---	20.0	20.0	14.0	27.0	14.0	19.0	16.0	9.0	10.0	7.0
31	15.0	---	5.0	7.0	---	16.0	---	13.0	---	18.0	23.0	---	7.0	---	2.0
MONTH	15.5	10.5	7.5	7.0	8.5	15.0	19.0	21.0	25.0	24.0	23.0	19.0	15.5	10.0	6.5

RIO GRANDE BASIN

08383000 PECOS RIVER AT SANTA ROSA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	20	292	16	24	57	3.7	16	87	3.8
2	20	188	10	22	67	4.0	16	98	4.2
3	19	142	7.3	24	58	3.8	17	453	21
4	25	225	15	24	106	6.9	17	133	6.1
5	22	159	9.4	22	122	7.2	19	75	3.8
6	20	97	5.2	22	388	23	19	69	3.5
7	20	108	5.8	24	176	11	19	88	4.5
8	25	112	7.6	22	98	5.8	18	97	4.7
9	24	97	6.3	20	196	5.7	17	53	2.4
10	19	73	3.7	20	117	6.3	17	77	3.5
11	19	86	4.4	22	101	6.0	18	87	4.2
12	17	102	4.7	22	102	6.1	18	64	3.1
13	19	101	5.2	22	140	8.3	20	46	2.5
14	17	97	4.5	22	325	19	20	93	5.0
15	24	118	7.6	24	214	14	21	139	7.9
16	25	133	9.0	20	136	7.3	21	203	12
17	20	127	6.9	20	99	5.3	20	50	2.7
18	19	118	6.1	20	118	6.4	19	124	6.4
19	17	110	5.0	19	96	4.9	17	98	4.5
20	17	102	4.7	20	117	6.3	20	35	1.9
21	17	103	4.7	20	125	6.8	20	42	2.3
22	17	127	5.8	22	97	5.8	19	86	4.4
23	19	110	5.6	19	410	21	16	72	3.1
24	19	67	3.4	20	121	6.5	17	55	2.5
25	19	75	3.8	19	115	5.9	20	88	4.8
26	19	75	3.8	18	105	5.1	24	75	4.9
27	20	70	3.8	17	92	4.2	24	93	6.0
28	20	70	3.8	17	90	4.1	20	83	4.5
29	22	78	4.6	17	81	3.7	20	77	4.2
30	22	85	5.0	16	93	4.0	22	63	3.7
31	24	67	4.3	--	--	--	22	57	3.4
TOTAL	626	--	193.0	620	--	228.1	593	--	151.5
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	22	62	3.7	22	119	7.1	14	61	2.3
2	20	70	3.8	19	101	5.2	13	123	4.3
3	9.0	67	1.6	20	85	4.6	12	121	3.9
4	5.0	72	.97	19	92	4.7	16	120	5.2
5	1.0	103	.28	16	103	4.4	17	125	5.7
6	1.0	113	.31	19	66	3.4	16	71	3.1
7	3.0	138	1.1	17	60	2.8	16	67	2.9
8	9.0	101	2.5	11	111	3.3	17	79	3.6
9	17	102	4.7	13	89	3.1	16	43	1.9
10	25	106	7.2	13	165	5.8	14	41	1.5
11	31	112	9.4	14	106	4.0	16	72	3.1
12	31	89	7.4	14	115	4.3	16	68	2.9
13	31	130	11	14	50	1.9	17	24	1.1
14	25	203	14	14	76	2.9	17	56	2.6
15	24	200	13	16	53	2.3	17	43	2.0
16	24	155	10	16	40	1.7	19	44	2.3
17	22	184	11	17	39	1.8	17	35	1.6
18	20	306	17	19	206	11	17	37	1.7
19	20	223	12	19	40	2.1	16	26	1.1
20	20	287	15	19	84	4.3	16	32	1.4
21	20	321	17	16	67	2.9	17	33	1.5
22	20	172	9.3	13	87	3.1	16	27	1.2
23	19	142	7.3	20	87	4.7	17	32	1.5
24	17	176	8.1	20	81	4.4	17	38	1.7
25	19	203	10	19	93	4.8	16	35	1.5
26	20	160	8.6	17	78	3.6	17	24	1.1
27	20	118	6.4	16	33	1.4	17	22	1.0
28	20	220	12	19	33	1.7	17	17	.78
29	22	196	12	--	--	--	18	23	1.1
30	22	150	8.9	--	--	--	18	29	1.4
31	22	102	6.1	--	--	--	16	22	.95
TOTAL	581.0	--	251.66	471	--	107.3	505	--	67.93

08383000 PECOS RIVER AT SANTA ROSA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	15	17	.69	12	21	.68	10	43	1.2
2	16	22	.95	12	32	1.0	10	24	.65
3	17	21	.96	12	45	1.5	12	44	1.4
4	17	9	.41	11	24	.71	11	37	1.1
5	17	22	1.0	11	26	.77	10	25	.68
6	17	12	.55	12	21	.68	11	26	.77
7	17	9	.41	12	18	.58	11	33	.98
8	17	16	.73	12	17	.55	12	45	1.5
9	17	13	.60	11	20	.59	12	66	2.1
10	17	22	1.0	10	42	1.1	11	28	.83
11	17	24	1.1	10	35	.95	10	43	1.2
12	16	19	.82	11	41	1.2	11	45	1.3
13	16	11	.48	11	19	.56	11	27	.80
14	17	11	.50	11	42	1.2	10	42	1.1
15	19	12	.62	11	24	.71	10	58	1.6
16	19	27	1.4	10	25	.68	10	36	.97
17	18	14	.68	10	30	.81	9.0	41	1.0
18	17	22	1.0	10	49	1.3	9.0	31	.75
19	17	11	.50	11	52	1.5	12	61	2.0
20	17	22	1.0	10	39	1.1	10	44	1.2
21	16	12	.52	10	27	.73	10	62	1.7
22	14	17	.64	10	24	.65	9.0	66	1.6
23	14	21	.79	10	26	.70	9.0	40	.97
24	16	15	.65	10	45	1.2	8.1	30	.66
25	13	19	.67	10	30	.81	8.1	41	.90
26	13	21	.74	9.0	27	.66	9.0	28	.68
27	13	17	.60	9.0	76	1.8	21	145	8.2
28	13	9	.32	9.0	34	.83	64	847	146
29	13	30	1.1	9.0	30	.73	17	733	34
30	13	21	.74	9.0	20	.49	10	643	17
31	--	--	--	12	57	1.8	--	--	--
TOTAL	478	--	22.17	327.0	--	28.57	377.2	--	234.84

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	11	324	9.6	510	18500	25500	101	2140	584
2	11	350	10	327	14700	13000	54	1350	197
3	10	225	6.1	119	7000	2250	39	640	67
4	8.1	200	4.4	144	6300	2450	27	242	18
5	8.1	175	3.8	41	1000	111	22	241	14
6	6.6	182	3.2	64	2200	380	22	118	7.0
7	6.6	187	3.3	82	5200	1150	19	113	5.8
8	7.3	192	3.8	2100	29400	194000	17	80	3.7
9	10	200	5.4	495	13700	18300	17	86	3.9
10	10	175	4.7	355	11300	10800	17	80	3.7
11	8.1	146	3.2	342	8200	7570	16	60	2.6
12	8.1	124	2.7	232	5000	3130	16	62	2.7
13	9.0	193	4.7	108	2200	642	16	53	2.3
14	10	89	2.4	58	1200	188	13	47	1.6
15	11	142	4.2	352	11300	14400	14	77	2.9
16	13	161	5.7	193	4500	2600	16	43	1.9
17	13	163	5.7	90	3530	1460	16	126	5.4
18	14	178	6.7	48	2100	272	19	87	4.5
19	17	1150	53	54	6390	746	18	39	1.9
20	1650	18900	124000	66	2670	476	15	54	2.2
21	872	21800	50800	51	1400	193	15	24	.97
22	498	21300	28600	56	2450	370	15	61	2.5
23	216	13400	7810	66	3080	549	19	42	2.2
24	177	9900	4730	630	7420	42900	21	70	4.0
25	202	10800	5890	2360	19300	185000	18	395	19
26	173	13800	6450	347	9600	8990	14	69	2.6
27	168	11600	5260	182	5340	2620	14	350	13
28	112	7500	2270	108	1950	569	16	39	1.7
29	244	10900	8000	66	1050	187	17	48	2.2
30	4570	26500	344000	481	6630	10700	91	3080	950
31	586	18300	29000	226	4640	2830	--	--	--
TOTAL	9659.9	--	616952.6	10353	--	554333	734	--	1930.27

RIO GRANDE BASIN

08383000 PECOS RIVER AT SANTA ROSA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	35	1470	139	58	620	97	20	54	2.9
2	22	450	27	56	500	76	19	72	3.7
3	40	1380	188	54	550	80	18	58	2.8
4	46	1110	138	48	352	46	19	40	2.1
5	37	950	95	37	228	23	19	29	1.5
6	24	352	23	31	182	15	19	32	1.6
7	17	196	9.0	24	107	6.9	19	60	3.1
8	14	123	4.6	20	82	4.4	17	98	4.5
9	13	114	4.0	20	62	3.3	16	156	6.7
10	13	132	4.6	19	67	3.4	17	383	18
11	12	109	3.5	17	67	3.1	17	54	2.5
12	11	93	2.8	17	68	3.1	18	115	5.6
13	11	61	1.8	16	148	6.4	19	45	2.3
14	13	72	2.5	16	93	4.0	19	75	3.8
15	14	72	2.7	17	87	4.0	14	48	1.8
16	13	54	1.9	20	60	3.2	14	58	2.2
17	14	48	1.8	20	37	2.0	14	65	2.5
18	14	67	2.5	17	30	1.4	14	57	2.2
19	14	52	2.0	19	92	4.7	16	76	3.3
20	12	36	1.2	25	232	16	14	64	2.4
21	13	92	3.2	24	172	11	14	42	1.6
22	13	87	3.1	20	109	5.9	16	106	4.6
23	13	66	2.3	19	52	2.7	16	62	2.7
24	13	55	1.9	17	36	1.7	16	43	1.9
25	14	120	4.5	17	27	1.2	16	36	1.6
26	64	1680	290	17	30	1.4	16	34	1.5
27	151	5700	2320	17	28	1.3	16	32	1.4
28	101	5350	1460	17	32	1.5	16	27	1.2
29	85	2950	677	17	39	1.8	24	62	4.0
30	66	1440	257	17	39	1.8	31	232	19
31	61	750	124	--	--	--	29	382	30
TOTAL	983	--	5797.9	733	--	433.2	552	--	145.0

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

25325.1

1174500.94

25754.1

1180304.44

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDIMENT (MG/L) (80154)	SUS- PENDED SEDIMENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70326)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70327)
DEC., 1970									
13...	1535	10.0	20	453	24	58	--	74	--
JAN., 1971									
14...	1720	6.0	41	323	36	49	--	60	--
FEB.									
19...	0935	7.0	18	511	25	57	--	75	--
JULY									
20...	0845	17.0	3780	31000	316000	27	--	35	--
21...	1105	20.0	2000	24500	132000	42	--	54	--
29...	1430	15.5	78	4670	984	52	--	62	--
AUG.									
08...	0950	15.0	4560	24500	302000	29	--	33	--
10...	1125	20.0	324	10000	8750	49	5	60	17
22...	0915	20.0	53	2680	384	65	--	84	--
SEP.									
01...	1005	24.0	116	2160	677	51	--	68	--
30...	0835	16.0	151	4430	1810	32	--	40	--
OCT.									
04...	1800	20.0	41	1970	218	56	--	76	--
28...	1600	15.0	97	4970	1300	45	--	59	--
DEC.									
31...	1040	2.0	19	350	18	--	--	--	--

RIO GRANDE BASIN

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08383000 PECOS RIVER AT SANTA ROSA, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	SUS. SED. FALL DIAM. % FINER THAN (70339)	SUS. SED. FALL DIAM. % FINER THAN (70328)	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. FALL DIAM. % FINER THAN (70329)	SUS. SED. FALL DIAM. % FINER THAN (70341)	SUS. SED. FALL DIAM. % FINER THAN (70330)	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. FALL SIEVE DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70343)
DEC., 1970									
13...	--	--	92	--	--	--	--	95	--
JAN., 1971									
14...	--	--	76	--	--	--	--	93	--
FEB.									
19...	--	--	98	--	--	--	--	99	--
JULY									
20...	--	--	51	--	--	--	93	--	98
21...	--	--	68	--	--	--	93	--	99
29...	--	--	85	--	--	--	94	--	96
AUG.									
08...	--	--	40	--	--	--	91	--	98
10...	65	54	73	75	83	83	91	--	96
22...	--	--	96	--	--	--	97	--	97
SEP.									
01...	--	--	93	--	--	--	--	98	--
30...	--	--	62	--	--	--	90	--	94
OCT.									
04...	--	--	89	--	--	--	--	91	--
28...	--	--	72	--	--	--	83	--	92
DEC.									
31...	--	--	--	--	--	--	--	96	--

DATE	SUS. SED. SIEVE DIAM. % FINER THAN (70332)	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. SIEVE DIAM. % FINER THAN (70333)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. SIEVE DIAM. % FINER THAN (70334)	SUS. SED. FALL DIAM. % FINER THAN (70346)	SUS. SED. SIEVE DIAM. % FINER THAN (70335)	SUS. SED. SIEVE DIAM. % FINER THAN (70336)
DEC., 1970								
13...	96	--	98	--	100	--	--	--
JAN., 1971								
14...	96	--	99	--	100	--	--	--
FEB.								
19...	99	--	100	--	--	--	--	--
JULY								
20...	--	100	--	--	--	--	--	--
21...	--	100	--	--	--	--	--	--
29...	--	98	--	100	--	--	--	--
AUG.								
08...	--	99	--	100	--	--	--	--
10...	--	99	--	100	--	--	--	--
22...	--	99	--	100	--	--	--	--
SEP.								
01...	100	--	--	--	--	--	--	--
30...	--	95	--	99	--	100	--	--
OCT.								
04...	92	--	95	--	100	--	--	--
28...	--	97	--	100	--	--	--	--
DEC.								
31...	97	--	98	--	100	--	--	--

RIO GRANDE BASIN

08383500 PECOS RIVER NEAR PUERTO DE LUNA, N. MEX.
(Surveillance network station)

LOCATION.--Lat 34°43'48", long 104°31'28", in NE 1/4 sec. 20, T.6 N., R.23 E., Guadalupe County, at gaging station 9 miles southeast of Puerto de Luna, and 15.8 miles upstream from Alamogordo Dam.

DRAINAGE AREA.--3,970 sq mi, approximately (contributing area).

PERIOD OF RECORD.--Chemical analyses: July 1939 to September 1941, December 1942 to April 1943, November 1946 to June 1959, October 1967 to December 1971.

Water temperatures: June 1949 to June 1959, October 1967 to August 1969.

Sediment records: January 1948 to November 1958.

EXTREMES, 1939-41, 1946-49, 1967-69.--Dissolved solids: Maximum, 2,740 mg/l May 1-10, 1955, July 1-9, 1956; minimum, 220 mg/l Aug. 7, 1957.

Hardness: Maximum, 1,910 mg/l Apr. 21-30, 1954; minimum, 161 mg/l Aug. 7, 1957.

Specific conductance: Maximum daily, 3,880 micromhos June 27, 30, 1957; minimum daily, 344 micromhos Sept. 21, 1941.

Water temperatures (1967-69): Maximum, 36°C Aug. 6, 1969; minimum, freezing point Dec. 14, 15, 18, 1967, Jan. 7, 1968.

REMARKS.--Formerly 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 miles northwest of the gaging station. Bacteria and aquatic biology analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (L/S) (000660)	DIS- SOLVED SILICA (SIU2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- ASS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCU3) (MG/L) (00440)	CAL- MAGNATE (CU3) (MG/L) (00445)	DIS- SOLVED SULFATE (SU4) (MG/L) (00945)
UCT., 1970											
08...	1515	88	14	10	510	60	85	2.2	133	0	1350
NOV.											
04...	1145	96	14	0	520	62	80	2.0	136	0	1420
DEC.											
08...	1030	96	14	60	535	63	83	2.2	156	0	1420
JAN., 1971											
12...	1100	124	15	--	520	59	80	2.4	118	0	1300
MAR.											
03...	0925	96	13	--	520	59	96	3.9	155	0	1400
APR.											
14...	1158	72	15	40	570	78	63	2.4	130	0	1600
MAY											
11...	1000	76	15	--	580	67	63	2.3	125	0	1400
JUNE											
15...	1058	64	15	--	570	70	83	2.4	127	0	1600
JULY											
14...	1000	54	15	--	610	74	110	2.4	120	0	1700
AUG.											
10...	0845	485	9.3	--	100	14	23	3.0	114	0	230
25...	1222	1880	--	--	--	--	--	--	--	--	--
SEP.											
14...	0900	74	15	--	540	65	75	2.2	135	0	1500
UCT.											
13...	0900	74	15	1300	550	64	100	2.4	157	0	1500
NOV.											
09...	0745	92	15	--	510	61	100	2.3	163	0	1400
DEC.											
14...	0920	96	14	--	530	63	85	2.4	174	0	1400

DATE	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)	DIS- SOLVED FLUOR- IDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (N) (MG/L) (00613)	DIS- SOLVED NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA PLUS NITRO- GEN (N) (MG/L) (00608)	DIS- SOLVED NITRO- GEN (N) (MG/L) (00605)	ORGANIC NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	TOTAL PHOS- PHORUS (P) (MG/L) (00671)
UCT., 1970										
08...	119	.6	.02	.10	.00	--	.00	.39	.41	.01
NOV.										
04...	125	.7	.02	.10	--	--	--	--	--	--
DEC.										
08...	124	.7	.16	.70	--	--	--	--	.00	--
JAN., 1971										
12...	120	.7	.11	.50	--	.50	--	--	--	1.4
MAR.										
03...	130	.7	--	--	--	.00	--	--	--	--
APR.										
14...	140	.7	.10	--	.00	.10	.19	--	.10	.01
MAY										
11...	160	.5	--	--	--	.00	--	--	--	.02
JUNE										
15...	150	.5	--	--	--	.35	--	--	--	.04
JULY										
14...	140	.7	--	--	--	.03	--	--	--	.01
AUG.										
10...	20	.6	--	--	--	.47	--	--	--	.05
25...	--	--	--	--	--	--	--	--	--	--
SEP.										
14...	88	.7	--	--	--	.04	--	--	--	.03
UCT.										
13...	130	.6	.06	.30	.00	.06	.09	.38	.19	.04
NOV.										
09...	130	.6	--	--	--	.15	--	--	--	.04
DEC.										
14...	140	.7	--	--	--	.10	--	--	--	.04

RIO GRANDE BASIN

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08383500 PECOS RIVER NEAR PUERTO DE LUNA, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SOLIDS (KES)- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	MANU- NESS (CA, MG) (MG/L) (00900)	MANU- NESS (MG/L) (00902)	SODIUM AN- SODIUM RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLUM- (PLAT- IUM- CUBALT UNITS) (00080)	TUM- SIO- IY (JIT) (00070)	DIS- SOLVED RUBIN (H) (01020)
UCI., 1970											
08...	2360	2210	1520	1410	.9	2490	7.4	17.0	--	--	140
NOV,											
04...	2400	2290	1590	1480	.9	2620	7.7	9.5	--	--	--
DEC,											
08...	2470	2320	1600	1470	.9	2510	7.7	8.0	--	--	--
JAN., 1971											
12...	2170	2200	1500	1400	.9	2490	8.1	1.0	--	--	--
MAR,											
03...	2460	2300	1500	1370	1.1	2740	8.5	.0	--	--	--
APR,											
14...	2710	2530	1700	1600	.7	2900	7.8	18.0	--	--	110
MAY											
11...	2800	2350	1700	1600	.7	2880	7.8	15.0	--	--	--
JUNE											
15...	2750	2560	1700	1600	.9	2910	7.7	23.5	--	--	--
JULY											
14...	2800	2710	1800	1700	1.1	2940	7.5	22.0	--	--	--
AUG,											
10...	474	458	310	210	.6	682	7.3	18.5	--	--	--
25...	--	--	--	--	--	478	--	20.5	--	--	--
SEP,											
14...	2270	2350	1600	1500	.8	2700	7.8	17.5	--	--	--
UCT,											
13...	2670	2440	1600	1500	1.1	2810	7.6	11.5	--	--	100
NOV,											
04...	2580	2300	1500	1400	1.1	2700	7.9	5.5	--	--	--
DEC,											
14...	1820	2320	1600	1400	.9	2700	7.9	4.0	--	--	--

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CADI- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED COPPER (CU) (UG/L) (01035)
AUG., 1971										
10...	0845	70	0	230	<2	<6	54	<80	<6	<6
OCT,										
13...	0900	53	0	60	<1	<2	100	<20	<1	<2

DATE	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED GALLIUM (GA) (UG/L) (01120)	DIS- SOLVED GER- MANIUM (GE) (UG/L) (01125)	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)	DIS- SOLVED MANG- NESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MOLYB- DENIUM (MO) (UG/L) (01060)
AUG., 1971										
10...	<10	<2	<8	40	100	<6	<10	3	.4	2
OCT,										
13...	18	<8	<40	1300	18	5	20	3	.3	3

DATE	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED TIN (SN) (UG/L) (01100)	DIS- SOLVED TAN- IUM (TI) (UG/L) (01150)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED ZIR- CONIUM (ZK) (UG/L) (01160)
AUG., 1971									
10...	<6	<1	8	950	<8	<6	7.0	<360	<17
OCT,									
13...	<2	<1	2	7100	<40	<1	<25	280	<9

RIO GRANDE BASIN

08383500 PECOS RIVER NEAR PUERTO DE LUNA, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MMHS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMPER- ATURE (DEG C) (00020)	CULUM (PLAT- INUM- CUMUL UNITS) (00080)
OCT., 1970							
06...	1515	88	2800	8.1	17.0	12.0	2
NOV.							
04...	1145	96	2700	8.4	9.5	13.5	3
DEC.							
06...	1030	96	2700	8.1	8.0	19.5	4
JAN., 1971							
12...	1100	124	2410	8.5	1.0	11.0	4
FEB.							
02...	1120	92	2600	8.1	7.0	12.0	0
MAR.							
03...	0925	96	2700	8.4	.0	1.5	3
APR.							
14...	1158	72	2990	8.4	18.0	26.5	5
MAY							
11...	1000	76	3000	8.2	15.0	16.0	5
JUNE							
15...	1058	64	2900	8.1	23.5	29.0	3
JULY							
14...	1000	54	3000	8.2	22.0	26.5	3
AUG.							
10...	0845	485	710	8.1	18.5	22.5	50
SEP.							
14...	0900	74	2800	8.2	17.5	23.5	5
OCT.							
13...	0900	74	3000	8.4	11.5	12.5	10
NOV.							
09...	0745	92	2750	8.1	5.5	3.0	80
DEC.							
14...	0920	96	2650	8.3	4.0	8.0	3

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LUM LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (CUL. PER 100 ML) (31501)	FECAL COLI- FORM (CUL. PER 100 ML) (31616)	STREP- TOCOCCI (CUL- ONES PER 100 ML) (31679)
OCT., 1970							
06...	60	7.7	3	.9	40	20	10
NOV.							
04...	30	10.8	1	.2	100	<10	<10
DEC.							
06...	55	12.0	7	.7	20	10	<10
JAN., 1971							
12...	70	13.5	11	.8	1750	<10	20
FEB.							
02...	25	12.6	6	.7	<10	<10	<10
MAR.							
03...	35	11.9	5	.8	30	<10	<10
APR.							
14...	30	8.2	3	.4	--	--	--
MAY							
11...	50	8.4	5	.6	<100	<10	30
JUNE							
15...	85	8.9	4	1.0	220	120	20
JULY							
14...	30	7.6	11	1.2	20	20	10
AUG.							
10...	3200	8.2	16	10	--	--	--
SEP.							
14...	45	8.3	11	1.0	--	--	--
OCT.							
13...	85	9.5	5	.7	400	70	70
NOV.							
09...	80	11.7	2	.2	15	3	0
DEC.							
14...	20	10.6	5	.6	1100	1000	680

E ESTIMATED

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: July 14, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Ephemeroptera: Baetidae; Baetis sp., 1Ephemerella sp., 2Traverella sp., 1Odonata: Gomphidae; Erpetogomphus sp., 1Trichoptera: Hydropsychidae; Hydropsyche sp., 18

Date: September 14, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Diptera: Simuliidae; 4 larvae, 1 pupa

Odonata: Gomphidae; Progomphus sp., 1Trichoptera: Hydropsychidae; Hydropsyche sp., 29

08386000 PECOS RIVER NEAR ACME, N. MEX.

LOCATION.--Lat 33°32'10", long 104°22'34", in SW 1/4 sec.14, T.9 S., R.25 E., Chaves County, at gaging station, 3.0 miles downstream from U.S. Highway 70, 3.7 miles downstream from Salt Creek, 4.7 miles southwest of Acme, and 14 miles northeast of Roswell.

DRAINAGE AREA.--11,380 sq mi, approximately (contributing area).

PERIOD OF RECORD.--Chemical analyses: July 1937 to December 1971.
Water temperatures: May 1952 to August 1969.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (000660)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- ASSIUM (K) (MG/L) (00935)	DIS- SOLVED BICAR- BONATE (MG/L) (00440)	DIS- SOLVED CAL- CIUM (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)
UCT., 1970												
05...	1030	47	16	--	430	100	360	4.7	98	0	1500	500
26...	1045	52	14	--	370	81	240	4.1	102	0	1220	300
NOV.												
16...	1120	28	14	--	470	120	440	4.6	117	0	1400	590
DEC.												
28...	1020	15	13	--	470	160	510	5.1	132	0	1540	830
JAN., 1971												
27...	1030	12	11	--	540	140	610	5.7	130	0	1800	940
FEB.												
16...	1030	9.7	9.4	--	590	160	740	6.6	124	0	1900	1100
MAR.												
08...	1010	17	11	--	560	140	620	5.2	124	0	1900	910
29...	1100	11	17	--	590	150	610	6.5	117	0	2000	910
APR.												
16...	1050	578	13	50	440	63	68	3.1	119	0	1200	150
MAY												
24...	1110	55	15	--	520	79	160	3.9	108	0	1600	220
JUNE												
04...	1120	9.2	16	--	600	120	350	5.8	125	0	1900	510
22...	1550	26	9.4	--	150	20	56	3.6	97	0	380	68
AUG.												
04...	1005	17	10	--	290	16	13	4.4	117	0	700	14
SEP.												
20...	1050	6.4	8.1	--	65	11	82	2.2	111	0	210	57
UCT.												
06...	1445	21	12	--	340	70	160	4.3	91	0	1100	180
29...	1605	95	12	0	360	73	160	4.0	112	0	1200	190
NOV.												
17...	1245	22	13	--	390	99	320	5.6	107	0	1300	410
DEC.												
06...	1000	26	12	--	410	97	300	4.8	122	0	1400	420
21...	0955	13	11	--	480	120	380	5.7	117	0	1600	580

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PER- NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONI- UM (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (SUM OF CONSTIT- UENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	SODIUM BICAR- BONATE RATIO (MG/L) (00902)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)	
UCT., 1970											
05...	1.0	.30	--	3000	1500	1420	4.1	3760	7.4	19.0	150
26...	.9	.20	--	2300	1300	1220	2.9	3010	7.4	16.0	--
NOV.											
16...	.8	.30	--	3000	1700	1600	4.7	4310	7.5	8.0	--
DEC.											
28...	--	.10	.02	3600	1800	1690	5.2	5050	7.8	7.0	--
JAN., 1971											
27...	.7	.00	--	4100	1900	1790	6.1	4970	7.8	7.0	--
FEB.											
16...	1.2	.00	--	4600	2100	2000	7.0	6110	7.9	8.5	--
MAR.											
08...	.6	.10	--	4210	2000	1900	6.1	5580	8.0	7.0	--
29...	.7	.10	--	4340	2100	2000	5.8	5710	7.9	14.0	--
APR.											
16...	.5	.20	--	2000	1400	1300	.8	2480	7.7	15.5	150
MAY											
24...	.6	.16	--	2650	1600	1500	1.7	3030	7.6	18.0	--
JUNE											
04...	.7	.01	--	3560	2000	1900	3.4	4240	7.6	19.0	--
22...	.6	1.3	--	741	460	380	1.1	1030	7.6	31.0	--
AUG.											
04...	.3	.52	--	1110	790	690	.2	1400	7.2	19.5	--
SEP.											
20...	.5	1.2	--	496	210	120	2.5	792	7.5	15.5	--
UCT.											
06...	.5	.11	--	1910	1100	1100	2.1	2610	7.5	20.0	--
29...	.5	.28	--	2060	1200	1100	2.0	2630	7.7	19.0	200
NOV.											
17...	.6	.30	--	2590	1400	1300	3.7	3510	7.9	14.0	--
DEC.											
06...	.5	.36	--	2730	1400	1300	3.5	3570	7.9	5.0	--
27...	.6	.27	--	3240	1700	1600	4.0	4330	8.0	7.0	--

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, N. MEX.
(Irrigation, pesticide and surveillance network station)

LOCATION.--Lat 32°50'25", long 104°19'23", in NW 1/4 sec. 18, T. 17 S., R. 27 E., Eddy County, at gaging station at bridge on State Highway 83, 4.3 miles east of Artesia, 7.0 miles north of mouth of Rio Pecos, and 17 miles north of McMillan Dam.

DRAINAGE AREA.--15,300 sq mi, approximately (contributing area).

PERIOD OF RECORD.--Chemical analyses: July 1937 to December 1971.

Water temperatures: April 1949 to December 1971.

Sediment records: January 1949 to December 1971.

EXTREMES, 1970-71.--Dissolved solids: Maximum, 16,600 mg/l June 24-30, 1971; 1,090 mg/l Aug. 1-5, 1971.

Hardness: Maximum, 4,200 mg/l June 24-30, 1971; 540 mg/l Aug. 1-5, 1971.

Specific conductance: Maximum daily, 28,600 micromhos June 24, 1971; minimum daily, 864 micromhos Aug. 19, 1971.

Water temperatures: Maximum, 35°C July 10, 12, 22, 1971; minimum, freezing point Jan. 6-8, 10, 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SI02) (00955)	DIS- SOLVED IRON (FE) (00146)	DIS- SOLVED CUM- (CA) (00915)	DIS- SOLVED MAG- NE- SIUM (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (00935)	BICAR- BONATE (MG/L) (00440)	CAR- BONATE (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (00945)	DIS- SOLVED CHLOR- IDE (CL) (00940)	DIS- SOLVED FLUOR- IDE (F) (00950)
OCT., 1970												
01-07	62	16	--	470	136	627	--	117	0	1580	955	--
06-18	65	15	--	525	151	816	--	116	0	1760	1260	--
14-31	77	14	--	480	127	629	--	116	0	1560	970	--
NOV.												
01-11	55	14	--	520	164	873	--	135	0	1740	1380	--
12-30	42	8.5	--	580	143	1100	--	169	0	1900	1790	--
DEC.												
01-31	47	11	--	580	200	1200	8.9	158	0	1800	2000	--
JAN., 1971												
01-17	46	11	50	610	220	1300	8.7	205	0	1800	2200	1.1
18-27	56	7.2	--	560	190	1100	7.5	153	0	1900	1900	--
28-31	44	6.2	--	590	210	1300	8.2	146	0	2000	2100	--
FEB.												
01-28	50	7.3	--	620	250	1500	13	163	0	2300	2500	1.5
MAR.												
01-..	40	7.6	--	690	310	2300	18	154	0	2400	3800	1.2
02-21	27	8.8	--	650	240	1600	13	156	0	2200	2500	1.3
22-31	9.9	12	--	790	360	2700	23	157	0	2800	4300	1.3
APR.												
01-12	8.2	13	--	900	390	3400	26	158	0	3100	5600	.9
13-..	167	7.1	--	750	330	2000	18	147	0	2700	3400	.9
14-..	513	16	--	550	110	380	7.6	169	0	1600	610	.7
15-30	434	14	--	500	71	140	3.8	124	0	1300	240	.6
MAY												
01-04	78	13	--	530	95	330	4.7	118	0	1600	570	.7
05-22	479	11	--	500	75	130	3.5	119	0	1500	170	.7
23-25	86	14	--	560	95	290	4.7	121	0	1700	580	.8
26-31	24	20	--	660	140	760	8.4	136	0	2000	1100	.8
JUNE												
01-05	19	21	--	710	180	1100	13	153	0	2200	1800	.9
06-15	5.3	24	--	790	240	2000	23	182	0	2700	3200	1.0
16-20	4.8	25	--	920	320	3500	35	169	0	3100	5800	1.1
21-23	11	15	--	500	130	1200	19	121	0	1600	2000	.6
24-30	2.7	20	--	980	420	4500	42	153	0	3400	7200	1.2
JULY												
01-31	1.2	17	--	790	270	2400	37	99	0	2800	3900	1.4
AUG.												
01-05	228	12	--	170	27	140	7.7	128	0	420	240	.3
06-09	10	11	--	310	73	510	10	113	0	950	840	.5
10-11	609	16	--	450	110	520	9.8	143	0	1300	860	.7
12-19	900	12	--	240	30	83	5.0	143	0	660	110	.5
20-25	145	13	--	280	39	130	5.4	119	0	760	200	.7
26-31	359	14	--	270	38	140	5.8	126	0	730	200	.6
SEP.												
01-07	44	17	--	400	96	510	9.0	124	0	1200	840	.7
08-15	12	20	--	530	160	1000	15	151	0	1700	1700	.8
16-22	12	20	--	680	240	2000	26	166	0	2300	3300	.8
23-27	39	16	20	420	160	980	11	142	0	1400	1600	.8
28-30	66	15	--	360	98	510	7.1	135	0	1100	820	.7
OCT.												
01-14	39	17	--	460	150	800	12	134	0	1500	1400	.6
15-25	37	20	--	580	210	1100	13	155	0	1900	2000	.9
26-31	64	16	--	470	160	810	9.1	137	0	1600	1400	.8
NOV.												
01-08	74	17	--	460	130	610	11	150	0	1500	990	.5
09-30	47	16	--	520	190	1100	14	149	0	1900	1700	.5
DEC.												
01-31	52	11	--	560	210	1200	19	189	0	1900	2100	.9
CALENDAR YEAR												
MTD. AVG.	--	13	--	438	93	398	6.8	137	0	1310	646	.7
TIME MTD.												
AVG.	105	14	--	587	195	1320	15	150	0	1950	2160	.9
TUN5												
PER DAY	--	3.6	--	124	26	113	1.9	39	0	370	183	.2
WATER YEAR												
MTD. AVG.	--	12	--	441	92	351	5.9	134	0	1310	630	--
TIME MTD.												
AVG.	106	13	--	592	192	1390	15	145	0	1950	2120	--
TUN5												
PER DAY	--	3.6	--	127	27	110	1.8	39	0	376	181	--

08396500 PECOS RIVER NEAR ARTESIA, N. MEX.--Continued

EXTREMES, 1970-71--Continued

Sediment concentrations: Maximum daily, 10,400 mg/l Aug. 13, 1971; minimum daily, 2 mg/l Jan. 28, 1971.
Sediment discharge: Maximum daily, 37,700 tons Aug. 13, 1971; minimum daily, 0.01 tons July 5, 6, 8, 29, 1971.

EXTREMES, 1937-71.--Dissolved solids: Maximum, 17,500 mg/l May 3, 1967; minimum, 461 mg/l May 31, 1963.

Hardness: Maximum, 4,740 mg/l May 3; minimum, 235 mg/l May 31, 1963.

Specific conductance: Maximum daily, 28,600 micromhos June 24, 1971; minimum daily, 682 micromhos Aug. 1, 1962.

Water temperatures (1949-71): Maximum, 36°C July 27, 1966, July 25, 1969; minimum, freezing point on several days during February 1956, January 1959, 1962, 1963, February 1966, January 1970, and January 1971.

Sediment concentrations (1949-71): 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 discharge (1949-71): Maximum daily, 183,000 tons Sept. 26, 1955; minimum daily, 0 tons on many days during July 1953, July and August 1954, July 1957, July to October 1964.

REMARKS.--Bacteria and aquatic biology analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SOLVED NITRATE (MG/L) (00631)	DIS- SOLVED NITRUS (MG/L) (00671)	DIS- SOLVED BOMON (MG/L) (01020)	DIS- SOLVED DUE AT (MG/L) (70300)	DIS- SOLVED CUMUL- (MG/L) (70301)	DIS- SOLVED (TONS) PER DAY (70302)	DIS- SOLVED (TONS) PER DAY (70302)	HARD- NESS (MG/L) (00900)	SODIUM CAN- BUNATE MAK- NESS (MG/L) (00902)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHS) (00095)	PH (UNITS) (00400)
OCT., 1970											
01-07	--	--	--	--	3840	5.22	850	1730	1630	6.5	7.4
08-18	--	--	--	--	4580	6.23	805	1930	1840	8.1	7.2
19-31	--	--	--	--	3840	5.22	801	1720	1620	6.6	7.4
NOV.											
01-11	--	--	--	--	4760	6.47	681	1910	1860	8.6	7.3
12-30	--	--	--	--	5660	7.70	646	2240	2100	10	7.9
DEC.											
01-31	.37	--	--	--	5880	8.00	746	2300	2100	11	7.8
JAN., 1971											
01-17	.10	--	1100	--	6200	8.43	770	2400	2230	12	8.1
18-27	.20	--	--	--	5800	7.84	877	2200	2070	10	8.2
28-31	.50	--	--	--	6300	8.57	748	2300	2180	12	8.2
FEB.											
01-28	.10	--	--	--	7280	9.40	590	2600	2500	13	7.6
MAR.											
01-..	.80	--	--	--	9610	13.1	1040	3000	2900	18	7.4
02-21	.60	--	--	--	7290	9.91	531	2600	2500	14	7.1
22-31	.60	--	--	--	11100	15.1	297	3500	3400	20	7.3
APR.											
01-12	.70	--	--	--	13500	18.4	299	3900	3800	24	7.2
13-..	1.1	--	--	--	9280	12.6	4180	3200	3100	15	7.2
14-..	1.4	--	--	--	3360	4.57	4650	1800	1700	3.9	7.7
15-30	.70	--	--	--	2330	3.17	2730	1500	1400	1.6	7.5
MAY											
01-04	.01	--	--	--	3200	4.35	674	1700	1600	3.5	7.4
05-22	.14	--	--	--	2450	3.33	3170	1600	1500	1.4	7.5
23-25	.00	--	--	--	3100	4.22	720	1800	1700	3.0	7.5
26-31	.00	--	--	--	4760	6.47	308	2200	2100	7.0	7.4
JUNE											
01-05	.63	--	--	--	6100	8.30	313	2500	2400	9.5	7.3
06-15	.52	--	--	--	9070	12.3	130	3000	2800	16	7.5
16-20	.63	--	--	--	13800	18.8	179	3600	3500	25	7.5
21-23	.60	--	--	--	5530	7.52	164	1800	1700	12	7.4
24-30	.40	--	--	--	16600	22.6	121	4200	4000	30	7.4
JULY											
01-31	.18	--	--	--	10300	14.0	33.4	3100	3000	19	7.5
AUG.											
01-05	2.8	--	--	--	1090	1.48	671	540	430	2.6	7.7
06-09	.52	--	--	--	2760	3.75	74.5	1100	980	6.8	7.9
10-11	2.3	--	--	--	3330	4.53	5480	1500	1400	5.8	7.9
12-19	.26	--	--	--	1210	1.65	2940	720	610	1.3	7.9
20-25	.58	--	--	--	1490	2.03	583	860	760	1.9	7.8
26-31	.45	--	--	--	1460	1.99	1340	830	730	2.1	7.9
SEP.											
01-07	.43	--	--	--	3140	4.27	373	1400	1300	5.9	7.4
08-15	.57	--	--	--	5200	7.07	168	2000	1900	9.8	7.4
16-22	.52	--	--	--	8650	11.8	280	2700	2500	17	7.3
23-27	.85	.02	430	5180	4660	6.34	491	1700	1600	10	7.4
28-30	1.3	--	--	--	2980	4.05	531	1300	1200	6.2	7.4
OCT.											
01-14	.96	--	--	--	4410	6.00	464	1800	1700	8.3	7.4
15-25	.78	--	--	--	5900	8.02	542	2300	2200	10	7.6
26-31	.61	--	--	--	4540	6.17	772	1800	1700	8.2	7.3
NOV.											
01-08	.80	--	--	--	3800	5.17	759	1700	1600	6.5	7.4
09-30	.87	--	--	--	5520	7.51	700	2100	2000	11	7.7
DEC.											
01-31	1.1	--	--	--	6100	8.30	856	2300	2100	11	7.6
CALENDAR YEAR											
MTD. AVG.	.57	--	--	--	2970	4.04	--	1480	1370	4.0	7.6
TIME MTD.											
AVG.	.57	--	--	--	6330	8.61	--	2280	2160	11	7.6
TONS											
PER DAY	.16	--	--	--	842	--	--	--	--	--	--
WATER YEAR											
MTD. AVG.	.52	--	--	--	2950	4.01	--	1480	1370	3.9	7.6
TIME MTD.											
AVG.	.44	--	--	--	6260	8.51	--	2280	2150	11	7.6
TONS											
PER DAY	.16	--	--	--	848	--	--	--	--	--	--

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANG- NESE (MN) (UG/L) (01056)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- ASSIUM (K) (MG/L) (00935)	BICAR- BONATE (MG/L) (00440)
OCT., 1970										
05...	1130	84	13	10	--	480	126	618	5.8	105
NOV.										
02...	1145	53	12	0	--	490	154	799	7.6	124
DEC.										
07...	1430	50	10	30	--	580	201	1130	9.0	129
JAN., 1971										
12...	1030	53	15	--	--	570	210	1200	9.1	231
FEB.										
01...	1430	39	4.3	--	--	640	220	1500	11	136
MAR.										
02...	1300	45	5.4	--	--	330	240	1500	14	165
APR.										
05...	1430	5.9	12	30	--	900	400	3300	29	152
MAY										
05...	1215	59	14	--	--	540	100	420	6.6	110
JUNE										
07...	1600	6.2	20	--	--	760	210	1700	21	164
JULY										
06...	1615	.38	22	--	--	910	330	2800	30	134
AUG.										
02...	1530	382	7.4	--	--	93	22	130	6.1	108
SEP.										
07...	1700	23	10	--	--	490	140	750	8.7	136
OCT.										
04...	1800	38	15	20	9	430	160	710	6.3	121
NOV.										
01...	1640	94	12	--	--	480	140	630	6.4	119
DEC.										
06...	1515	60	10	--	--	560	200	1100	9.3	195

DATE	CAR- BONATE (CU3) (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 NITRATE (N) (MG/L) (00616)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)
UCT., 1970									
05...	0	1540	980	.7	.16	.70	.00	--	.05
NOV.									
02...	0	1620	1320	.8	1.1	4.7	--	--	--
DEC.									
07...	0	1940	1900	.9	.25	1.1	--	--	--
JAN., 1971									
12...	0	1900	1800	1.2	--	--	--	2.4	--
FEB.									
01...	0	2000	2200	1.1	--	--	--	--	--
MAR.									
02...	0	1800	2400	1.4	--	--	--	.00	--
APR.									
05...	0	3100	5500	1.1	.00	.00	.00	.00	.25
MAY									
05...	0	1800	640	.9	--	--	--	.00	--
JUNE									
07...	0	2400	2800	.9	--	--	--	.02	--
JULY									
06...	0	3000	5000	1.0	--	--	--	.01	--
AUG.									
02...	0	260	190	.3	--	--	--	.07	--
SEP.									
07...	0	1600	1100	.8	--	--	--	.22	--
UCT.									
04...	0	1700	1100	.6	.00	.00	.00	.01	.09
NOV.									
01...	0	1600	980	.8	--	--	--	.10	--
DEC.									
06...	0	1700	1800	1.0	--	--	--	1.0	--

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08396500 PECOS RIVER NEAR ARTESIA, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	SODIUM CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SUMP- TION RATIO (00931)
OCT., 1970									
05...	.27	.48	.01	--	4000	3820	1740	1650	6.4
NOV.									
02...	--	--	--	--	4600	4470	1900	1800	8.0
DEC.									
07...	--	--	--	--	6030	5840	2260	2150	10
JAN., 1971									
12...	--	--	--	1.8	6210	5800	2300	2110	11
FEB.									
01...	--	--	--	--	6770	6500	2500	2390	11
MAR.									
02...	--	--	--	--	7370	6400	1800	1670	15
APR.									
05...	--	--	.20	.02	13800	13300	3900	3800	23
MAY									
03...	--	--	--	.05	3430	3380	1800	1700	4.4
JUNE									
07...	--	--	--	.02	8750	7990	2800	2600	14
JULY									
06...	--	--	--	.02	15000	12200	5600	3500	20
AUG.									
02...	--	--	--	.02	828	766	320	230	3.1
SEP.									
07...	--	--	--	.03	3620	4170	1800	1700	7.7
OCT.									
04...	.19	.29	.15	.02	5180	4190	1700	1600	7.4
NOV.									
01...	--	--	--	.03	4120	3910	1800	1700	6.5
DEC.									
06...	--	--	--	.03	5340	5480	2200	2100	10

DATE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MMHS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- CUBALT UNITS) (00080)	TUR- BID- ITY (JTU) (00070)	DENSITY (GM/ML AT 20 C) (71820)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970									
05...	5350	7.3	20.0	--	--	--	370	--	0
NOV.									
02...	6350	7.1	12.5	--	--	--	--	--	--
DEC.									
07...	8530	7.0	9.5	--	--	--	--	--	--
JAN., 1971									
12...	8700	7.8	5.0	--	--	--	--	--	--
FEB.									
01...	8380	7.9	9.0	--	--	--	--	--	--
MAR.									
02...	9730	7.6	6.5	0	14	--	--	--	--
APR.									
05...	19400	7.2	19.0	--	--	1.005	1200	--	--
MAY									
03...	4260	7.1	23.5	--	--	--	--	--	--
JUNE									
07...	10000	7.4	26.5	--	--	1.002	--	--	--
JULY									
06...	18200	7.3	33.0	--	--	1.003	--	--	--
AUG.									
02...	1270	7.5	23.0	--	--	--	--	--	--
SEP.									
07...	6070	7.5	30.5	--	--	--	--	--	--
OCT.									
04...	6030	7.4	19.5	--	--	--	430	10	180
NOV.									
01...	5460	8.4	16.5	--	--	--	--	--	--
DEC.									
06...	8040	7.8	7.5	--	--	--	--	--	--

RIO GRANDE BASIN
08396500 PECOS RIVER NEAR ARTESIA, N. MEX.--Continued
TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ALUM- (AL) (UG/L) (01106)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	DIS- SOLVED BUNUM (B) (UG/L) (01020)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHMO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED HEXA- VALENT CHRO- MIUM (CR6) (UG/L) (01052)
OCT., 1970										
05...	1130	--	<10	--	--	--	370	0	--	0
OCT., 1971										
04...	1800	54	--	65	<1	<2	430	<20	<1	--

DATE	DIS- SOLVED COPALT (CU) (UG/L) (01035)	DIS- SOLVED CUPPER (CU) (UG/L) (01040)	DIS- SOLVED GALLIUM (GA) (UG/L) (01120)	DIS- SOLVED GER- MANIUM (GE) (UG/L) (01125)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)
OCT., 1970									
05...	0	--	--	--	10	0	--	--	<.5
OCT., 1971									
04...	<2	10	<14	<60	20	5	60	9	--

DATE	DIS- SOLVED MULYB- DENUM (MO) (UG/L) (01060)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED TIN (SN) (UG/L) (01100)	DIS- SOLVED TAN- IUM (TI) (UG/L) (01150)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED ZIN- CONIUM (ZR) (UG/L) (01160)
OCT., 1970									
05...	--	--	--	--	--	--	--	0	--
OCT., 1971									
04...	5	<2	<1	9700	<60	<1	<45	180	<9

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- CUBALT UNITS) (00080)
OCT., 1970							
05...	1130	84	5250	8.2	20.0	24.0	5
NOV.,							
02...	1145	53	6600	8.7	12.5	15.5	5
DEC.,							
07...	1430	50	--	8.3	9.5	21.5	5
JAN., 1971							
12...	1030	53	--	8.1	5.0	9.0	7
FEB.,							
01...	1430	39	--	8.3	9.0	8.0	2
MAR.,							
02...	1300	45	9900	8.3	6.5	-1.5	10
APR.,							
05...	1430	5.9	19000	8.0	19.0	18.0	22
MAY,							
05...	1215	59	--	8.3	23.5	29.5	5
JUNE,							
07...	1600	6.2	11100	8.0	26.5	34.0	10
JULY,							
06...	1615	.38	--	8.2	33.0	39.0	5
AUG.,							
02...	1530	382	1380	7.5	23.0	26.5	20
SEP.,							
07...	1700	23	6200	8.2	30.5	33.0	20
OCT.,							
04...	1800	38	5700	8.0	19.5	18.0	20
NOV.,							
01...	1640	94	5100	8.4	16.5	15.5	30
DEC.,							
06...	1515	60	7600	8.2	7.5	12.0	7

RIO GRANDE BASIN

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08396500 PECOS RIVER NEAR ARTESIA, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TURBIDITY (JTU) (00070)	DISSOLVED OXYGEN (MG/L) (00300)	CHEMICAL OXYGEN DEMAND (MG/L) (00335)	BIOLOGICAL OXYGEN DEMAND (MG/L) (00310)	IMMEDIATE CULIFORM (COL. PER 100 ML) (31501)	FECAL CULIFORM (COL. PER 100 ML) (31616)	SIMPLE STRAIN (COL. PER 100 ML) (31679)
OCT., 1970							
05...	34	7.5	15	10	200	10	10
NOV.							
02...	30	14.9	--	19	<10	<10	<10
DEC.							
07...	7	12.8	--	21	<100	10	<10
JAN., 1971							
12...	6	10.8	23	3.3	30	<10	60
FEB.							
01...	2	13.8	9	1.4	<10	<10	<10
MAR.							
02...	6	11.6	12	2.8	<10	<10	90
APR.							
05...	8	11.8	12	1.0	<100	<10	10
MAY							
03...	35	7.6	15	5.2	<100	<10	<10
JUNE							
07...	20	6.9	12	4.1	<10	<10	<10
JULY							
06...	3	9.3	12	2.7	<10	<10	30
AUG.							
02...	465	5.8	14	7.2	--	--	--
SEP.							
07...	35	7.0	12	3.4	--	--	--
OCT.							
04...	50	8.4	13	5.4	70	10	<10
NOV.							
01...	60	12.3	23	10	<10	<10	10
DEC.							
06...	7	12.0	14	3.0	<10	<10	<10

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: April 5, 1971
 Method of sampling: Ekman dredge and 30-mesh sieve
 Organisms (classification, number)
 Diptera: Chironomidae; Chironomus decorus 2 larvae
 Paratendipes sp., 6 larvae
 Cryptochironomus sp., 13 larva
 Odonata: Coenagrionidae, 1
 Gastropoda: Physidae, Physa sp., 1

Date: June 7, 1971
 Method of sampling: Surber (3 square feet)
 No macroinvertebrates in sample

Date: August 2, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Hemiptera: Corixidae, 8 adults
 Diptera: Ephydriidae, Ephydra sp., 1

Date: September 7, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Ephemeroptera: Baetidae, Isonychia sp., 1
 Odonata: Coenagrionidae; Argia sp., 1
 Unidentified, 1
 Gastropoda: Physidae, Physa sp.,

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, N. MEX.--Continued

PESTICIDE ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	ALDRIN (UG/L) (39330)	CHLOR- DANE (UG/L) (39350)	DDD (UG/L) (39360)	DDE (UG/L) (39365)	DDT (UG/L) (39370)	DI- AZINON (UG/L) (39570)	DI- ELDMIN (UG/L) (39380)	ENDMIN (UG/L) (39390)	HEPTA- CHLOR (UG/L) (39410)
OCT., 1970										
01...	1400	.00	.0	.00	.00	.00	.00	.00	.00	.00
NOV.										
02...	1315	.00	.0	.00	.00	.00	.00	.00	.00	.00
DEC.										
02...	1230	.00	.0	.00	.00	.00	.00	.00	.00	.00
JAN., 1971										
04...	1430	.00	.0	.00	.00	.00	.00	.00	.00	.00
FEB.										
01...	1245	.00	.0	.00	.00	.00	.00	.00	.00	.00
MAR.										
01...	1245	.00	.0	.00	.00	.00	.00	.00	.00	.00
APR.										
01...	1215	.00	.0	.00	.00	.00	.00	.00	.00	.00
MAY										
03...	1145	.00	.0	.00	.00	.00	.00	.00	.00	.00
20...	1020	--	--	--	--	--	--	--	--	--
JUNE										
01...	1330	.00	.0	.00	.00	.00	.00	.00	.00	.00
16...	0930	--	--	--	--	--	--	--	--	--
JULY										
01...	1230	.00	.0	.00	.00	.00	.00	.00	.00	.00
14...	1130	--	--	--	--	--	--	--	--	--
21...	1000	--	--	--	--	--	--	--	--	--
AUG.										
02...	1120	.00	.0	.00	.00	.01	.00	.00	.00	.00
18...	1045	--	--	--	--	--	--	--	--	--
SEP.										
01...	0900	.00	.0	.00	.00	.00	.00	.00	.00	.00

DATE	HEPTA- CHLOR EPOXIDE (UG/L) (39420)	LINDANE (UG/L) (39340)	MALA- THION (UG/L) (39530)	METHYL PARA- THION (UG/L) (39600)	PARA- THION (UG/L) (39540)	TUX- APHENE (UG/L) (39400)	2,4-D (UG/L) (39730)	2,4,5-T (UG/L) (39740)	SILVEX (UG/L) (39760)
OCT., 1970									
01...	.00	.00	.00	.00	.00	.0	.00	.00	.00
NOV.									
02...	.00	.00	.00	.00	.00	.0	.00	.00	.00
DEC.									
02...	.00	.00	.00	.00	.00	.0	.00	.00	.00
JAN., 1971									
04...	.00	.00	.00	.00	.00	.0	.00	.00	.00
FEB.									
01...	.00	.00	.00	.00	.00	.0	.00	.00	.00
MAR.									
01...	.00	.00	.00	.00	.00	.0	.00	.00	.01
APR.									
01...	.00	.00	.00	.00	.00	.0	.00	.04	.01
MAY									
03...	.00	.00	.00	.00	.00	.0	.00	.00	.00
20...	--	--	--	--	--	--	.00	.00	.00
JUNE									
01...	.00	.00	.00	.00	.00	.0	.00	.00	.00
16...	--	--	--	--	--	--	.00	.00	.00
JULY									
01...	.00	.00	.00	.00	.00	.0	.00	.00	.00
14...	--	--	--	--	--	--	.00	.00	.00
21...	--	--	--	--	--	--	.00	.00	.00
AUG.									
02...	.00	.00	.00	.00	.00	.0	.00	.00	.00
18...	--	--	--	--	--	--	.00	.00	.00
SEP.									
01...	.00	.00	.00	.00	.00	.0	.04	.00	.00

OTHER VALUES IN MICROGRAMS PER LITER:

AUG.
05... 1020 2,4-D 0.00; SILVEX 0.04; 2,4,5-T 0.00; DICAMBA < .02; 2,4-DP 0.48

08396500 PECOS RIVER NEAR ARTESIA, N. MEX.--Continued

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED SILICA (SE) (UG/L) (01145)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970					
05.,.,	1135	<4	<4	6	6

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	4940	6490	8460	9440	9190	14900	16400	3410	10300	19100	18600	3130	4440	5400	8090
2	5110	6520	8400	9460	9450	9720	16900	3800	7130	18100	1340	3620	5050	4620	8090
3	5260	6610	8150	9140	9580	9280	17100	4220	7670	17600	1190	3740	5670	4560	8220
4	5260	6610	8240	8750	9680	8560	17700	4490	8290	16500	1640	4410	5620	4720	8140
5	5480	6820	8320	8930	10500	8240	18400	3640	8790	16200	2670	4740	6020	4740	7660
6	5590	6880	8440	8840	10500	8310	18700	3060	10000	17000	2960	5070	6770	5350	7790
7	5750	6960	7650	8800	10400	8730	20200	2890	10900	16600	3580	5860	6600	5650	7890
8	4060	6830	8320	9190	10000	10300	20100	2820	11900	16600	3900	6450	7000	5970	7160
9	6250	6820	8300	9560	10200	9630	20100	2780	12900	17100	5350	7080	5410	6790	7570
10	6380	6780	8440	9280	9780	9630	19900	2830	13000	17000	6550	7030	5890	7200	9070
11	6590	6750	8500	8600	9530	9900	20600	2710	13600	16600	2540	7320	7850	7280	7910
12	6330	7570	8220	8580	9840	10300	19500	2740	13000	17100	1900	7570	6670	7330	8090
13	6500	7590	8590	8690	10100	9900	14500	2790	12900	17200	1710	7410	7070	7700	8150
14	6450	8000	8690	8930	10300	9900	4260	2790	13100	17500	1590	8380	7570	7810	8280
15	6630	8090	8610	9120	10500	10000	3200	2810	14100	17000	1560	7030	8430	8240	8280
16	6490	8130	8320	9120	9890	10300	2930	2820	18500	16900	1630	12100	7990	7930	8410
17	6330	7880	8730	8950	9840	10300	2780	2840	19700	17600	1550	12500	7810	7830	8410
18	6090	7740	8270	8540	9680	10500	2770	2910	20000	17400	1520	12700	8480	7430	8350
19	5490	7990	8780	8050	9710	10700	2780	2910	19800	17000	864	13200	8490	7590	8410
20	5260	8120	8760	7910	10200	11500	2730	2910	18100	17200	1490	10200	8490	7330	8350
21	5260	8000	8870	7810	10380	11900	2710	2920	12200	16700	1630	12300	8560	7770	8410
22	5000	8120	8760	8110	10600	13200	2670	2960	6670	16900	1830	12100	8770	7550	8350
23	5460	7910	8650	8140	10400	13700	2720	3440	7290	16800	2430	7400	8990	6840	8350
24	5300	7950	8650	8090	10100	14500	2700	3690	28600	16000	2600	5480	9150	6710	8550
25	5280	8090	8150	8400	10100	14600	2700	4430	27800	16300	2110	6210	8770	6970	8620
26	5270	8160	8190	8460	10500	15000	2700	5180	25800	16200	1990	7110	6290	7500	8410
27	5280	8520	8560	8350	10600	14700	2720	5290	22200	16600	1700	7500	5910	7550	8480
28	5220	8370	7890	8730	11000	14100	2720	5870	21200	16100	1830	4480	6050	7550	8620
29	5350	8250	8590	8700	---	14200	2850	6600	20000	16700	1820	4060	6600	7880	8550
30	5560	8310	8650	9060	---	14900	3080	7450	20000	3140	1990	4150	6820	8000	8630
31	6090	---	8780	9020	---	15900	---	8640	---	18800	2630	---	8370	---	8630
MONT-1	5720	7560	8450	8730	10090	11440	9590	3830	15180	16570	2800	7350	7080	6860	8250

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	17.0	12.0	13.0	4.0	6.0	11.0	18.0	20.0	23.0	25.0	25.0	29.0	25.0	17.0	7.0
2	19.0	14.0	10.0	5.0	6.0	5.0	12.0	19.0	24.0	25.0	20.0	27.0	25.0	16.0	5.0
3	18.0	13.0	10.0	4.0	6.0	3.0	15.0	23.0	23.0	34.0	28.0	29.0	22.0	14.0	6.0
4	19.0	10.0	7.0	2.0	5.0	7.0	12.0	20.0	26.0	30.0	23.0	27.0	18.0	15.0	6.0
5	22.0	7.0	12.0	1.0	5.0	13.0	18.0	19.0	27.0	33.0	27.0	29.0	20.0	15.0	4.0
6	18.0	8.0	10.0	0.0	10.0	9.0	14.0	12.0	25.0	31.0	24.0	30.0	18.0	17.0	8.0
7	19.0	10.0	6.0	0.0	5.0	9.0	18.0	16.0	22.0	30.0	22.0	30.0	18.0	10.0	7.0
8	17.0	12.0	9.0	0.0	4.0	12.0	15.0	21.0	21.0	22.0	29.0	30.0	23.0	8.0	5.0
9	15.0	15.0	10.0	1.0	6.0	10.0	20.0	21.0	23.0	29.0	28.0	31.0	21.0	1.0	3.0
10	17.0	9.0	11.0	0.0	10.0	16.0	23.0	19.0	27.0	35.0	19.0	30.0	23.0	15.0	6.0
11	13.0	8.0	6.0	2.0	9.0	10.0	17.0	20.0	26.0	26.0	23.0	29.0	22.0	15.0	9.0
12	17.0	12.0	4.0	4.0	10.0	10.0	20.0	20.0	27.0	35.0	25.0	21.0	20.0	15.0	8.0
13	14.0	10.0	7.0	6.0	11.0	12.0	16.0	20.0	26.0	34.0	26.0	22.0	21.0	15.0	10.0
14	19.0	7.0	3.0	8.0	11.0	11.0	17.0	18.0	22.0	32.0	24.0	26.0	23.0	14.0	6.0
15	13.0	11.0	5.0	8.0	9.0	15.0	17.0	23.0	25.0	31.0	24.0	20.0	23.0	15.0	9.0
16	11.0	7.0	6.0	10.0	12.0	17.0	16.0	22.0	28.0	30.0	25.0	21.0	23.0	16.0	2.0
17	10.0	10.0	5.0	7.0	12.0	17.0	18.0	21.0	30.0	31.0	25.0	18.0	21.0	13.0	3.0
18	12.0	11.0	10.0	10.0	14.0	12.0	15.0	18.0	28.0	34.0	25.0	13.0	17.0	8.0	3.0
19	15.0	11.0	7.0	6.0	11.0	11.0	14.0	17.0	28.0	28.0	26.0	14.0	14.0	7.0	4.0
20	14.0	6.0	9.0	9.0	11.0	13.0	15.0	18.0	23.0	31.0	26.0	13.0	13.0	6.0	2.0
21	19.0	6.0	8.0	8.0	5.0	15.0	15.0	22.0	26.0	27.0	27.0	19.0	15.0	9.0	8.0
22	16.0	9.0	9.0	10.0	4.0	18.0	15.0	20.0	28.0	35.0	25.0	20.0	18.0	9.0	8.0
23	15.0	5.0	11.0	9.0	6.0	13.0	18.0	21.0	26.0	27.0	27.0	15.0	19.0	12.0	7.0
24	17.0	7.0	5.0	6.0	8.0	12.0	17.0	19.0	30.0	26.0	25.0	19.0	19.0	10.0	8.0
25	18.0	7.0	7.0	5.0	12.0	19.0	18.0	24.0	30.0	34.0	22.0	16.0	17.0	6.0	7.0
26	16.0	9.0	7.0	6.0	7.0	21.0	18.0	21.0	30.0	30.0	27.0	19.0	11.0	10.0	10.0
27	12.0	11.0	5.0	7.0	8.0	17.0	20.0	22.0	21.0	25.0	28.0	21.0	16.0	11.0	11.0
28	9.0	9.0	7.0	10.0	10.0	22.0	19.0	21.0	27.0	25.0	25.0	25.0	15.0	8.0	11.0
29	15.0	15.0	7.0	7.0	---	20.0	15.0	21.0	33.0	32.0	25.0	20.0	19.0	10.0	12.0
30	11.0	12.0	5.0	5.0	---	18.0	18.0	11.0	26.0	24.0	24.0	23.0	15.0	10.0	6.0
31	13.0	---	6.0	10.0	---	20.0	---	22.0	---	28.0	28.0	---	13.0	---	8.0
MONTH	15.5	10.0	7.5	5.5	8.5	13.5	17.0	19.5	26.0	29.5	25.0	23.0	19.0	12.0	6.5

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	88	179	43	52	37	5.2	49	11	1.5
2	84	153	35	54	43	6.3	50	10	1.4
3	92	173	43	58	51	8.0	50	12	1.6
4	90	172	42	54	36	5.2	48	18	2.3
5	81	161	35	56	32	4.8	50	13	1.8
6	73	154	30	54	35	5.1	50	14	1.9
7	67	73	13	59	47	7.5	50	22	3.0
8	60	72	12	62	47	7.9	51	16	2.2
9	60	98	16	53	42	6.0	50	18	2.4
10	59	73	11	48	30	3.9	49	17	2.2
11	73	70	14	37	52	5.2	49	18	2.4
12	63	56	9.5	41	44	4.9	47	18	2.3
13	59	43	6.8	34	52	4.8	47	15	1.9
14	54	48	7.0	36	23	2.2	49	12	1.6
15	56	47	7.1	39	18	1.9	45	12	1.5
16	60	38	6.2	44	15	1.8	47	10	1.3
17	74	39	7.8	42	22	2.5	48	14	1.8
18	98	58	15	38	18	1.8	45	33	4.0
19	100	60	16	37	15	1.5	46	9	1.1
20	87	58	14	41	14	1.5	47	10	1.3
21	87	59	14	42	15	1.7	44	11	1.3
22	80	58	13	46	15	1.9	45	29	3.5
23	78	62	13	45	11	1.3	47	12	1.5
24	81	65	14	44	6	.71	49	8	1.1
25	83	65	15	40	6	.65	49	10	1.3
26	83	74	17	42	9	1.0	49	7	.93
27	80	62	13	48	12	1.6	48	6	.78
28	74	62	12	49	11	1.5	47	18	2.3
29	63	41	7.0	47	9	1.1	48	10	1.3
30	56	40	6.0	49	18	2.4	39	10	1.1
31	53	38	5.4	--	--	--	36	7	.68
TOTAL	2296	--	512.8	1391	--	101.86	1468	--	55.29

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	33	6	.53	39	5	.53	40	5	.54
2	41	8	.89	36	6	.58	44	10	1.2
3	44	9	1.1	27	4	.29	39	5	.53
4	39	25	2.6	26	7	.49	41	18	2.0
5	35	17	1.6	30	4	.32	34	10	.92
6	33	7	.62	34	7	.64	25	5	.34
7	35	14	1.3	38	9	.92	22	6	.36
8	40	11	1.2	36	6	.58	26	7	.49
9	48	15	1.9	42	7	.79	30	10	.81
10	59	12	1.9	38	7	.72	30	9	.73
11	56	8	1.2	31	17	1.4	26	10	.70
12	53	8	1.1	27	8	.58	33	10	.89
13	50	10	1.4	26	6	.42	35	9	.85
14	49	8	1.1	27	8	.58	28	13	.98
15	49	8	1.1	36	8	.78	28	14	1.1
16	53	4	.57	37	8	.80	23	13	.81
17	58	7	1.1	36	6	.58	18	15	.73
18	64	10	1.7	31	14	1.2	15	13	.53
19	62	7	1.2	29	6	.47	15	15	.61
20	58	7	1.1	27	14	1.0	14	20	.76
21	59	8	1.3	23	6	.37	15	23	.93
22	59	4	.64	20	6	.32	12	15	.49
23	57	8	1.2	32	7	.60	14	16	.60
24	53	8	1.1	27	13	.95	14	18	.68
25	53	6	.86	25	10	.68	10	15	.41
26	53	8	1.1	17	19	.87	9.0	15	.36
27	42	4	.45	16	16	.69	9.0	23	.56
28	44	2	.24	21	13	.74	8.5	15	.34
29	46	9	1.1	--	--	--	7.5	17	.34
30	45	3	.36	--	--	--	7.1	13	.25
31	41	--	--	--	--	--	7.8	15	.32
TOTAL	1511	--	33.56	834	--	18.89	679.9	--	21.16

08396500 PECOS RIVER NEAR ARTESIA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	6.2	19	.32	90	270	66	39	78	8.2
2	6.2	12	.20	63	160	27	21	27	1.5
3	6.5	14	.25	57	80	12	14	33	1.2
4	8.5	17	.39	104	154	77	11	47	1.4
5	6.2	12	.20	377	870	886	11	34	1.0
6	7.5	14	.28	454	960	1180	8.5	26	.60
7	8.5	20	.46	490	920	1220	6.2	41	.69
8	6.8	16	.29	503	940	1280	5.5	47	.70
9	4.9	18	.24	477	940	1210	5.2	48	.67
10	7.5	12	.24	503	920	1250	4.2	47	.53
11	12	15	.49	524	960	1360	3.3	50	.45
12	18	21	1.0	530	940	1350	3.5	52	.49
13	167	279	226	532	930	1340	4.2	68	.77
14	513	2030	2810	516	870	1210	7.8	43	.91
15	607	2230	3650	508	800	1100	4.4	43	.51
16	610	1890	3110	495	850	1140	4.2	63	.71
17	513	1580	2190	479	820	1060	2.2	58	.34
18	408	1270	1400	503	910	1240	1.4	47	.18
19	414	1200	1340	535	740	1070	1.4	38	.14
20	459	1230	1520	527	370	526	15	77	5.1
21	505	1270	1730	466	499	628	13	163	7.0
22	456	1220	1500	211	400	228	3.8	2	.02
23	444	1070	1280	125	295	100	17	79	6.1
24	474	1060	1360	78	177	37	9.9	24	.64
25	464	1030	1290	56	82	12	3.1	70	.59
26	446	960	1160	31	42	3.5	1.4	22	.08
27	444	940	1130	22	27	1.6	1.7	18	.08
28	396	975	1040	19	48	2.5	1.1	43	.13
29	172	610	283	21	45	2.6	.86	15	.03
30	124	420	141	21	25	1.4	.86	8	.02
31	--	--	--	29	42	3.3	--	--	--
TOTAL	7714.8	--	27164.36	9346	--	19623.9	225.72	--	40.78

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.86	7	.02	278	672	2490	49	273	36
2	.94	16	.04	601	2330	4740	43	167	19
3	.86	10	.02	142	835	349	47	164	21
4	.70	10	.02	69	181	34	57	97	15
5	.62	8	.01	48	143	19	45	73	8.9
6	.54	7	.01	16	109	4.7	41	62	6.9
7	.62	11	.02	8.1	49	1.1	28	62	4.7
8	.62	8	.01	6.8	50	.92	25	79	5.3
9	.62	16	.03	9.4	33	.84	23	74	4.6
10	.62	15	.03	540	2880	5250	14	54	2.0
11	.62	10	.02	678	5310	9720	6.2	170	2.8
12	.78	12	.03	856	4870	11900	5.9	59	.94
13	.78	10	.02	1310	10400	37700	4.7	70	.89
14	.70	15	.03	886	6400	15300	4.4	62	.74
15	.62	28	.05	829	4100	9180	15	54	2.2
16	.54	14	.02	889	3520	8450	6.8	52	.95
17	.54	12	.02	994	2980	8000	2.6	54	.38
18	.54	14	.02	748	2550	5150	5.5	54	.80
19	.54	140	.20	688	5340	10400	8.5	46	1.1
20	.62	15	.03	308	1500	1250	8.5	142	3.3
21	.62	11	.02	181	1080	528	27	76	6.3
22	.70	12	.02	119	800	257	23	58	3.6
23	.62	24	.04	94	500	127	23	77	4.8
24	.62	13	.02	62	500	84	34	65	6.0
25	.54	18	.03	105	2450	762	32	47	4.1
26	.46	16	.02	880	8650	20600	34	38	3.5
27	.62	20	.03	479	6600	8540	74	66	13
28	.62	12	.02	303	3900	3190	72	296	58
29	.46	8	.01	176	2000	950	68	300	55
30	10	36	1.3	119	1200	386	57	337	52
31	9.1	33	.99	78	620	131	--	--	--
TOTAL	37.64	--	3.15	12500.3	--	165494.56	884.1	--	343.80

08396500 PECOS RIVER NEAR ARTESIA, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	50	294	40	97	134	35	44	46	5.5
2	45	212	26	88	109	26	46	52	6.5
3	43	114	13	88	115	27	45	33	4.0
4	38	92	9.4	88	119	28	49	42	5.6
5	35	87	8.2	76	114	23	58	45	7.0
6	32	116	10	57	86	13	60	44	7.1
7	32	62	5.4	51	73	10	60	19	3.1
8	32	58	5.0	43	69	8.0	67	14	2.5
9	45	156	21	40	71	7.7	65	16	2.8
10	36	82	8.0	38	72	7.4	64	17	2.9
11	43	79	9.2	45	70	8.5	60	12	1.9
12	44	63	7.5	46	57	7.1	56	13	2.0
13	37	68	6.8	39	58	6.1	53	11	1.6
14	34	60	5.5	36	53	5.2	51	12	1.7
15	39	68	7.2	37	53	5.3	50	11	1.5
16	35	64	5.9	44	54	6.4	51	9	1.2
17	29	71	5.6	50	56	7.6	51	8	1.1
18	28	67	5.1	48	63	8.2	52	8	1.1
19	33	48	4.3	57	45	6.9	53	11	1.6
20	33	32	2.9	54	44	6.4	52	8	1.1
21	32	34	2.9	53	46	6.6	52	14	2.0
22	31	38	3.2	65	42	7.4	50	12	1.6
23	39	33	3.5	60	32	5.2	49	13	1.7
24	46	42	5.2	52	28	3.9	49	14	1.9
25	57	78	12	49	29	3.8	48	42	5.4
26	64	83	14	47	39	4.9	49	13	1.7
27	56	52	7.9	45	33	4.0	48	9	1.2
28	53	41	5.9	44	42	5.0	47	11	1.4
29	58	48	7.5	42	46	5.2	47	14	1.8
30	65	46	8.1	46	54	6.7	47	7	.89
31	87	87	20	--	--	--	47	4	.51
TOTAL	1331	--	296.2	1625	--	305.5	1620	--	81.90

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

38888.46

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

213414.11

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

38309.46

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

213427.76

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDIM- ENT (MG/L) (80154)	SUS- PENDED SEDIM- ENT DIS- CHARGE (T/DAY) (80155)	SUS- SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS- SED. FALL DIAM. % FINER THAN .002 MM (70326)	SUS- SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS- SED. FALL DIAM. % FINER THAN .004 MM (70327)	SUS- SED. FALL DIAM. % FINER THAN .004 MM (70327)
APR., 1971										
14...	1650	17.0	557	2340	3520	42	--	57	--	--
19...	1830	14.0	421	1220	1390	48	--	63	--	--
28...	1640	19.0	384	1010	1050	53	--	65	--	--
MAY										
11...	1445	20.0	524	952	1350	52	--	62	--	--
AUG.										
02...	1530	23.0	382	1830	1890	40	--	55	--	--
03...	1810	28.0	106	1170	336	62	--	87	--	--
13...	1810	28.0	1220	9760	32100	47	--	60	--	--
17...	1130	25.0	991	2840	7600	47	--	54	--	--
19...	1645	26.0	612	3190	5270	48	--	59	--	--
27...	1715	28.0	404	6330	6900	59	--	80	--	--
OCT.										
09...	1840	21.0	70	585	111	63	--	80	--	--
		SUS- SED. FALL DIAM. % FINER THAN (70339)	SUS- SED. FALL DIAM. % FINER THAN (70328)	SUS- SED. FALL DIAM. % FINER THAN (70340)	SUS- SED. FALL DIAM. % FINER THAN (70329)	SUS- SED. FALL DIAM. % FINER THAN (70341)	SUS- SED. FALL DIAM. % FINER THAN (70330)	SUS- SED. FALL DIAM. % FINER THAN (70342)	SUS- SED. FALL DIAM. % FINER THAN (70331)	SUS- SED. FALL DIAM. % FINER THAN (70343)
APR., 1971										
14...	--	--	81	--	--	--	96	--	100	--
19...	--	--	87	--	--	--	--	97	--	100
28...	--	--	82	--	--	--	--	98	--	100
MAY										
11...	--	--	80	--	--	--	--	97	--	100
AUG.										
02...	--	--	78	--	--	--	95	--	100	--
03...	--	--	100	--	--	--	--	--	--	--
13...	--	--	83	--	--	--	97	--	100	--
17...	--	--	80	--	--	--	--	99	--	100
19...	--	--	88	--	--	--	--	100	--	--
27...	--	--	96	--	--	--	--	99	--	100
OCT.										
09...	--	--	99	--	--	--	--	100	--	--

RIO GRANDE BASIN

177

08398500 RIO PENASCO AT DAYTON, N. MEX.

LOCATION.--Lat 32°44'36", long 104°24'49", in NE¼SE¼SE¼ sec.18, T.18 S., R.26 E., Eddy County, at gaging station 1.2 miles upstream from U.S. Highway 285, 1.9 miles northwest of old Dayton railway station, 6 miles upstream from mouth, and 7 miles south of Artesia.

DRAINAGE AREA.--1,060 sq mi, approximately.

PERIOD OF RECORD.--Sediment records: September 1951 to December 1971.

EXTREMES, 1970-71.--Sediment concentration: Maximum daily, 5,270 mg/l Aug. 18, 1971; minimum daily, no flow on most days.
Sediment discharge: Maximum daily, 4,550 tons July 24, 1971; minimum daily, 0 tons on most days.

EXTREMES, 1951-71.--Sediment concentrations: Maximum daily, 30,600 mg/l Oct. 7, 1954; minimum daily, no flow on most days of each year.
Sediment discharge: Maximum daily, 600,000 tons Oct. 7, 1954; minimum daily, 0 tons on most days of each year.

REMARKS.--Records of specific conductance and water temperatures of daily samples available in district office at Albuquerque, N. Mex. Flow occurred only on days indicated. Sediment-discharge table included only for period of flow.

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	130	4490	3310			
2	0	0	0	.15	350	.14			
3	0	0	0	.03	200	.02			
4	0	0	0	.01	143	.01			
5	0	0	0	0	0	0			
6	0	0	0	0	0	0			
7	0	0	0	0	0	0			
8	0	0	0	0	0	0			
9	0	0	0	0	0	0			
10	0	0	0	0	0	0			
11	0	0	0	0	0	0			
12	0	0	0	0	0	0			
13	0	0	0	0	0	0			
14	0	0	0	.02	435	.05			
15	0	0	0	0	0	0			
16	0	0	0	0	0	0			
17	0	0	0	0	0	0			
18	0	0	0	30	5270	873			
19	0	0	0	5.3	2850	81			
20	0	0	0	.03	950	.08			
21	0	0	0	.01	500	.03			
22	0	0	0	0	0	0			
23	0	0	0	0	0	0			
24	85	4780	4550	0	0	0			
25	5.0	400	5.4	.06	750	.12			
26	1.0	250	.68	.01	281	.02			
27	.10	150	.04	0	0	0			
28	.05	130	.02	0	0	0			
29	.05	100	.01	0	0	0			
30	74	2850	1630	0	0	0			
31	.75	450	.91	0	0	0			
TOTAL	165.95	--	6187.06	165.62	--	4264.47	0	--	0

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

331.57

10451.53

331.57

10451.53

08405000 PECOS RIVER AT CARLSBAD, N. MEX.

LOCATION.--Lat 32°24'42", long 104°13'17", in SE 1/4 NE 1/4 sec. 7, T. 22 S., R. 27 E., Eddy County, immediately downstream from Lower Tansil Dam, which is approximately 0.2 mile upstream from Dark Canyon, and 0.5 mile downstream from the Greene Street Bridge on U.S. Highway 62-180 in Carlsbad.

DRAINAGE AREA.--18,100 sq mi, approximately (contributing area).

PERIOD OF RECORD.--Chemical analyses: May 1905 to April 1907, May 1937 to September 1946, July 1951 to December 1971.
Water temperatures: July 1951 to December 1971.

EXTREMES, 1970-71.--Dissolved solids: Maximum, 3,560 mg/l July 1-29, 1971; minimum, 1,650 mg/l Aug. 16, 1971.
Hardness: Maximum, 1,800 mg/l July 1-29, 1971; minimum, 870 mg/l Aug. 16, 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED SILICA (MG/L)	DIS- SOLVED IRON (MG/L)	DIS- SOLVED COPPER (MG/L)	DIS- SOLVED MAGNESIUM (MG/L)	DIS- SOLVED SODIUM (MG/L)	DIS- SOLVED POTASSIUM (MG/L)	BICARBONATE (MG/L)	CARBONATE (MG/L)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED FLUORIDE (MG/L)
OCT., 1970												
01-31	21	24	--	330	110	330	8.4	183	0	1100	510	--
NOV.												
01-30	20	23	--	340	120	310	--	196	0	1000	500	--
DEC.												
01-14	17	20	--	340	110	290	4.1	69	0	1100	500	--
15...	40	17	--	340	120	280	4.1	131	0	1100	510	--
16...	80	17	--	340	110	270	4.8	107	0	1100	520	--
17-18	20	18	--	350	120	280	4.5	191	0	1100	510	--
19...	9.4	18	--	330	110	270	4.2	59	0	1100	470	--
20-31	18	19	--	320	110	280	5.5	200	0	1000	450	--
JAN., 1971												
01-31	16	17	--	340	110	290	4.4	191	0	1000	500	--
FEB.												
01-19	23	17	--	330	110	280	3.9	185	0	1100	460	1.0
20-23	2.6	16	--	400	120	300	3.7	206	0	1300	500	1.1
24-28	18	17	--	340	110	290	4.0	188	0	1100	480	1.1
MAR.												
01-31	18	21	--	350	110	360	5.6	181	0	1200	520	.9
APR.												
01-26	21	18	40	360	110	320	5.0	162	0	1100	560	.7
27-30	98	13	--	390	120	360	5.3	181	0	1200	640	.7
MAY												
01-31	5.0	16	--	390	140	400	5.7	172	0	1300	700	.9
JUNE												
01-30	1.7	13	--	450	150	430	5.5	166	0	1600	680	.9
JULY												
01-29	6.5	19	--	460	170	440	5.4	146	0	1700	690	1.0
30...	23	6.9	--	240	86	230	6.4	112	0	850	380	.6
31...	48	8.9	--	350	120	330	5.9	165	0	1200	470	.7
AUG.												
01-15	2.9	12	--	370	120	390	9.6	151	0	1300	600	.8
16...	28	7.6	--	230	73	220	8.6	102	0	710	350	.5
17-22	7.0	11	--	350	120	360	9.7	128	0	1200	570	.7
23-24	106	10	--	270	94	290	9.6	107	0	960	450	.4
25-31	11	14	--	340	120	350	9.7	121	0	1200	550	.6
SEP.												
01-30	9.4	20	--	350	130	340	5.3	148	0	1300	570	.7
OCT.												
01-31	13	24	20	360	120	360	6.9	172	0	1200	560	.7
NOV.												
01-30	11	21	--	340	110	340	5.9	187	0	1100	510	.7
DEC.												
01-31	12	20	--	300	100	280	4.7	192	0	960	460	.9
CALENDAR YEAR												
MTD. AVG.	--	18	--	346	115	328	5.6	171	0	1140	529	.8
TIME MTD.												
AVG. TONS	12	18	--	365	123	351	5.7	170	0	1230	565	.8
PER DAY	--	.6	--	11	3.7	11	.2	6	0	37	17	.0
WATER YEAR												
MTD. AVG.	--	19	--	344	115	322	5.8	169	0	1120	522	--
TIME MTD.												
AVG. TONS	14	18	--	366	124	346	5.8	167	0	1220	562	--
PER DAY	--	.7	--	13	4.4	12	.2	6	0	42	20	--

08405000 PECOS RIVER AT CARLSBAD, N. MEX.--Continued

ESTREMES, 1970-71--Continued

Specific conductance: Maximum daily, 4,840 micromhos July 6, 1971; minimum daily, 2,370 micromhos Aug. 16, 1971.
 Water temperatures: Maximum, 30°C July 16, 1971; minimum, 3°C on Jan. 6, 1971.

EXTREMES, 1937-46, 1951-71.--Dissolved solids: Maximum, 3,850 mg/l Aug. 27-30, 1969; minimum, 335 mg/l Oct. 21, 1969.

Hardness: Maximum, 1,970 mg/l May 1, 1941; minimum, 216 mg/l Oct. 21, 1969.

Specific conductance: Maximum daily, 5,870 micromhos Apr. 25, 1942; minimum daily, 578 micromhos Oct. 21, 1969.

Water temperatures (1951-70): Maximum, 38°C May 28, 1969; minimum, freezing point Dec. 18, 1965.

REVISIONS.--Revised figures for water temperatures for 1969 water year superseding those previously published are given herewith:

EXTREMES, 1968-69.--Water temperatures: Maximum, 35°C July 9; EXTREMES, 1937-46, 1951-69.--Water temperatures (1951-69): Maximum, 37°C July 3, 1957; Delete daily temperature values from May 22 to May 29, inclusive.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SOLVED NITRATE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED URTHO, PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED BURN (B) (UG/L) (01020)	DIS- SOLVED (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED (SUM OF CUNSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED (TUNS PER AC-F) (TONS) (70303)	DIS- SOLVED (TUNS PER DAY) (70302)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SUMP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MH/CM) (00095)	PH (UNITS) (00400)
UCI., 1970												
01-31	1.5	--	--	--	2500	3.40	142	1300	1150	4.0	3550	7.7
NOV.												
01-30	1.6	--	--	--	2400	5.26	130	1400	1240	3.7	3530	7.8
DEC.												
01-14	1.1	--	--	--	2400	3.26	110	1300	1200	3.5	3270	7.8
15...	.10	--	--	--	2400	3.26	259	1300	1190	3.3	3500	8.2
16...	.20	--	--	--	2400	3.26	5.18	1300	1210	3.3	3500	8.0
17-18	.10	--	--	--	2500	3.40	135	1400	1240	3.3	3530	8.3
19...	1.1	--	--	--	2340	3.18	59.4	1300	1200	3.3	3250	7.8
20-31	.30	.02	--	--	2300	3.13	112	1300	1140	3.4	3370	8.0
JAN., 1971												
01-31	.10	--	--	--	2400	5.26	117	1300	1140	3.5	3380	8.2
FEB.												
01-19	.40	--	--	--	2400	3.26	149	1300	1100	3.4	3250	7.9
20-23	.00	--	--	--	2740	3.73	19.2	1500	1500	3.4	3560	7.8
24-28	.10	--	--	--	2440	3.32	119	1300	1100	3.5	3310	8.1
MAR.												
01-31	1.0	--	--	--	2660	3.62	129	1300	1200	4.3	3440	7.3
APR.												
01-26	.70	--	220	--	2560	3.48	145	1400	1300	3.8	3610	8.0
27-30	.60	--	--	--	2820	3.84	7.46	1500	1400	4.1	3930	7.8
MAY												
01-31	.81	--	--	--	3040	4.13	41.0	1500	1400	4.4	4110	7.6
JUNE												
01-30	.28	--	--	--	3410	4.64	15.7	1700	1600	4.5	4630	7.6
JULY												
01-29	.22	--	--	--	3560	4.84	62.5	1800	1700	4.5	4820	7.4
30...	.90	--	--	--	1860	2.53	116	950	860	3.2	2540	7.3
31...	.20	--	--	--	2570	3.50	3.33	1400	1200	3.9	3730	7.3
AUG.												
01-15	.05	--	--	--	2880	5.92	22.6	1400	1300	4.5	3920	7.8
16...	.01	--	--	--	1650	2.24	125	870	790	3.2	2370	7.6
17-22	.09	--	--	--	2680	3.64	50.7	1400	1300	4.2	3670	7.5
23-24	.55	--	--	--	2140	2.91	612	1100	970	3.9	3030	8.0
25-31	.11	--	--	--	2640	3.59	78.4	1300	1200	4.2	3670	7.4
SEP.												
01-30	.46	--	--	--	2790	3.79	70.8	1400	1300	3.9	3840	7.3
UCI.												
01-31	.96	--	240	--	2720	5.70	95.5	1400	1300	4.2	3680	7.7
NOV.												
01-30	1.1	--	--	--	2520	3.43	74.8	1300	1100	4.1	3480	7.7
DEC.												
01-31	1.2	--	--	--	2230	5.03	72.3	1200	1000	3.6	3090	7.7
CALENDAR YEAR												
MTD. AVG.	.64	--	--	--	2580	3.51	--	1340	1200	3.9	3530	7.7
TIME MTD.												
AVG.	.61	--	--	--	2750	3.74	--	1410	1280	4.0	3750	7.7
TUNS												
PER DAY	.02	--	--	--	84	--	--	--	--	--	--	--
WATER YEAR												
MTD. AVG.	.77	--	--	--	2540	3.46	--	1350	1210	3.8	3530	7.8
TIME MTD.												
AVG.	.65	--	--	--	2730	3.72	--	1420	1300	4.0	3770	7.7
TUNS												
PER DAY	.03	--	--	--	96	--	--	--	--	--	--	--

08405000 PECOS RIVER AT CARLSBAD, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	DIS- SOLVED OXYGEN (MG/L) (00300)	IMME- DIATE CULI- FURM (COL. PER) (31501)	FECAL CULI- FURM (COL. PER) (31616)	STREP- TOCULI- FURM (COL. PER) (31679)
APR., 1971									
05...	1815	16	3600	15.0	16.5	8.5	<100	<10	<10
MAY									
03...	1620	.48	4400	23.5	33.5	8.3	<10	20	50
JUNE									
07...	2030	.06	4900	26.0	25.0	--	10	<10	<10
JULY									
06...	2000	21	5900	26.0	26.0	--	560	<10	950
AUG.									
02...	1930	.38	3820	25.5	27.0	--	--	--	--
SEP.									
07...	1940	12	4100	27.5	27.0	--	--	--	--
OCT.									
04...	2100	11	3650	21.0	15.0	--	--	--	--
NOV.									
01...	1945	12	3650	16.0	12.0	--	--	--	--
DEC.									
06...	1900	11	5000	8.0	7.5	--	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3670	3590	3510	---	3280	3350	3420	3840	---	4810	3360	3700	3480	3570	3410
2	3650	3600	3510	---	3210	3350	3450	3880	---	4750	3930	3720	3550	3490	3260
3	3630	3600	3480	3290	3280	3350	3450	3900	---	4710	4090	3730	3550	3500	3190
4	3520	3600	3410	3290	3240	3350	3450	3860	---	4620	4170	3740	3550	3490	3190
5	3390	3640	3440	3290	3270	3350	3450	3900	---	4720	4210	3790	3550	3500	2990
6	3490	3610	3480	3290	3250	3340	3450	3900	---	4840	4160	3780	3560	3500	2970
7	3490	3570	3410	3260	3250	3340	3450	3910	---	4670	4190	3780	3570	3500	3010
8	3560	3630	3410	3290	3280	3340	3490	3950	---	4620	4240	3790	3610	3510	3070
9	3580	3620	3410	3290	3280	3310	3480	4510	---	4630	4190	3830	3580	3500	3060
10	3570	3590	3380	3300	3280	3310	3480	4430	---	4530	3100	3850	3590	3440	3060
11	3570	3590	3440	3270	3220	3320	3490	4590	---	4570	3290	3820	3590	3480	3050
12	3570	3590	3440	3290	3280	3410	3490	4510	---	4620	3390	3820	3640	3470	3080
13	3570	3600	3220	3260	3290	3450	3490	4510	---	4560	3460	3820	3620	3430	3080
14	3590	3560	3410	3270	3250	3320	3520	4490	---	4560	3510	3850	3590	3430	3050
15	3580	3560	3500	3260	3230	3350	3520	4470	---	4630	3570	3850	3590	3420	3150
16	3580	3560	3500	3260	3210	3370	3490	4550	---	4640	2370	3840	3620	3260	3060
17	3550	3560	3340	3270	3280	3370	3490	4650	---	4610	3300	3840	3570	3200	1060
18	3560	3550	3050	3270	3210	3400	3520	4720	---	4650	3460	3840	3580	3300	3070
19	3520	3590	3250	3270	3240	3400	3520	4640	---	4570	3460	3840	3570	3310	3030
20	3520	3550	3410	3280	3150	3400	3520	4660	---	4720	3370	3850	3570	3300	3060
21	3530	3590	3190	3260	3560	3400	3540	4790	---	4690	3620	3850	3590	3320	3050
22	3550	3590	3410	3290	3570	3400	3540	4600	---	4580	3660	3840	3610	3320	3050
23	3550	3550	3310	3290	3650	3400	3560	4550	---	4730	3710	3820	3580	3320	3030
24	3520	3550	3380	3300	3470	3400	3570	4620	---	4700	---	3950	3560	3330	3020
25	3550	3550	3380	3300	3310	3400	3590	4620	---	4790	---	3200	3580	3320	3020
26	3560	3520	3240	3300	3340	3400	3650	4700	---	4790	---	3300	3530	3310	3000
27	3560	3520	3370	3270	3220	3400	3660	4790	---	4760	---	3340	3570	3280	3010
28	3560	3520	3330	3310	3340	3400	3770	4720	---	4810	---	3410	3530	3280	2960
29	3560	3500	3330	3280	---	3400	3830	4740	---	4760	---	3460	3520	3270	2980
30	3570	3580	3110	3280	---	3400	3880	4740	---	2540	---	3440	3510	3260	2990
31	---	---	3280	3260	---	3400	---	---	---	3730	---	---	3520	---	2950
MONTH	3560	3570	3360	3280	3300	3370	3540	4420	---	4570	---	3680	3570	3390	3060

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20.0	14.0	12.5	8.5	9.0	9.0	14.5	15.0	16.5	21.0	23.0	24.0	22.0	17.0	11.0
2	21.0	14.0	11.5	8.5	8.5	9.0	14.0	15.0	20.0	23.5	20.0	25.0	21.0	13.0	9.0
3	21.0	13.0	12.0	7.5	9.0	9.0	13.0	15.5	22.0	22.0	20.0	25.0	20.0	15.0	8.0
4	21.0	12.0	12.0	5.0	8.0	8.5	12.0	19.0	21.0	22.0	21.0	25.0	20.0	13.0	8.0
5	21.0	11.0	12.0	6.0	8.0	9.5	13.5	13.0	20.0	21.5	20.5	24.5	20.0	13.5	8.0
6	19.0	13.0	11.0	3.0	8.5	9.0	13.0	15.0	16.0	23.0	21.0	25.0	20.0	15.5	7.0
7	20.0	13.0	12.0	5.0	7.5	9.5	13.0	16.0	15.0	25.0	20.0	25.0	20.0	13.0	8.0
8	17.0	13.0	11.0	4.5	5.5	10.0	15.0	16.0	17.0	25.0	21.0	25.0	18.0	12.0	8.0
9	17.0	13.0	11.0	5.0	6.0	11.0	15.0	18.0	16.0	25.5	20.5	25.0	20.0	12.0	6.0
10	17.0	12.0	11.5	5.0	6.0	11.0	15.5	18.0	18.0	25.0	23.0	25.0	20.0	12.0	8.0
11	18.0	13.0	11.0	6.0	8.0	12.0	16.5	15.0	19.0	28.0	24.0	25.0	20.0	12.0	7.0
12	17.0	14.0	9.0	7.0	9.0	10.0	17.0	16.0	19.0	27.0	24.0	24.0	20.0	12.0	8.0
13	17.0	13.0	9.0	10.0	9.0	10.0	16.0	18.0	18.0	27.0	24.5	23.0	20.0	15.0	7.0
14	18.0	12.0	9.0	9.0	9.0	12.0	16.0	16.0	19.5	27.0	24.5	23.0	17.0	12.0	8.0
15	17.0	12.0	9.0	9.0	13.0	11.0	17.0	17.0	19.0	28.0	25.0	23.0	17.0	15.0	7.0
16	15.0	11.0	9.0	9.0	12.0	11.0	17.0	17.5	19.0	30.0	24.0	23.0	19.0	15.0	7.0
17	15.0	11.0	8.0	10.0	12.0	12.5	18.5	17.0	20.0	27.0	24.5	22.5	20.0	14.0	6.5
18	14.0	12.0	9.5	10.0	11.0	12.0	18.5	17.0	20.0	26.0	25.0	21.0	18.0	13.0	5.5
19	18.0	11.0	9.0	10.0	11.0	12.5	14.0	13.0	19.0	25.0	25.0	21.5	16.0	12.0	7.0
20	15.0	11.0	11.0	10.0	12.0	12.0	16.0	17.0	21.0	23.0	25.0	21.0	14.0	14.0	7.5
21	16.0	11.0	10.0	11.0	11.0	13.0	17.0	18.0	20.5	24.0	21.0	17.5	14.0	12.5	7.0
22	16.0	11.0	10.0	11.0	12.0	14.0	17.0	20.0	20.5	25.5	25.0	20.0	15.0	12.0	7.0
23	16.5	10.0	12.0	10.5	14.0	14.0	17.0	17.0	20.0	26.0	24.0	22.5	14.0	11.0	8.0
24	17.0	8.5	9.0	9.5	10.0	14.5	18.5	15.0	20.5	25.0	25.0	16.0	15.0	12.0	9.0
25	15.0	10.0	10.0	9.5	10.0	13.5	19.0	15.0	20.0	25.0	24.0	17.0	16.0	11.0	9.0
26	16.5	11.0	8.0	10.0	10.0	15.5	19.0	19.0	20.0	25.5	26.0	20.0	16.0	10.0	10.0
27	14.0	12.0	8.0	10.0	10.0	15.0	16.0	21.0	20.0	23.0	25.0	20.0	14.0	10.0	10.0
28	13.0	11.0	11.5	10.0	10.0	15.5	14.0	20.0	20.0	23.0	25.0	22.0	15.0	10.0	10.0
29	13.0	13.0	9.0	10.0	---	16.5	11.0	19.0	20.0	25.0	25.0	25.5	16.5	10.0	9.0
30	14.0	12.5	10.0	10.0	---	15.0	11.5	17.5	20.0	23.0	26.0	21.0	15.0	11.0	10.0
31	14.5	---	8.5	10.5	---	17.0	---	---	---	20.0	25.0	---	14.0	---	10.0
MONTH	17.0	12.0	10.0	8.5	9.5	12.0	15.5	17.0	19.0	24.5	23.5	22.5	17.5	12.5	8.0

RIO GRANDE BASIN

08406500 PECOS RIVER NEAR MALAGA, N. MEX.
(Surveillance network station)

LOCATION (revised).--Lat 32°12'26", long 104°01'22", in SW 1/4 sec. 19, T.24 S., R.29 E., Eddy County, 2.5 miles upstream from gaging station near Malaga, which is 3.1 miles southeast of Malaga, and 4.3 miles downstream from Black River.

DRAINAGE AREA.--19,190 sq mi, approximately, upstream from gaging station (contributing area).

PERIOD OF RECORD.--Chemical analyses: July 1937 to December 1971.

Water temperatures: February 1959 to December 1971.

Sediment records: July 1969 to December 1971.

EXTREMES, 1970-71.--Dissolved solids: Maximum, 7,700 mg/l July 24-31, 1971; minimum, 3,020 Aug. 24-26, 1971.

Hardness: Maximum, 2,400 mg/l Feb. 21-28, May 1-31, July 1-23, Nov. 1-30, 1971; minimum, 1,500 mg/l Aug. 24-26, 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SOLVED CHLORIDE (CLF) (00960)	DIS- SOLVED SILICA (SIU2) (00955)	DIS- SOLVED IRON (FE) (01046)	DIS- SOLVED CALCIUM (CA) (00915)	DIS- SOLVED MAGNESIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (00930)	DIS- SOLVED POTASSIUM (K) (00935)	BICARBONATE (HCU3) (00440)	CARBONATE (CU3) (00445)	DIS- SOLVED SULFATE (SU4) (00945)	DIS- SOLVED CHLORIDE (CL) (00940)	DIS- SOLVED FLUORIDE (F) (00950)
OCT., 1970												
01-14	37	25	--	550	210	990	29	168	0	1600	1600	--
15-31	43	20	--	500	180	820	18	169	0	1600	1400	--
NOV.												
01-30	40	22	--	510	200	900	26	165	0	1800	1500	--
DEC.												
01-31	44	12	--	500	190	860	18	176	0	1700	1500	--
JAN., 1971												
01-26	47	15	--	530	180	860	22	191	0	1600	1400	--
27-31	29	18	--	560	230	960	26	214	0	1700	1700	--
FEB.												
01-20	25	19	--	560	210	1200	37	202	0	1800	2000	1.5
21-28	29	19	--	590	220	1100	30	197	0	1900	1900	1.5
MAR.												
01-31	31	16	--	530	210	1100	27	154	0	1900	1800	1.1
APR.												
01-07	24	14	--	570	180	1000	25	172	0	2000	1700	1.0
08-30	20	17	--	570	210	1400	31	177	0	2000	2200	1.0
MAY												
01-31	16	23	--	600	210	1400	41	201	0	2100	2000	1.4
JUNE												
01-30	11	25	--	590	210	1600	36	190	0	2200	2500	1.2
JULY												
01-23	9.5	17	--	600	220	1600	--	145	0	2200	2700	.8
24-31	15	15	--	560	210	1800	72	87	0	2100	2900	.7
AUG.												
01-23	16	25	--	540	200	1200	37	175	0	1900	2000	1.1
24-26	151	17	--	420	110	400	9.8	147	0	1300	690	.7
27-31	18	15	--	510	180	920	28	156	0	1700	1600	1.0
SEP.												
01-23	15	24	--	610	190	1200	38	175	0	1900	2200	1.2
24-25	34	19	--	430	130	730	19	146	0	1400	1200	.9
26-30	16	22	--	540	180	1100	36	166	0	1800	1900	1.2
OCT.												
01-31	16	27	--	570	210	1200	36	179	0	1900	2200	1.0
NOV.												
01-30	18	26	--	610	210	1300	38	196	0	2000	2300	1.1
DEC.												
01-31	32	23	--	550	190	980	27	199	0	1800	1600	1.1
CALENDAR YEAR												
MTD. AVG.	--	20	--	553	195	1110	30	180	0	1840	1850	1.1
TIME MTD.												
AVG.	23	21	--	568	203	1230	34	180	0	1930	2040	1.1
TONS												
PER DAY	--	1.2	--	34	12	69	2.0	11	0	114	114	.1
WATER YEAR												
MTD. AVG.	--	18	--	533	194	1030	27	176	0	1780	1700	--
TIME MTD.												
AVG.	28	19	--	552	201	1170	31	176	0	1880	1910	--
TONS												
PER DAY	--	1.4	--	40	15	77	2.1	13	0	133	127	--

RIO GRANDE BASIN

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08406500 PECOS RIVER NEAR MALAGA, N. MEX.--Continued

EXTREMES, 1970-71--Continued

Specific conductance: Maximum daily, 10,900 micromhos May 22, 1971; minimum daily, 3,650 micromhos Aug. 25, 1971.
Water temperatures: Maximum, 31.5°C July 18, 1971; minimum, 4°C Jan. 5, 6, 1971.

EXTREMES, 1937-71--Dissolved solids: Maximum, 18,700 mg/l June 7, 1966; minimum, 344 mg/l Oct. 21, 1969.

Hardness: Maximum, 3,110 mg/l June 7, 1966; minimum, 235 mg/l Oct. 21, 1969.
Specific conductance: Maximum daily, 28,100 micromhos June 7, 1966; minimum daily, 450 micromhos Sept. 21, 1941.
Water temperatures (1959-71): Maximum, 34°C June 25, 1964; minimum, 3°C Jan. 13, 1963.

REMARKS.--No appreciable inflow between sampling point and gaging station. Bacteria and aquatic biology analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SOLVED NITRATE PLUS NITRATE (N) (MG/L) (000631)	DIS- SOLVED NITRATE PLUS NITRATE (P) (MG/L) (000671)	DIS- SOLVED NITRATE PLUS NITRATE (B) (UG/L) (01020)	DIS- SOLVED NITRATE PLUS NITRATE (B) (MG/L) (70300)	DIS- SOLVED NITRATE PLUS NITRATE (B) (MG/L) (70301)	DIS- SOLVED NITRATE PLUS NITRATE (B) (MG/L) (70303)	DIS- SOLVED NITRATE PLUS NITRATE (B) (MG/L) (70302)	DIS- SOLVED NITRATE PLUS NITRATE (B) (MG/L) (000900)	DIS- SOLVED NITRATE PLUS NITRATE (B) (MG/L) (000902)	DIS- SOLVED NITRATE PLUS NITRATE (B) (MG/L) (000931)	DIS- SOLVED NITRATE PLUS NITRATE (B) (MG/L) (00095)	DIS- SOLVED NITRATE PLUS NITRATE (B) (MG/L) (000400)
UCI, 1970												
01-14	.70	--	--	--	4900	6.66	495	2200	2060	9.1	7440	7.7
15-31	.60	--	--	--	4600	6.26	534	2000	1860	8.0	6810	7.7
NOV.												
01-30	.50	--	--	--	5000	6.80	540	2100	1950	8.6	7170	7.7
DEC.												
01-31	2.2	--	--	--	4860	6.54	580	2000	1900	8.5	7030	8.1
JAN., 1971												
01-20	.20	.07	--	--	4800	6.53	609	2100	1940	8.2	6760	7.8
27-31	.20	.03	--	--	5300	7.21	415	2300	2120	8.6	7700	8.0
FEB.												
01-20	.20	--	--	--	5930	8.06	400	2300	2100	11	8500	7.9
21-28	.10	--	--	--	5860	7.97	459	2400	2200	9.8	8060	7.8
MAR.												
01-31	2.3	--	--	--	5670	7.71	475	2200	2100	10	7600	7.4
APR.												
01-07	1.8	--	--	--	5580	7.59	362	2200	2000	9.4	7630	7.5
08-30	1.7	--	--	--	6520	8.87	352	2300	2100	13	9070	7.4
MAY												
01-31	1.9	--	--	--	6480	8.81	280	2400	2200	13	10400	7.7
JUNE												
01-30	2.0	--	--	--	7270	9.89	216	2300	2200	14	10700	7.6
JULY												
01-23	1.0	--	--	--	7470	10.2	117	2400	2300	14	10600	7.5
24-31	.53	--	--	--	7700	10.5	312	2300	2200	16	8770	8.0
AUG.												
01-23	2.0	--	--	--	6000	8.16	292	2200	2000	11	8830	7.8
24-26	.42	--	--	--	3020	4.11	1230	1500	1400	4.5	4280	8.1
27-31	.94	--	--	--	5030	6.84	244	2000	1900	8.9	7210	7.6
SEP.												
01-23	1.8	--	--	--	6260	8.51	254	2300	2200	11	8980	7.6
24-25	1.5	--	--	--	4010	5.45	368	1600	1500	7.9	5620	8.0
26-30	1.6	--	--	--	5670	7.71	245	2100	2000	10	8540	7.7
OCT.												
01-31	2.1	--	--	--	6240	8.49	270	2300	2100	11	9090	7.5
NOV.												
01-30	2.4	--	--	--	6590	8.96	320	2400	2200	12	9410	7.7
DEC.												
01-31	2.5	--	--	--	5280	7.18	456	2200	2000	9.2	7450	7.6
CALENDAR YEAR												
WTD. AVG.	1.5	--	--	--	5710	7.77	--	2200	2040	10	8120	7.7
TIME WTD.												
AVG.	1.6	--	--	--	6140	8.35	--	2270	2110	11	8800	7.6
TUNGS												
PER DAY	.09	--	--	--	352	--	--	--	--	--	--	--
WATER YEAR												
WTD. AVG.	1.2	--	--	--	5360	7.30	--	2130	1990	9.6	7680	7.8
TIME WTD.												
AVG.	1.3	--	--	--	5850	7.96	--	2210	2070	11	8410	7.7
TUNGS												
PER DAY	.09	--	--	--	401	--	--	--	--	--	--	--

RIO GRANDE BASIN

08406500 PECOS RIVER NEAR MALAGA, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED CHARGE (C+S) (000660)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- ASSIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	CAR- BONATE (CO ₃) (MG/L) (00445)	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)	DIS- SOLVED CHLOR- IDE (CL) (MG/L) (00940)
UCI., 1970												
06...	1000	39	17	40	510	186	1060	27	166	0	1680	1780
NOV.												
02...	1530	36	15	10	495	175	872	26	180	0	1690	1550
DEC.												
08...	0930	45	11	40	520	186	858	20	171	0	1730	1440
JAN., 1971												
11...	1500	51	12	--	480	170	810	17	181	0	1600	1300
FEB.												
02...	0900	25	16	--	590	210	1200	34	203	0	1800	2000
MAR.												
02...	0730	37	14	--	520	220	1100	21	162	0	1900	1700
APR.												
06...	0900	25	15	10	580	200	1000	29	161	0	1900	1700
MAY												
04...	0745	18	20	--	610	220	1600	41	187	0	2100	2500
JUNE												
08...	0700	12	19	--	600	220	1600	48	169	0	2300	2600
JULY												
07...	1200	9.7	23	--	580	220	1600	42	187	0	2100	2600
AUG.												
03...	1000	18	17	--	460	160	1100	34	159	0	1700	1800
SEP.												
08...	1210	15	21	--	590	210	1200	28	189	0	2100	2000
UCI.												
05...	1545	16	20	10	560	200	1100	25	194	0	2000	1900
NOV.												
02...	1510	16	23	--	590	210	1400	38	189	0	2000	2500
DEC.												
07...	1220	27	19	--	540	180	1000	33	188	0	1700	1700

DATE	DIS- SOLVED FLUOR- IDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO ₃) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)
UCI., 1970											
06...	1.0	1.3	5.7	.02	--	.03	.41	1.8	.01	--	5560
NOV.											
02...	1.0	1.5	6.8	--	--	--	--	--	--	--	5170
DEC.											
08...	1.1	1.9	8.5	--	--	--	--	--	.00	--	4860
JAN., 1971											
11...	1.1	--	--	--	2.7	--	--	--	--	1.5	4780
FEB.											
02...	1.3	--	--	--	--	--	--	--	--	--	6180
MAR.											
02...	1.5	--	--	--	.10	--	--	--	--	--	5930
APR.											
06...	1.0	.68	3.0	.02	.70	.16	--	--	.09	.00	5930
MAY											
04...	1.3	--	--	--	1.9	--	--	--	--	.07	6910
JUNE											
08...	1.8	--	--	--	1.6	--	--	--	--	.03	7840
JULY											
07...	1.1	--	--	--	1.5	--	--	--	--	.01	7500
AUG.											
03...	.9	--	--	--	.97	--	--	--	--	.01	5380
SEP.											
08...	1.2	--	--	--	1.9	--	--	--	--	.06	5740
UCI.											
05...	.8	2.0	8.9	.02	2.0	.13	.20	2.3	.09	.02	6080
NOV.											
02...	1.3	--	--	--	2.2	--	--	--	--	.05	7550
DEC.											
07...	1.0	--	--	--	2.0	--	--	--	--	.03	5540

RIO GRANDE BASIN

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08406500 PECOS RIVER NEAR MALAGA, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SULFIDS (SUM OF CONSTITU- ENTS) (MG/L) (70301)	HAZU- NESS (CA, MG) (MG/L) (00900)	NUN- CAR- BONATE HAZU- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CUN- DUCT- ANCE (MICRO- MHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DENSITY (GM/ML AT 20 C) (71820)	DIS- SOLVED SULFUR (B) (UG/L) (01020)
OCT., 1970									
06...	5350	2040	1900	10	7820	7.4	20.0	--	490
NOV.									
02...	4920	2040	1890	8.4	7120	7.7	15.5	--	--
DEC.									
08...	4840	2040	1900	8.1	6880	7.6	11.0	--	--
JAN., 1971									
11...	4500	1900	1750	8.1	6520	7.5	9.0	--	--
FEB.									
02...	6000	2300	2130	11	7690	7.7	9.0	--	--
MAR.									
02...	5500	2200	2070	10	7760	7.6	10.0	--	--
APR.									
06...	5510	2300	2200	9.1	7900	7.5	14.0	--	490
MAY									
04...	7190	2400	2200	14	9810	7.0	20.0	--	--
JUNE									
08...	7480	2400	2300	14	10700	7.5	21.5	1.001	--
JULY									
07...	7260	2400	2200	14	9900	7.3	25.0	--	--
AUG.									
03...	5350	1800	1700	11	7060	7.4	24.5	--	--
SEP.									
08...	6250	2300	2200	11	8850	7.4	26.0	--	--
OCT.									
05...	5910	2200	2100	10	8480	7.6	21.5	--	520
NOV.									
02...	6670	2300	2200	13	9650	7.6	19.0	--	--
DEC.									
07...	5270	2100	1900	9.5	7740	7.6	10.5	--	--

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CUN- DUCT- ANCE (MICRO- MHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMPER- ATURE (DEG C) (00020)	COLUM- (PLAT- INUM- CUBALT UNITS) (00080)
OCT., 1970							
06...	1000	39	8300	7.8	20.0	28.0	17
NOV.							
02...	1530	36	--	7.8	15.5	15.0	3
DEC.							
08...	0930	45	7300	8.0	11.0	18.0	5
JAN., 1971							
11...	1500	51	--	7.9	9.0	18.0	4
FEB.							
02...	0900	25	--	7.8	9.0	9.0	12
MAR.							
02...	0730	37	7800	8.0	10.0	.0	25
APR.							
06...	0900	25	8000	7.8	14.0	8.0	15
MAY							
04...	0745	18	9900	7.7	20.0	22.0	10
JUNE							
08...	0700	12	10400	7.9	21.5	19.0	20
JULY							
07...	1200	9.7	10200	7.9	25.0	36.0	10
AUG.							
03...	1000	18	7300	7.8	24.5	23.0	20
SEP.							
08...	1210	15	--	7.9	26.0	34.0	10
OCT.							
05...	1345	16	8600	--	21.5	26.0	5
NOV.							
02...	1310	16	9450	8.0	19.0	20.5	15
DEC.							
07...	1220	27	7500	8.3	10.5	17.5	5

RIO GRANDE BASIN

08406500 PECOS RIVER NEAR MALAGA, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (MG/L) (00355)	BIU- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE CULI- FORM (CUL. PER (00301)	FECAL CULI- FORM (CUL. PER (01016)	STREP- TOCOCCI (CUL- ONES PER (01679)
OCT., 1970							
06...	11	7.3	9	7.8	40	10	90
NOV.							
02...	10	9.4	8	1.5	10	10	<10
DEC.							
08...	8	8.2	10	2.4	<10	<10	<10
JAN., 1971							
11...	4	10.2	25	2.2	10	<10	<10
FEB.							
02...	9	9.5	12	2.3	10	10	10
MAR.							
02...	10	9.2	8	--	<10	<10	20
APR.							
06...	20	8.8	8	3.0	<10	10	30
MAY							
04...	20	5.9	11	2.9	<10	<10	<10
JUNE							
08...	15	5.7	11	3.4	<10	<10	20
JULY							
07...	15	8.6	16	3.4	<10	<10	230
AUG.							
03...	20	8.1	10	5.8	--	--	--
SEP.							
08...	20	7.9	10	4.8	--	--	--
OCT.							
05...	15	9.0	5	2.6	50	10	<10
NOV.							
02...	9	9.8	6	3.2	<10	<10	10
DEC.							
07...	5	10.7	12	2.8	<10	<10	<10

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: April 6, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Diptera: Chironomidae, 590

Ephemeroptera: Heptageniidae; Rhithrogena sp., 8Ironodes sp., 2Lepidoptera: Pyralidae; Elophila sp., 15

Date: June 8, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Diptera: Chironomidae, 5

Odonata: Coenagrionidae, 1

Trichoptera: Hydropsychidae, Cheumatopsyche sp., 2Gastropoda: Physidae; Physa sp., 2

Date: August 3, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Plecoptera: Perlodidae; Isogenus sp., 1

Date: September 8, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Coleoptera: Elmidae, 1

Hydrophilidae; Perosus sp., 1

Diptera: Chironomidae, 8

Hemiptera: Velidae, Velia sp., 3Lepidoptera: Pyralidae; Elophila sp., 3Odonata: Coenagrionidae; Hyponeura sp., 1Ischnura sp., 6Zonagrion sp., 2Trichoptera: Hydropsychidae; Cheumatopsyche sp., 36Rhyacophilidae; Glossosoma cases, 3Gastropoda: Physidae; Physa sp., 4Oligochaeta: Lumbriculidae, Lumbriculus sp., 1WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED OXYGEN (MG/L) (01040)	DIS- SOLVED LEAD (PB) (01049)	DIS- SOLVED NITR- ATE (SE) (01145)	DIS- SOLVED ZINC (ZN) (01090)
OCT., 1970					
06...	1005	14	7	<12	9

RIO GRANDE BASIN

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08406500 PECOS RIVER NEAR MALAGA, N. MEX.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	7260	7200	6950	7120	8220	7720	7740	9510	9630	10400	7310	8080	9050	9220	8910
2	7240	7080	6990	7070	8180	7570	7100	9900	10000	10200	7160	---	8980	9470	7850
3	7480	7270	6830	7010	8300	7570	7920	9710	10400	10000	7140	8680	8220	8980	8410
4	7580	7220	7000	6870	8110	7570	8170	9800	10300	9470	7840	8540	8220	9220	7570
5	7880	7450	6860	6670	8340	7570	7570	9800	10200	9390	8030	8820	8280	9470	7460
6	8040	7400	6900	6550	8320	7490	7360	10100	10300	9550	8350	9820	8410	9300	7910
7	7330	7540	6780	6500	8400	7440	7520	9900	10200	10400	8410	8610	8690	9550	7520
8	7790	7430	6830	6530	8340	---	8800	9710	10200	10600	8620	8330	8830	---	8410
9	7550	7300	5830	6530	8170	7400	8580	9950	10300	10500	9220	8330	8550	9550	8480
10	7430	7420	6740	6530	8460	7380	8660	9710	10500	10200	9290	8080	8620	9070	7910
11	7300	7300	6690	6500	8710	6990	8950	9430	10500	10000	8200	8680	8830	9470	7970
12	7270	7420	6880	6380	8500	6670	9270	9710	10300	10000	8690	8760	9060	9390	7570
13	7200	7430	6960	6390	8620	6600	9190	9800	10600	10300	9760	8270	9060	9390	7520
14	7090	7170	7040	6380	8880	6750	9270	9710	10300	10200	9220	8610	8980	9730	7360
15	5890	7350	7130	6300	8750	7020	9110	9520	10300	10300	8550	8970	8980	9550	7160
16	6810	7430	7110	6140	8630	7320	8640	9250	10400	10200	8480	8820	9060	9910	7190
17	6810	7420	7040	6610	8580	7490	8720	9710	10600	10100	8550	8820	8760	9550	7520
18	6740	7130	6830	6750	9060	7750	8950	9990	10600	10400	8550	9380	8980	9470	7410
19	6730	7230	7040	6910	8970	7400	9360	10200	10800	10400	8930	8540	9460	8560	6790
20	6570	7110	7420	6720	8810	7260	9190	10400	10600	10400	8910	8200	---	9070	7070
21	6690	6930	7090	6760	7460	7550	9110	10400	10600	10300	8810	9550	8980	9070	5930
22	6640	6660	7160	7040	7270	7650	9270	10900	10300	10500	8970	9720	8760	8920	7110
23	6920	6980	7220	7240	7840	7720	8360	10300	10300	10300	8970	8150	7970	8940	6880
24	5900	6900	7130	7330	7760	7320	8360	10300	10600	10400	3760	5350	7720	8700	6710
25	7040	6650	7050	7770	8220	8000	8500	10300	10500	7280	3650	5610	8150	8770	5820
26	5930	6820	6940	7300	8320	7000	8500	10400	10400	7810	4980	6840	8280	3360	6690
27	7060	6960	6820	7360	8790	6970	9640	10400	10200	3760	5970	7310	---	3430	6710
28	5910	7080	7160	7450	8490	7060	8870	10400	10600	8760	5600	8280	9050	8350	6560
29	5820	7040	7050	7550	---	7550	9200	10300	10600	9470	7290	8830	9290	8630	6360
30	5940	7180	7060	7860	---	8530	9360	9820	10400	10000	7720	8900	9540	3430	6400
31	6950	---	7030	8060	---	8390	---	9960	---	6370	7890	---	9460	---	---
MONTH	7120	7180	5990	6890	8380	7450	8610	9980	10380	9770	7830	8340	8770	9120	7370

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20.0	14.0	12.5	8.5	10.5	10.0	20.0	20.0	24.0	25.0	25.0	28.0	26.0	19.0	11.0
2	24.0	13.0	12.0	10.0	10.0	10.0	14.0	18.0	27.0	27.0	29.0	28.0	22.0	14.0	9.0
3	20.0	13.0	12.0	9.0	10.0	10.0	13.0	23.0	25.0	27.0	24.0	28.0	22.0	14.0	9.0
4	20.0	11.0	12.0	6.0	10.0	14.0	16.0	24.0	25.0	30.0	27.0	31.0	20.0	13.0	9.0
5	20.0	10.0	12.0	4.0	9.0	10.0	14.0	21.0	27.0	30.0	28.0	25.0	20.0	13.0	8.0
6	20.0	10.0	13.5	4.0	12.0	13.0	14.0	20.5	27.5	28.0	29.0	25.0	22.0	14.0	9.0
7	21.0	16.0	10.0	4.5	10.0	10.0	13.0	24.0	28.0	28.0	23.0	25.0	22.0	13.0	12.0
8	18.0	15.0	11.0	4.5	11.0	10.0	20.0	24.0	29.0	28.0	24.0	24.0	19.0	---	10.0
9	15.0	13.0	10.0	7.0	8.0	15.0	20.0	25.0	28.0	29.0	23.0	27.0	20.0	12.0	8.0
10	20.0	12.0	12.0	7.0	9.0	12.0	21.0	23.0	28.5	25.0	25.0	26.0	19.5	12.0	9.0
11	17.0	13.5	10.0	10.0	12.0	14.0	23.0	24.0	25.0	31.0	24.0	28.0	19.0	12.0	9.0
12	20.0	13.0	9.0	10.0	14.0	14.0	22.0	24.0	22.0	24.5	26.0	25.0	20.0	14.5	10.0
13	19.5	13.0	9.0	10.5	15.0	15.5	19.0	23.0	22.5	24.5	26.0	29.0	20.0	14.0	9.0
14	20.0	11.0	9.0	12.0	14.0	15.0	21.0	24.0	28.0	23.0	28.0	27.0	19.0	13.0	9.0
15	16.0	11.0	8.0	10.0	15.0	19.0	19.0	27.0	28.5	30.5	27.0	23.0	20.0	15.0	8.0
16	14.0	13.0	8.0	9.0	15.0	13.0	22.0	22.0	28.0	25.0	28.0	24.0	20.0	19.0	9.0
17	14.0	13.0	10.0	12.0	15.0	16.0	20.0	22.0	28.0	30.0	29.0	23.0	20.0	16.0	8.0
18	15.0	10.5	9.0	6.0	15.5	15.0	19.0	19.5	23.0	31.5	24.5	18.0	21.0	12.0	8.0
19	15.0	12.0	10.5	10.0	16.0	15.0	16.0	18.0	30.0	27.0	25.0	16.0	17.0	8.0	9.0
20	19.0	11.0	9.0	12.0	12.0	12.0	15.0	23.0	29.0	27.0	29.0	16.0	12.0	12.0	11.0
21	17.0	11.0	12.0	13.0	9.0	15.0	15.0	21.0	27.0	25.0	30.0	22.0	16.0	16.0	11.0
22	17.0	10.0	10.0	14.0	9.0	14.5	16.0	26.0	27.0	26.0	25.0	19.5	15.0	15.0	12.0
23	18.0	11.0	10.0	12.0	10.0	14.0	15.0	25.0	30.0	27.0	27.0	17.0	20.0	14.0	12.0
24	15.0	9.0	10.0	9.0	10.0	15.0	23.0	24.0	30.0	26.0	26.0	17.0	18.0	13.0	13.0
25	17.0	13.0	10.0	10.0	12.0	14.0	20.0	25.0	29.0	25.0	27.0	19.0	19.0	11.0	12.0
26	16.0	12.0	9.0	10.0	11.0	21.5	23.0	25.0	27.0	25.0	25.0	22.0	17.0	13.0	13.0
27	15.0	14.0	9.0	9.5	12.0	17.0	19.0	23.0	23.0	25.0	30.0	23.0	19.0	10.0	11.0
28	16.0	12.0	10.0	9.5	12.0	13.0	20.0	23.0	29.0	27.0	30.0	26.0	18.0	11.0	12.0
29	15.0	14.0	10.0	10.0	---	19.0	18.0	23.0	28.0	30.5	25.0	26.0	20.0	11.0	14.0
30	17.0	15.5	9.0	11.0	---	20.0	19.0	22.0	25.0	25.0	29.0	25.0	19.0	12.0	12.0
31	13.0	---	8.0	14.0	---	16.0	---	21.0	---	24.0	29.0	---	15.0	---	10.5
MONTH	17.5	12.5	10.0	9.5	11.5	14.5	18.5	22.5	27.0	27.0	26.5	24.0	19.0	13.5	10.0

RIO GRANDE BASIN

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08406500 PECOS RIVER NEAR MALAGA, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINEH THAN ,002 MM (70337)	SUS. SED. FALL DIAM. % FINEH THAN ,004 MM (70338)	SUS. SED. FALL DIAM. % FINEH THAN ,016 MM (70340)
UCT., 1970								
08...	1000	20.0	39	38	4.0	--	--	--
NOV,								
02...	1530	15.5	36	51	4.9	--	--	--
DEC,								
08...	0930	11.0	45	14	1.7	--	--	--
JAN., 1971								
11...	1500	9.0	51	4	.55	--	--	--
FEB,								
02...	0900	9.0	25	13	.88	--	--	--
MAR,								
02...	0730	10.0	37	14	1.4	--	--	--
APR,								
06...	0900	14.0	25	22	1.5	--	--	--
MAY								
04...	0745	20.0	18	59	2.9	--	--	--
JUNE								
08...	0700	21.5	12	40	1.3	--	--	--
JULY								
07...	1200	25.0	9.7	61	1.6	--	--	--
AUG,								
03...	1000	24.5	18	42	2.0	--	--	--
UCT,								
05...	1345	21.5	16	56	2.0	--	--	--
NOV,								
02...	1310	19.0	16	49	2.0	--	--	--
DEC,								
07...	1220	10.5	27	15	1.1	--	--	--

08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, N. MEX.

LOCATION (revised).--Lat 32°11'19", long 103°58'43", in SW 1/4 sec. 27, T.24 S., R.29 E., Eddy County, 0.2 mile downstream from gaging station, at Pierce Canyon Crossing, which is 6 miles southeast of Malaga.

DRAINAGE AREA.--19,260 sq mi, approximately (contributing area).

PERIOD OF RECORD.--Chemical analyses: March 1938 to September 1941, October 1951 to December 1971.
Water temperatures: October 1952 to December 1971.

EXTREMES, 1970-71.--Dissolved solids: Maximum, 27,800 mg/l June 19-30, 1971; minimum, 4,990 mg/l Aug. 26-29, 1971.
Hardness: Maximum, 3,700 mg/l June 19-30, 1971; minimum, 1,600 Aug. 16-24, 26-29, 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SIU2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (NA) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- AS- SIUM (K) (MG/L) (00935)	BICARB- ONATE (HCO3) (MG/L) (00440)	CARB- ONATE (HCO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SU4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)
OCT., 1970												
01-08	28	21	--	520	227	2480	--	170	0	1900	4000	--
09-10	39	20	--	540	246	3020	--	183	0	2010	4850	--
11-31	48	17	--	535	227	2160	--	180	0	1900	3450	--
NOV.												
01-30	42	21	0	530	230	2300	100	196	0	2100	3400	1.4
DEC.												
01-31	49	13	--	540	250	2400	82	186	0	430	4800	--
JAN., 1971												
01-30	46	14	--	550	230	2000	43	192	0	1800	3400	--
31...	30	15	--	600	290	3600	150	236	0	1700	6000	--
FEB.												
01-11	26	16	--	560	270	2500	99	210	0	2300	4200	1.6
12-21	27	18	--	580	290	3400	130	207	0	2400	5500	1.5
22-28	26	18	--	590	270	2400	88	206	0	2200	4100	1.6
MAR.												
01-23	36	16	--	560	260	2900	79	170	0	2100	4500	1.3
24-31	20	15	--	560	310	3500	110	170	0	2300	5200	1.3
APR.												
01-30	15	14	30	600	300	3800	--	164	0	2400	6100	1.2
MAY												
01-06	7.4	15	--	670	350	5100	200	178	0	2700	8000	1.3
07-31	8.8	18	--	650	390	6500	260	208	0	2900	9500	1.4
JUNE												
01-18	8.7	18	--	680	380	5800	230	208	0	2700	9600	1.5
19-30	6.4	22	--	710	470	8700	340	215	0	3400	14000	1.5
JULY												
01-24	5.8	12	--	720	430	8100	430	143	0	3300	14000	.9
25-31	17	9.6	--	630	340	5800	310	106	0	2800	8800	.7
AUG.												
01-15	16	13	--	590	250	3500	160	132	0	2100	5800	1.0
16-24	30	12	--	360	160	1700	70	116	0	1300	3000	.7
25...	200	10	--	600	220	1600	67	171	0	1900	3000	1.1
26-29	49	8.7	--	440	130	1100	47	135	0	1300	1900	.7
30-31	15	10	--	550	200	2300	81	165	0	1800	3700	.9
SEP.												
01-22	11	14	--	590	300	4800	210	172	0	2400	7900	1.0
23-26	53	21	--	510	220	2500	110	168	0	1900	4200	1.0
27-30	20	20	--	590	270	3900	180	189	0	2200	6600	1.0
OCT.												
01-31	19	22	--	580	270	3600	160	187	0	2200	6200	1.1
NOV.												
01-30	20	23	--	660	300	3700	170	207	0	2400	6300	1.1
DEC.												
01-31	36	20	--	580	240	2300	67	196	0	2100	4000	1.0
CALENDAR YEAR												
WTD. AVG.	--	17	--	576	265	3140	117	182	0	2150	5190	1.1
TIME WTD.												
AVG.	22	17	--	603	299	4080	170	181	0	2370	6700	1.2
TUN8												
PER DAY	--	1.0	--	35	16	189	7.2	11	0	130	313	.1
WATER YEAR												
WTD. AVG.	--	16	--	553	254	2840	107	180	0	1840	4710	--
TIME WTD.												
AVG.	27	16	--	584	291	3870	166	179	0	2180	6310	--
TUN8												
PER DAY	--	1.2	--	41	19	208	7.8	13	0	135	346	--

RIO GRANDE BASIN

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08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, N. MEX.--Continued

EXTREMES, 1970-71--Continued

Specific conductance: Maximum daily, 44,300 micromhos June 29, 1971; minimum daily, 6,110 micromhos Aug. 27, 1971.
Water temperatures: Maximum, 32°C Aug. 17, 1971; minimum, 2°C Jan. 6, 1971.

EXTREMES, 1938-41, 1951-71.--Dissolved solids: Maximum, 40,900 mg/l Aug. 1-7, 1966; minimum, 280 mg/l Sept. 21, 1941.

Hardness: Maximum, 4,850 mg/l Aug. 16, 1969; minimum, 202 mg/l Sept. 21, 1941.

Specific conductance: Maximum daily, 66,000 micromhos Aug. 1, 2, 1966; minimum daily, 433 micromhos Sept. 21, 1941.

Water temperatures (1952-71): Maximum, 35°C July 6, 1968; minimum, 2°C Jan. 13, 1963, Jan. 6, 1971.

REMARKS.--No appreciable inflow between gaging station and sampling point except during periods of heavy local rains. Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SOLVED NITRATE (N) (MG/L) (00051)	DIS- SOLVED NITRITE PLUS PHOSPHATE (P) (MG/L) (00071)	DIS- SOLVED NITRATE (N) (MG/L) (01020)	DIS- SOLVED NITRATE (N) (MG/L) (70300)	DIS- SOLVED NITRATE (N) (MG/L) (70301)	DIS- SOLVED NITRATE (N) (MG/L) (70303)	DIS- SOLVED NITRATE (N) (MG/L) (70302)	DIS- SOLVED NITRATE (N) (MG/L) (00900)	DIS- SOLVED NITRATE (N) (MG/L) (00902)	DIS- SOLVED NITRATE (N) (MG/L) (00931)	DIS- SOLVED NITRATE (N) (MG/L) (00045)	DIS- SOLVED NITRATE (N) (MG/L) (00400)
UCI., 1970												
01-08	--	--	--	--	9240	12.6	714	2230	2096	23	13500	7.4
09-10	--	--	--	--	10800	14.7	1140	2360	2210	27	15800	7.5
11-31	--	--	--	--	8580	11.4	1090	2270	2120	20	12300	7.6
NOV.												
01-30	.30	--	800	--	8600	12.0	998	2300	2140	21	12500	7.8
DEC.												
01-31	11	--	--	--	8660	11.8	1150	2400	2200	21	14790	7.3
JAN., 1971												
01-30	.10	.05	--	--	8100	11.0	1010	2300	2140	18	11600	7.8
31...	.70	.03	--	--	12000	16.3	972	2700	2510	30	18200	8.0
FEB.												
01-11	.10	--	--	--	10100	13.7	709	2500	2300	22	14600	8.1
12-21	.10	--	--	--	12400	16.9	904	2600	2400	29	17800	8.0
22-28	.20	--	--	--	9770	13.3	686	2600	2400	21	14400	8.0
MAR.												
01-23	1.9	--	--	--	10500	14.3	1020	2500	2400	25	14300	7.0
24-31	1.5	--	--	--	12100	16.5	653	2700	2600	29	16600	6.9
APR.												
01-30	1.1	--	1200	--	--	18.2	543	2700	2600	32	19600	7.3
MAY												
01-06	1.1	--	--	--	17100	23.3	342	3100	3000	40	25800	7.4
07-31	1.2	--	--	--	20300	27.6	482	3200	3100	50	31300	7.5
JUNE												
01-18	.56	--	--	--	19500	26.5	456	3300	3100	44	30800	7.6
19-30	.45	--	--	--	27800	37.8	480	3700	3500	62	41600	7.6
JULY												
01-24	.04	--	--	--	27100	36.9	695	3600	3400	59	37500	7.5
25-31	.12	--	--	--	18700	25.4	658	3000	2900	46	28000	7.6
AUG.												
01-15	.05	--	--	--	12500	17.0	608	2500	2400	30	19600	8.0
16-24	.01	--	--	--	6660	9.06	539	1600	1500	19	10200	7.8
25...	1.1	--	--	--	7490	10.2	4050	2400	2300	14	14700	8.1
26-29	.31	--	--	--	4990	6.79	660	1600	1500	12	7710	7.6
30-31	.09	--	--	--	8720	11.9	353	2200	2100	21	13100	8.0
SEP.												
01-22	.56	--	--	--	16300	22.2	484	2700	2600	40	24100	7.4
23-26	1.4	--	--	--	9550	13.0	1370	2200	2000	23	14700	7.4
27-30	1.7	--	--	--	13900	18.9	751	2600	2400	33	21500	7.4
UCI.												
01-31	1.4	--	--	--	13100	17.8	672	2600	2400	31	19300	7.5
NOV.												
01-30	1.8	--	--	--	13700	18.6	740	2900	2700	30	20600	7.7
DEC.												
01-31	2.0	--	--	--	9350	12.7	909	2400	2300	20	14400	7.7
CALENDAR YEAR												
MTD. AVG.	.98	--	--	--	11400	15.7	--	2530	2390	27	17100	7.6
TIME MTD.												
AVG.	.92	--	--	--	14400	19.5	--	2740	2590	33	21200	7.6
TONS												
PER DAY	.06	--	--	--	709	--	--	--	--	--	--	--
WATER YEAR												
MTD. AVG.	2.4	--	--	--	10300	14.1	--	2430	2280	25	15600	7.6
TIME MTD.												
AVG.	1.6	--	--	--	13500	18.4	--	2660	2510	32	20000	7.6
TONS												
PER DAY	.17	--	--	--	783	--	--	--	--	--	--	--

RIO GRANDE BASIN

08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIST- CHARGE (CFS) (000600)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00045)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	CULUM (PLAT- INUM- CUBALT UNITS) (00080)	IMME- DIATE CULI- FORM (CUL, PER (31501)	FECAL CULI- FORM (CUL, PER (31616)	STREP- TOCOCCI (CUL- UNIES PER (31679)
OCT., 1970									
05...	1630	24	--	--	--	--	20	<10	20
NOV.									
02...	--	38	--	--	--	--	<10	<10	10
DEC.									
08...	1100	51	13000	11.0	23.0	4	--	--	--
JAN., 1971									
11...	1700	54	--	7.5	19.5	--	<10	<10	<10
FEB.									
02...	1100	29	14000	9.5	12.0	--	<10	<10	<10
MAR.									
02...	0900	57	14000	9.5	2.0	--	<10	<10	10
APR.									
06...	1145	28	--	15.0	13.5	--	<10	<10	<10
MAY									
04...	0930	6.6	29000	22.0	29.0	--	50	<10	<10
JUNE									
08...	0930	8.9	30500	24.0	28.0	--	<10	<10	<10
JULY									
07...	1300	5.9	40000	28.0	37.0	--	<10	<10	90
AUG.									
03...	1115	18	17000	26.0	27.0	--	--	--	--
OCT.									
05...	1500	19	25500	23.0	23.0	--	--	--	--
NOV.									
02...	1420	18	14600	17.0	23.0	--	--	--	--
DEC.									
07...	1045	30	14500	7.0	12.5	--	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	12800	12700	14700	13300	13300	15100	19500	23100	25500	43700	15800	16900	---	13500	20400
2	12700	12600	14300	12500	12500	14200	19700	23500	26100	43500	13700	16400	14700	15500	12300
3	12800	12400	14200	13400	12200	15900	19900	24500	25900	34300	16700	17200	15500	15100	18400
4	13000	11600	14100	12200	16000	13100	17900	---	26200	36800	15700	18000	20500	16300	12700
5	13700	11900	13000	12300	16100	12700	16700	25400	27600	36600	21600	18900	15900	15800	12500
6	15100	12600	17400	11500	17700	17600	16700	25800	28900	34300	17700	19600	15400	13900	12100
7	13800	12400	13200	11800	21300	14600	17400	27200	28700	36600	19200	20800	18300	28600	30700
8	13800	15800	13100	12100	13900	13200	17300	28400	28600	36600	17300	22000	17300	---	21900
9	17700	15100	14700	11500	13500	16600	17500	29200	28400	36800	21000	20100	12400	14500	18100
10	14600	13200	13400	11000	13000	15700	19600	29700	28800	36700	21700	20200	14300	15700	12800
11	12100	14200	13700	11600	13000	14300	20000	30600	29300	36800	17000	27200	13600	16700	10700
12	13100	12600	13100	11600	20600	14300	20900	31700	30900	37000	22900	21400	13700	16700	12400
13	13000	12900	12600	10900	17300	14100	21500	32000	30900	36400	19600	21500	15300	17500	11800
14	13400	14300	12600	13000	13300	13900	22000	31700	32400	36300	19000	21600	19500	18000	11500
15	12600	12800	15000	13900	22400	13200	22000	30600	30700	34700	19700	23800	15900	24100	15600
16	12200	13500	18500	12400	16100	12400	22300	28100	30400	33000	10900	25000	20900	18900	14800
17	11400	12400	13400	12400	16200	15000	22500	28200	30100	34500	6600	28100	18800	20100	10700
18	11500	14400	13000	10800	20100	15000	23000	28200	31000	34300	7380	29200	21300	22100	13600
19	12600	14000	12600	11600	21400	15700	24100	28500	33200	33800	8290	26700	23400	16200	11200
20	11200	13600	13900	11100	16400	12600	24900	29700	33900	33700	9620	32200	24900	---	10700
21	11600	---	12100	11700	18600	13400	20600	30900	34700	34200	11600	38100	34100	37700	18500
22	11900	---	11700	12900	14100	13400	22000	30600	35700	34400	12300	26600	15200	17300	14600
23	12100	15600	15800	14600	12800	14600	20200	---	36900	34400	12700	18500	27000	18100	13600
24	12600	17500	13700	11400	13300	16000	18600	30400	38100	34500	10700	12900	17300	31500	11600
25	11900	11800	15100	11900	14400	15700	19100	29800	40200	27200	14700	12700	15400	14100	10900
26	12100	12800	12500	12300	17300	16100	19100	29600	42700	28800	7480	12000	16100	16100	11300
27	13400	14900	13000	12400	15400	16100	19300	29800	43300	29400	6110	15500	22200	15700	11900
28	14300	14100	13600	12100	14800	16400	19400	29900	44000	26200	7590	15400	22700	20400	11400
29	11400	13300	13500	12400	---	16700	19900	29500	44300	28300	8990	29500	21800	18600	11600
30	11500	12300	13200	12300	---	19800	21200	29000	43800	29500	12100	21300	19100	31100	11000
31	12200	---	13100	18200	---	19200	---	27800	---	24200	12900	---	17300	---	10200
MONTH	12840	13480	13800	12400	15960	15070	20160	28740	33040	34110	14150	21640	18660	19710	13920

RIO GRANDE BASIN

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08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, N. MEX.--Continued

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	19.0	13.0	11.5	7.0	10.0	10.0	16.0	20.0	25.0	26.0	26.0	27.0	26.0	20.0	9.5
2	21.0	12.0	11.0	10.0	8.0	10.0	15.0	20.0	24.0	26.0	25.0	28.0	22.0	18.0	7.0
3	20.0	12.0	11.0	9.0	9.0	10.0	14.0	22.0	25.5	26.0	29.5	29.0	20.0	13.0	8.0
4	20.0	10.0	11.0	4.0	10.0	7.0	15.0	25.0	23.0	30.5	27.0	31.0	20.0	12.0	7.0
5	20.0	10.0	12.0	3.0	7.0	9.0	13.5	20.0	26.0	29.0	27.0	25.0	20.0	12.0	6.0
6	20.0	11.0	14.0	2.0	12.0	13.0	13.5	21.0	30.0	27.0	27.0	25.0	18.0	16.0	6.0
7	20.0	15.0	9.0	2.5	12.0	9.0	19.0	21.0	28.0	28.0	24.0	26.5	20.0	14.0	12.5
8	18.5	14.0	10.0	3.0	10.0	10.0	20.0	22.0	29.0	27.5	24.0	25.0	19.0	---	8.0
9	16.0	12.0	10.0	5.0	6.0	15.0	19.0	22.0	25.0	28.0	23.0	31.0	19.0	10.0	9.0
10	18.0	11.0	11.0	5.0	6.0	11.0	19.0	23.0	24.0	29.0	25.0	27.0	19.0	10.0	6.0
11	17.5	13.0	9.0	10.0	9.0	13.0	22.5	21.5	24.5	26.0	25.0	28.5	19.0	11.0	7.0
12	19.0	14.0	9.0	8.0	13.0	14.0	20.0	22.0	23.5	26.0	25.0	25.0	20.0	11.0	7.0
13	16.5	12.0	7.0	10.0	10.0	15.0	19.0	24.0	23.5	26.0	27.0	26.0	20.0	14.0	6.0
14	20.0	9.0	7.0	12.0	11.5	15.0	17.0	23.0	28.0	24.0	27.0	23.0	20.0	12.0	7.0
15	15.0	9.0	8.0	10.0	15.5	14.0	19.0	21.0	28.0	25.0	28.0	25.0	20.0	17.0	6.0
16	14.0	10.0	6.5	8.0	14.0	13.0	22.0	23.0	28.0	25.0	29.0	26.0	20.0	17.0	7.0
17	12.0	10.0	8.0	11.0	14.5	16.0	20.0	24.0	23.0	30.0	32.0	23.0	21.0	14.5	6.0
18	13.0	12.0	9.0	6.0	15.0	15.0	19.0	22.0	24.0	29.0	24.0	19.0	21.5	12.0	5.5
19	14.5	10.0	9.0	9.0	15.0	14.0	17.0	20.0	29.0	28.0	26.0	15.0	17.0	11.0	7.0
20	17.0	9.0	10.0	9.0	8.5	11.5	16.0	20.0	30.0	27.5	24.0	21.0	20.0	---	11.0
21	17.0	---	12.0	12.0	9.0	12.0	14.0	21.0	28.5	25.0	31.0	22.0	21.0	18.0	11.0
22	18.0	---	11.0	14.0	8.0	14.0	17.0	26.0	27.0	27.0	26.0	20.0	14.5	13.0	12.0
23	19.0	11.0	10.0	12.0	9.0	15.0	15.0	25.0	28.0	27.0	29.0	17.0	20.0	9.0	12.0
24	15.0	10.0	9.0	10.0	10.0	15.0	18.5	22.5	30.0	27.0	27.0	16.0	17.0	18.0	10.0
25	18.0	8.0	9.5	9.0	11.0	14.5	20.0	22.0	29.0	28.0	31.0	19.0	19.0	9.5	9.0
26	16.0	10.0	7.0	9.0	12.0	20.0	23.0	22.0	25.0	27.0	26.0	22.0	17.0	13.0	13.0
27	15.0	12.5	7.0	9.0	10.0	17.0	20.0	22.0	26.0	27.0	29.0	24.0	20.0	9.0	10.0
28	13.0	11.5	9.0	9.0	10.0	20.0	21.0	22.0	25.0	27.0	30.0	23.0	19.0	11.0	11.0
29	18.0	13.0	10.0	10.0	---	19.0	19.0	23.0	28.5	27.0	28.5	28.0	21.5	9.0	12.0
30	16.0	15.0	8.0	11.0	---	22.0	---	24.0	26.0	26.0	28.0	22.0	17.0	15.0	11.0
31	13.0	---	7.5	15.5	---	18.0	---	23.0	---	25.0	28.5	---	13.0	---	9.0
MONTH	17.0	11.5	9.5	8.5	10.5	14.0	18.0	22.0	26.5	27.0	27.0	24.0	19.5	13.0	8.5

08407500 PECOS RIVER AT RED BLUFF, N. MEX.
(Surveillance network station)

LOCATION (revised).--Lat 32°04'30", long 104°02'21", in SW 1/4 sec. 1, T.26 S., R.28 E., Eddy County, 2 miles downstream from gaging station which is at Red Bluff, 0.5 mile upstream from pipeline bridge, 0.2 mile downstream from Red Bluff Draw, and 5.5 miles upstream from Delaware River.

DRAINAGE AREA.--19,540 sq mi, approximately, upstream from gaging station (contributing area).

PERIOD OF RECORD.--Chemical analyses: July 1937 December 1971.

Water temperatures: October 1952 to December 1971.

Sediment records: July 1969 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum daily, 47,400 micromhos July 25, 1971; minimum daily, 1,360 micromhos Aug. 16, 1971.

Water temperatures: Maximum, 32°C on several days during June, July, Aug., and Sept. 1971; minimum, 3°C Jan. 5, 6, 7, and 8, 1971.

EXTREMES, 1937-71.--Dissolved solids (1937-70): Maximum, 32,800 mg/l May 25-30, 1965; minimum, 342 mg/l Aug. 22, 1966.

Hardness (1937-70): Maximum, 4,570 mg/l Aug. 13-18, 1964; minimum, 216 mg/l Aug. 22, 1966.

Specific conductance: Maximum daily, 48,800 micromhos May 30, 1965; minimum daily, 268 micromhos Sept. 19, 1966.

Water temperatures (1952-71): Maximum, 36°C July 31, 1966, July 13, 1970; minimum, 1°C Jan. 10, 11, 1962, Jan. 13, 1963.

REMARKS.--No appreciable inflow between gaging station and sampling point except during periods of heavy local rains. Aquatic biology analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED SILICA (F) (MG/L) (00060)	DIS- SOLVED SILICA (F) (MG/L) (00955)	DIS- SOLVED IRON (F) (MG/L) (01046)	DIS- SOLVED CAL- CIUM (F) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (F) (MG/L) (00925)	DIS- SOLVED SODIUM (F) (MG/L) (00930)	DIS- SOLVED POT- ASSIUM (F) (MG/L) (00935)	BICAR- BONATE (F) (MG/L) (00440)	CAR- BONATE (F) (MG/L) (00445)	DIS- SOLVED SULFATE (F) (MG/L) (00945)	DIS- SOLVED CHLOR- IDE (F) (MG/L) (00940)
UCT., 1970												
06...	0700	28	14	0	440	205	2420	79	99	0	1820	3950
NOV.												
05...	0700	37	8.7	20	510	220	2100	70	152	0	1960	3520
DEC.												
08...	1350	50	8.4	0	550	241	2360	90	145	0	2040	3940
JAN., 1971												
11...	1830	54	14	40	520	220	2000	81	169	0	1900	3000
FEB.												
02...	1300	28	9.0	120	590	220	2300	77	172	0	2000	3600
MAR.												
02...	1030	40	12	140	590	280	2800	110	166	0	1900	4600
APR.												
06...	1345	19	8.8	20	600	290	3700	110	127	0	2500	5900
MAY												
04...	1100	9.7	6.9	10	680	360	4800	140	141	0	2900	8000
JUNE												
08...	1100	5.0	8.9	40	770	480	7500	320	118	0	1800	15000
JULY												
07...	0815	5.7	3.9	10	790	470	8200	300	76	0	3700	12000
AUG.												
03...	0645	26	10	20	500	130	2200	95	112	0	1300	3500
SEP.												
08...	0840	9.1	11	10	430	170	1800	43	110	0	1800	2800
UCT.												
05...	1030	22	12	10	560	270	3400	100	152	0	2500	4900
NOV.												
02...	0915	19	12	10	610	310	4400	150	152	0	2700	7200
DEC.												
07...	0750	30	17	0	580	270	3500	160	179	0	2300	5800

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (F) (MG/L) (00618)	DIS- SOLVED NITRATE (F) (MG/L) (71851)	DIS- SOLVED NITRATE (F) (MG/L) (00613)	DIS- SOLVED NITRATE (F) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (F) (MG/L) (00608)	ORGANIC NITRO- GEN (F) (MG/L) (00605)	TOTAL NITRO- GEN (F) (MG/L) (00600)	TOTAL PHOS- PHORUS (F) (MG/L) (00665)	DIS- SOLVED ORTHU- PHOS- PHORUS (F) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (F) (MG/L) (70300)
UCT., 1970											
06...	.9	.14	.60	.01	--	.35	.97	1.4	.01	--	9340
NOV.											
03...	1.1	1.0	4.5	--	--	--	--	--	.01	--	8600
DEC.											
08...	1.0	1.4	6.0	--	--	--	--	--	.00	--	9480
JAN., 1971											
11...	1.3	.54	2.4	--	2.4	--	--	--	2.2	--	8620
FEB.											
02...	1.2	.09	.40	--	.00	--	--	--	.05	--	9280
MAR.											
02...	1.2	--	--	--	.10	--	--	--	.03	--	11300
APR.											
06...	1.1	.10	--	.00	.10	.28	--	--	.08	.01	13400
MAY											
04...	1.4	--	--	--	.10	--	--	--	--	.12	16600
JUNE											
08...	1.3	--	--	--	.00	--	--	--	--	.03	26800
JULY											
07...	1.3	--	--	--	.00	--	--	--	--	.02	26100
AUG.											
05...	.6	--	--	--	.30	--	--	--	--	.01	8660
SEP.											
08...	.7	--	--	--	.04	--	--	--	--	.06	6780
UCT.											
05...	.7	.40	1.8	.02	.37	.16	.22	.75	.14	.05	13400
NOV.											
02...	1.2	--	--	--	.71	--	--	--	--	.08	15900
DEC.											
07...	1.2	--	--	--	1.5	--	--	--	--	.06	11100

RIO GRANDE BASIN

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08407500 PECOS RIVER AT RED BLUFF, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70501)	HARD- NESS (CA, MG) (00400)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DENSITY (GM/AL AT 20 C) (71020)	DIS- SOLVED SOLIDS (H) (UG/L) (01020)
UC1., 1970									
06...	8980	2030	1950	23	13600	7.0	20.5	1.004	710
NOV.									
03...	8470	2280	2160	19	12700	7.8	10.5	1.004	680
DEC.									
08...	9290	2330	2210	21	14000	8.0	11.5	1.005	750
JAN., 1971									
11...	7800	2200	2060	19	11300	7.5	5.5	1.003	700
FEB.									
02...	8900	2400	2260	21	13200	7.9	9.5	1.004	640
MAR.									
02...	10000	2600	2460	24	14000	7.8	9.5	1.005	940
APR.									
06...	13200	2700	2600	31	16900	7.3	16.5	1.004	1100
MAY									
04...	17000	3200	3100	37	--	7.2	22.0	1.011	1600
JUNE									
08...	23900	3900	3800	52	36700	6.5	25.0	1.016	2100
JULY									
07...	25500	3900	3800	57	35400	7.0	25.0	1.013	2200
AUG.									
03...	7590	1300	1200	27	13600	7.4	23.0	1.007	740
SEP.									
08...	7110	1800	1700	19	11100	7.1	25.5	1.003	550
UC1.									
05...	11800	2500	2400	30	18500	7.6	20.5	1.007	940
NOV.									
02...	15500	2800	2700	36	22900	7.8	15.0	1.010	1300
DEC.									
07...	12700	2600	2400	30	19300	7.7	5.0	1.005	1100

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

		DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	
DATE	TIME									
JUNE, 1971										
08...	1100	160	<100	<36	<1	<1	2100	<10	1	
		DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED GALLIUM (GA) (UG/L) (01120)	DIS- SOLVED GER- MANIUM (GE) (UG/L) (01125)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)
DATE										
JUNE, 1971										
08...	<1	220	<80	<500	40	1	210	<170	12	
		DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED RUBI- DIUM (RB) (UG/L) (01135)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED TIN (SN) (UG/L) (01100)	DIS- SOLVED TAN- IUM (TI) (UG/L) (01150)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED ZIR- CONIUM (ZR) (UG/L) (01160)
DATE										
JUNE, 1971										
08...	16	34	1	18000	<400	6	<400	<22	<1	

RIO GRANDE BASIN

08407500 PECOS RIVER AT RED BLUFF, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCTI- ANCE (MICHO- MMHS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- CUBALT UNITS) (00080)
OCT., 1970							
06...	0700	28	14000	8.3	20.5	22.0	25
NOV.							
03...	0700	37	13000	8.1	10.5	5.0	3
DEC.							
08...	1330	50	15500	8.2	11.5	25.0	4
JAN., 1971							
11...	1830	54	--	8.1	5.5	8.0	4
FEB.							
02...	1300	28	13600	8.2	9.5	14.0	3
MAR.							
02...	1030	40	--	8.5	9.5	2.0	10
APR.							
06...	1345	19	--	8.1	16.5	14.0	17
MAY							
04...	1100	9.7	26000	8.0	22.0	35.0	10
JUNE							
08...	1100	5.0	--	8.3	25.0	32.0	10
JULY							
07...	0815	5.7	--	8.8	25.0	25.0	10
AUG.							
03...	0645	26	14000	8.0	23.0	19.0	15
SEP.							
08...	0840	9.1	--	8.1	25.5	25.0	25
OCT.							
05...	1030	22	--	7.9	20.5	20.0	5
NOV.							
02...	0915	19	22900	8.3	15.0	11.0	5
DEC.							
07...	0730	30	18000	8.3	5.0	5.0	3

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970							
06...	10	6.2	5	--	625	159	800
NOV.							
03...	2	11.8	5	2.0	4	2	6
DEC.							
08...	1	13.4	12	.9	20	1	20
JAN., 1971							
11...	1	10.8	23	1.8	0	0	3
FEB.							
02...	2	12.4	13	.9	0	0	0
MAR.							
02...	18	12.2	7	1.9	A <10	A <10	0
APR.							
06...	5	10.4	17	4.0	--	50	7
MAY							
04...	6	7.9	12	6.6	0	0	4
JUNE							
08...	5	6.6	11	4.2	--	14	2
JULY							
07...	4	7.1	21	2.8	0	0	12
AUG.							
03...	25	6.2	16	6.8	--	270	750
SEP.							
08...	25	6.6	11	5.6	1400	56	2600
OCT.							
05...	30	8.0	12	4.9	--	470	440
NOV.							
02...	5	10.1	4	2.6	160	9	58
DEC.							
07...	3	12.6	13	2.9	--	9	0

A BACTERIA ANALYZED BY THE NEW MEXICO ENVIRONMENTAL IMPROVEMENT AGENCY ON SAMPLES COLLECTED BY THE U.S. GEOLOGICAL SURVEY.

08407500 PECOS RIVER AT RED BLUFF, N. MEX.--Continued

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: June 8, 1971
 Method of sampling: Surber (3 square feet)
 No macroinvertebrates in sample

Date: July 7, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Coleoptera: Hydrophilidae; Berosus sp. 3

PESTICIDE ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	ALDRIN (UG/L) (39330)	CHLOR- DANE (UG/L) (39350)	DDD (UG/L) (39360)	DDE (UG/L) (39365)	DDT (UG/L) (39370)	D1- AZINON (UG/L) (39570)	D1- ELDRIN (UG/L) (39380)	ENDRIN (UG/L) (39390)	HEPTA- CHLOR (UG/L) (39410)
APR., 1971										
06...	1345	.00	.0	.00	.00	.00	.00	.00	.00	.00
JUNE										
08...	1100	.00	.0	.00	.00	.00	.00	.00	.00	.00
JULY										
07...	0815	.00	.0	.00	.00	.00	--	.00	.00	.00
SEP.										
08...	0840	.00	.0	.00	.00	.00	--	.00	.00	.00

DATE	HEPTA- CHLOR EPOXIDE (UG/L) (39420)	LINDANE (UG/L) (39340)	MALA- THION (UG/L) (39530)	METHYL THION (UG/L) (39600)	PARA- THION (UG/L) (39540)	TOX- APHENE (UG/L) (39400)	2,4-D (UG/L) (39730)	2,4,5-T (UG/L) (39740)	SILVEX (UG/L) (39760)
APR., 1971									
06...	.00	.00	.00	.00	.00	.0	.00	.00	.00
JUNE									
08...	.00	.00	.00	.00	.00	--	.00	.00	.00
JULY									
07...	.00	.00	--	--	--	--	.00	.00	.00
SEP.									
08...	.00	.00	--	--	--	--	.00	.00	.00

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED CUPPER (CU) (UG/L) (01040)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED SILVER (SE) (UG/L) (01145)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970					
06...	0705	10	<4	<30	8

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	11500	11800	10000	9400	8500	15700	17600	25300	36100	35400	4620	7030	15300	22600	21100
2	11800	10500	10700	9300	8500	16000	17600	24500	35700	35300	12000	7250	15400	22600	19800
3	11800	10100	10000	8500	8500	17400	17500	24000	35600	35500	16800	7570	15100	23600	18800
4	12000	10000	11000	7800	9000	17000	18100	23800	35600	35600	20600	8320	15900	23700	20400
5	12000	10200	10000	8000	8500	16700	18500	23800	35600	35800	20600	8890	18500	24400	23400
6	12000	10500	10000	7900	14800	15900	19200	23700	36300	35900	15500	9450	23000	24200	20800
7	12100	11000	9300	8800	16400	15900	20600	23600	36400	36400	13500	10300	23600	23600	20100
8	12200	11500	9800	8300	15200	15100	21200	23600	36700	38000	13300	11000	20900	22200	18100
9	12200	10900	9800	8100	14900	14500	21200	23700	36900	37100	14200	12100	11500	23100	16300
10	---	11400	9900	9000	15500	17000	21300	23700	36900	37400	15200	13200	19200	22400	16600
11	13400	10500	10000	9000	17100	17800	20900	23800	36800	37100	16200	14300	20000	21600	17900
12	13000	12000	9400	7500	17500	16000	20400	23900	36500	36900	16900	15000	19100	20500	20900
13	15000	12600	9400	9000	16900	15500	19800	24100	36500	36000	17700	15900	11200	21600	20000
14	13000	---	8700	7000	16300	15000	19400	24500	36500	35600	14400	16800	7850	23800	16700
15	12500	10500	11800	7000	16200	14700	17200	24900	36500	35400	14100	18000	11600	21400	15400
16	11500	10900	11000	9000	15400	15200	19000	25300	36600	35500	1360	19000	15500	20400	16000
17	11000	12000	11000	9000	15500	15000	19200	26100	36800	35600	1780	20100	17000	21000	19300
18	12000	13400	10900	9000	17500	16300	19300	26900	37100	36400	6270	20700	18100	21000	16200
19	11800	11000	15500	8500	18900	14700	19500	29200	36100	37000	5360	21500	19300	21400	15500
20	11800	12000	12000	8000	18100	15800	19900	28500	35200	37700	9290	22500	20200	21200	14900
21	11000	10800	10800	8500	19400	14700	20600	27900	34700	37700	10900	23600	20500	22900	15300
22	10500	11000	10400	9000	19100	14700	21600	30000	34700	39000	10800	24800	21200	25200	14900
23	10700	10300	10800	9500	21600	15900	22800	30600	34800	38800	11100	4800	23500	24700	13900
24	10700	10200	10800	9000	20900	16300	23900	31500	35000	41700	11300	12600	25900	23700	16500
25	10300	10100	10000	8500	20200	16300	24700	32400	35100	47400	13800	12000	25200	22300	16800
26	10800	11200	10000	8500	19900	16000	25300	33600	35300	37000	12300	17200	25000	20100	15500
27	10400	11000	10600	9500	18200	15700	25900	34000	35600	33400	12400	15700	24200	20900	13600
28	11000	10800	10000	16600	15400	15400	25700	35400	35500	21400	9290	14700	22300	21700	13200
29	10500	9000	10000	8000	---	15300	25500	36200	35100	8130	7540	14400	22500	22000	13200
30	10200	9400	9300	9000	---	15800	25200	36800	34900	4320	7030	14500	22300	22600	14300
31	10800	---	9200	9000	---	16800	---	36500	---	---	6930	---	23900	---	13600
MONTH	11650	10920	10390	8570	15900	15810	20950	27800	35900	34480	11710	14440	19220	22410	17060

RIO GRANDE BASIN
08407500 PECOS RIVER AT RED BLUFF, N. MEX.--Continued
TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	21.0	15.0	14.0	10.0	10.0	13.0	19.5	21.5	26.0	27.5	24.0	29.0	27.0	18.0	9.0
2	23.0	15.0	14.0	9.0	11.0	10.0	18.0	---	26.0	29.5	27.0	28.5	25.5	18.5	8.0
3	22.0	14.0	14.0	6.0	12.0	11.0	18.0	---	24.5	31.0	29.0	28.0	23.0	17.0	9.0
4	23.5	14.0	13.0	5.0	11.0	12.0	16.5	23.0	27.5	32.0	30.0	31.0	21.0	17.0	8.0
5	24.0	13.5	13.0	3.0	11.0	12.0	17.0	21.0	28.0	32.0	29.5	30.0	22.0	16.0	8.0
6	24.0	14.0	12.0	3.0	11.0	12.0	18.0	27.5	27.5	31.0	28.5	30.0	22.0	13.5	8.0
7	23.5	14.5	11.5	3.0	8.0	12.5	18.0	23.5	27.0	30.5	29.0	31.0	21.5	14.0	9.0
8	19.5	14.0	11.5	3.0	9.0	13.0	19.0	24.5	27.0	30.0	28.0	29.0	24.0	14.0	7.0
9	19.0	14.0	12.0	5.0	8.0	13.0	19.0	24.5	28.0	31.0	30.0	32.0	20.0	14.5	8.0
10	---	14.5	12.0	5.0	10.0	14.0	21.0	25.0	27.0	32.0	28.0	30.5	24.0	15.0	6.5
11	18.0	14.5	11.0	6.5	12.0	15.0	23.0	22.5	25.5	32.0	29.0	28.0	23.5	15.0	8.0
12	19.5	15.0	10.0	10.0	12.0	16.0	22.0	22.0	27.0	32.0	30.5	29.0	23.0	16.0	7.5
13	19.0	12.0	9.5	10.0	13.0	16.0	19.0	22.5	29.0	31.5	29.5	29.5	24.0	15.0	8.0
14	19.5	---	8.5	10.0	13.0	16.5	19.0	24.5	29.0	30.5	27.0	27.0	24.0	16.0	8.0
15	16.0	11.0	9.0	10.0	14.0	16.0	19.5	26.5	27.0	32.0	28.0	27.0	23.5	15.0	8.0
16	15.0	12.5	8.5	10.0	14.0	15.0	23.0	26.0	28.0	31.0	23.0	27.5	23.0	16.5	8.5
17	14.5	11.0	9.0	10.0	15.0	14.5	23.0	25.0	30.0	31.5	26.0	21.5	23.0	14.0	8.0
18	14.0	10.5	9.0	11.0	14.0	16.5	21.0	24.5	30.0	30.0	27.0	17.0	22.0	14.0	7.0
19	15.0	11.0	9.0	11.0	14.5	19.0	18.0	26.0	30.5	30.5	29.0	20.5	20.5	13.5	8.0
20	16.5	12.0	10.0	11.0	15.0	20.0	19.0	25.0	30.0	30.5	29.0	20.5	20.5	13.5	8.0
21	18.0	13.0	10.5	12.0	11.0	16.5	19.5	24.0	31.0	31.0	29.0	22.0	19.0	13.5	9.0
22	19.0	12.0	10.5	13.0	11.0	18.0	18.0	26.5	30.5	30.0	32.0	21.5	18.0	13.5	9.5
23	19.0	11.0	10.0	13.0	12.0	16.5	20.5	28.0	30.5	29.5	30.0	14.0	19.0	13.0	10.0
24	19.0	10.0	10.0	13.0	13.0	16.5	22.0	25.5	32.0	32.0	31.5	17.5	19.5	11.0	11.0
25	19.0	10.0	9.5	13.0	13.0	17.5	23.0	24.5	31.0	28.5	29.0	20.5	18.0	12.0	11.0
26	19.0	11.0	8.0	13.0	14.0	14.5	24.0	24.0	28.0	31.5	29.5	24.5	17.0	12.0	12.0
27	16.5	13.0	9.0	13.0	14.0	25.0	24.0	27.0	28.5	30.5	29.5	26.0	18.0	12.0	12.0
28	16.0	14.0	10.0	12.0	13.0	27.0	23.5	26.0	29.5	30.0	30.0	26.5	17.5	12.0	13.0
29	15.5	14.5	10.0	13.0	---	25.5	23.0	26.0	30.0	28.5	30.5	26.0	19.0	12.0	13.0
30	16.0	14.5	10.5	13.0	---	20.5	23.0	26.0	29.0	20.0	29.5	26.0	20.0	12.0	12.0
31	15.5	---	10.0	13.0	---	20.0	---	27.5	---	---	30.5	---	19.0	---	11.0
MONTH	18.5	13.0	10.5	9.5	12.0	16.5	20.5	25.0	28.5	30.5	28.5	25.5	21.5	14.5	9.0

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDIM- ENT (MG/L) (80154)	SUS- PENDED SEDIM- ENT DIS- CHARGE (T/DAY) (80155)
NOV., 1970					
03...	0700	10.5	37	8	.80
DEC.					
08...	1330	11.5	50	4	.54
JAN., 1971					
11...	1830	5.5	54	1	.17
FEB.					
02...	1300	9.5	28	2	.15
MAR.					
02...	1030	9.5	40	2	.23
APR.					
06...	1345	16.5	19	9	.46
MAY					
04...	1100	22.0	9.7	20	.52
JUNE					
08...	1100	25.0	5.0	6	.08
JULY					
07...	0815	25.0	5.7	14	.22
AUG.					
03...	0645	23.0	26	45	3.2
SEP.					
08...	0840	25.5	9.1	24	.59
OCT.					
05...	1030	20.5	22	63	3.7
DEC.					
07...	0730	5.0	30	10	.84

08476300 MIMBRES RIVER AT MCKNIGHT DAMSITE, NEAR MIMBRES, N. MEX.

LOCATION.--Lat 32°56'14", long 108°00'55", in SW¼SE¼ sec.6, T.16 S., R.11 W., Grant County, at gaging station 0.3 mile upstream from Mimbres Ranger station, 0.4 mile downstream from Cottonwood Canyon, and 8 miles northwest of Mimbres.

DRAINAGE AREA.--97.3 sq mi.

PERIOD OF RECORD.--Chemical analyses: August 1967 to December 1971.

Sediment records: August 1967 to December 1971.

REMARKS.--No flow Oct. 1 to Dec. 31, 1970; Jan. 1 to July 1, 3-22, 24-30, Aug. 2-10, 12-14, 16, 20-24, Sept. 4-17, 22, 24-26, Oct. 1-24, Dec. 26, 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED CHARGE (CFS) (00060)	DIS- SOLVED SILICA (STO2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00950)	DIS- SOLVED POT- ASSIUM (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)
AUG., 1971												
11...	--	60	12	30	12	1.6	1.7	3.9	31	0	7.5	.4
25...	1310	6.5	36	50	20	6.0	6.3	2.5	68	0	29	1.6
UCI,												
26...	1040	146	40	50	16	5.6	6.5	2.3	51	0	28	3.4
NOV,												
10...	1415	2.9	43	10	21	7.2	7.0	2.5	65	0	33	2.7
18...	1215	3.5	--	--	--	--	--	--	--	--	--	--
DEC,												
13...	1335	1.4	42	--	18	5.0	6.6	2.6	56	0	28	3.9
28...	1120	10	35	--	17	4.8	5.8	2.5	43	0	30	3.1

DATE	TIME	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70500)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L) (70301)	HAND- MADE NESS (CA, MG) (MG/L) (00900)	SODIUM CAM- BONATE HARD- NESS (MG/L) (00902)	SPE- CIFIC CON- DUCTIV- ANCE (MICRO- MHUS) (UNITS) (00400)	PH	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (MG/L) (01020)
AUG., 1971												
11...	.2	.95	--	--	54	37	11	.1	74	6.4	22.0	50
25...	.3	.09	--	--	136	75	19	.5	177	7.1	27.0	50
UCI,												
26...	.3	.59	--	--	130	63	21	.5	173	6.9	7.0	110
NOV,												
10...	.2	1.2	.13	192	154	82	29	.3	191	7.6	16.0	10
18...	--	--	--	--	--	--	--	--	177	--	15.0	--
DEC,												
13...	.0	.64	--	--	136	65	20	.4	168	8.0	13.0	--
28...	.1	.29	--	--	121	62	27	.3	149	7.4	8.0	--

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED COBALT (CO) (UG/L) (01035)
OCT., 1971										
26...	1040	130	10	24	<1	<2	110	<20	<2	<2
NOV,										
10...	1415	60	0	35	<1	<2	10	<30	<3	<2

	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED GALLIUM (GA) (UG/L) (01120)	DIS- SOLVED GER- MANIUM (GE) (UG/L) (01125)	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)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MOLYB- DENUM (MU) (UG/L) (01060)
DATE										
OCT., 1971										
26...	6	<1	<3	50	0	<2	<10	5	.1	<1
NOV,										
10...	2	<1	<3	10	19	<2	<10	3	1.7	<1

MIMBRES RIVER BASIN

08476300 MIMBRES RIVER AT MCKNIGHT DAMSITE, NEAR MIMBRES, N. MEX.--Continued

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED SILVER (SE) (UG/L) (01145)	DIS- SOLVED SILVER (SI) (UG/L) (01080)	DIS- SOLVED SILVER (SI) (UG/L) (01100)	DIS- SOLVED SILVER (TI) (UG/L) (01150)	DIS- SOLVED SILVER (V) (UG/L) (01085)	DIS- SOLVED SILVER (Z) (UG/L) (01090)	DIS- SOLVED SILVER (Z) (UG/L) (01160)
OCT., 1971									
26...	2	<1	7	75	<3	6	2.0	<100	<5
NOV.									
10...	<3	<1	6	110	<3	<2	4.0	<130	<6

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDIMENT (MG/L) (80154)	SUS- PENDED 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. 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)
AUG., 1971												
11...	--	22.0	.60	927	1.5	--	--	--	--	--	--	--
25...	1310	27.0	6.5	171	3.0	--	--	--	--	--	--	--
OCT.												
26...	1040	7.0	146	4050	1600	--	--	--	--	--	--	--
29...	1120	12.0	29	283	22	--	--	--	--	--	--	--
NOV.												
10...	1415	16.0	2.9	18	.10	--	--	--	--	--	--	--
18...	1215	15.0	3.5	5	.05	--	--	--	--	--	--	--
DEC.												
13...	1335	13.0	1.4	4	.02	--	--	--	--	--	--	--
28...	1120	8.0	10	54	1.5	--	--	--	--	--	--	--

TULAROSA VALLEY BASIN

201

08481500 RIO TULAROSA NEAR BENT, N. MEX.

LOCATION.--Lat 33°08'41", long 105°53'50", in SE 1/4 sec.32, T.13 S., R.11 E., Lincoln County, at gaging station on U.S. Highway 70, 2.6 miles west of Bent, and 8.5 miles northeast of Tularosa.

DRAINAGE AREA.--120 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: May 1963 to December 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SIU2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED POT- AS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCU3) (MG/L) (00440)	CAM- BONATE (CU3) (MG/L) (00445)	DIS- SOLVED SULFATE (SU4) (MG/L) (00945)
UCT., 1970											
07...	1145	7.2	19	--	240	61	42	2.0	203	0	640
30...	1115	8.8	18	0	200	57	41	1.2	274	0	490
NOV.											
18...	1530	8.7	19	--	200	61	40	1.4	242	0	500
DEC.											
09...	1000	8.8	15	--	180	60	50	1.6	184	0	540
JAN., 1971											
20...	1520	7.8	16	--	170	63	85	3.3	235	0	550
FEB.											
11...	1625	8.2	14	--	230	65	51	1.5	241	0	590
MAR.											
04...	1230	10	15	--	200	68	44	1.5	221	0	600
23...	1230	3.2	15	--	260	81	60	1.9	216	0	810
APR.											
14...	1130	7.6	15	--	240	68	51	1.3	230	0	610
28...	1000	9.8	--	--	--	--	--	--	--	--	--
MAY											
19...	0940	8.6	15	--	220	62	43	1.1	215	0	600
JUNE											
09...	1055	9.0	--	--	--	--	--	--	--	--	--
30...	0945	7.4	16	--	210	67	44	1.1	211	0	600
JULY											
23...	1000	6.3	16	--	190	58	44	1.4	208	0	530
SEP.											
14...	1430	7.8	15	--	580	56	42	2.0	161	0	990
UCT.											
04...	1450	8.3	15	--	200	56	39	1.6	185	0	580
26...	1700	11	14	0	260	61	46	2.3	216	0	750
DEC.											
08...	1025	11	15	--	210	62	44	1.4	253	0	580
28...	1535	10	15	--	210	61	43	1.4	249	0	570

DATE	DIS- SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUORIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00631)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SURP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
UCT., 1970											
07...	58	.6	.50	1200	860	693	.6	1560	7.4	13.0	--
30...	55	.9	.70	1000	730	505	.7	1450	7.6	8.0	0
NOV.											
18...	54	.6	.60	1000	740	541	.6	1410	7.6	7.0	--
DEC.											
09...	59	.6	.44	999	700	550	.8	1360	7.6	7.0	--
JAN., 1971											
20...	80	.5	.60	1100	690	497	1.4	1500	7.7	8.5	--
FEB.											
11...	66	.7	.00	1100	830	632	.8	1570	8.0	9.0	--
MAR.											
04...	59	.5	.40	1100	780	600	.7	1510	7.7	--	--
23...	87	.5	.20	1420	980	800	.8	1870	7.8	16.5	--
APR.											
14...	82	.4	.40	1180	880	690	.7	1650	7.7	14.0	60
28...	--	--	--	--	--	--	--	1480	--	13.5	--
MAY											
19...	60	.4	.40	1110	800	630	.7	1490	7.6	10.0	--
JUNE											
09...	--	--	--	--	--	--	--	1370	--	17.0	--
30...	59	.7	.84	1110	800	630	.7	1410	7.6	17.5	--
JULY											
23...	55	.6	.37	999	710	540	.7	1360	7.6	18.5	--
SEP.											
14...	55	.5	.62	1620	1200	1000	.5	1940	7.6	22.0	--
UCT.											
04...	55	.4	.44	1040	730	580	.6	1440	7.6	15.5	--
26...	63	.4	1.3	1310	900	720	.7	1800	7.8	9.0	70
DEC.											
08...	63	.5	.54	1100	780	570	.7	1510	7.8	6.0	--
28...	67	.5	.53	1090	770	570	.7	1500	7.7	9.0	--

SAN JUAN RIVER BASIN

09346000 NAVAJO RIVER AT EDITH, COLO.
(Surveillance network station)

LOCATION.--Lat 37°00'10", long 106°54'25", in NW 1/4 sec. 24, T. 32 N., R. 1 W., Archuleta County, at gaging station, 290 ft downstream from highway bridge, 0.2 mile southeast of Edith, 0.5 mile upstream from Colorado-New Mexico State line, and 1.3 miles upstream from Coyote Creek.

DRAINAGE AREA.--172 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1969 to December 1971.
Sediment records: October 1969 to December 1971.

REMARKS.--Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (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)
OCT., 1970											
12...	0950	62	24	40	24	4.7	8.0	1.4	74	0	39
JAN., 1971											
20...	1030	37	27	--	26	6.0	9.6	1.7	80	0	50
APR.											
19...	1015	44	22	30	24	6.2	10	2.6	78	0	37
JULY											
22...	1215	48	25	30	28	7.1	10	2.3	108	0	39
OCT.											
18...	1530	46	24	20	27	6.9	10	1.9	88	0	54

DATE	DIS- SOLVED CHLD- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)
OCT., 1970										
12...	.3	.3	.09	.40	.00	--	.00	.28	.37	.04
JAN., 1971										
20...	1.0	.2	--	.10	--	.10	--	--	--	--
APR.										
19...	.9	.1	.20	.89	.00	.20	.14	--	--	.14
JULY										
22...	1.3	.3	.05	.22	.00	.05	.01	--	--	.10
OCT.										
18...	2.6	.3	.00	.00	.00	.00	.23	.08	.31	.09

DATE	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
OCT., 1970										
12...	--	152	139	79	18	.4	197	7.8	2.5	60
JAN., 1971										
20...	2.3	158	170	90	24	.4	236	7.6	.0	--
APR.										
19...	.08	138	143	85	21	.5	219	7.7	1.5	10
JULY										
22...	.06	172	167	99	11	.4	237	8.0	20.5	30
OCT.										
18...	.03	130	170	96	24	.4	243	7.5	6.5	20

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	HEXA- VALENT CHRO- MIUM (CR6) (UG/L) (01032)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970								
12...	0950	<10	0	0	0	0	<.5	0

SAN JUAN RIVER BASIN

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09346000 NAVAJO RIVER AT EDITH, COLO.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COHALT UNITS) (00080)
OCT., 1970							
12...	0950	62	219	7.8	2.5	9.5	5
JAN., 1971							
20...	1030	37	230	7.9	.0	4.0	4
APR.							
19...	1015	44	215	8.2	1.5	5.5	30
JULY							
22...	1215	48	245	8.6	20.5	25.0	10
OCT.							
18...	1530	46	220	8.2	6.5	6.0	5

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970							
12...	5	10.6	7	.3	50	30	<10
JAN., 1971							
20...	6	11.6	--	.8	20	<10	<10
APR.							
19...	20	12.4	--	1.2	70	30	30
JULY							
22...	7	7.2	--	1.2	45	0	0
OCT.							
18...	7	9.9	6	.4	30	<10	50

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANGANESE (MN) (UG/L) (01056)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CADMIUM (CD) (UG/L) (01025)	DIS- SOLVED CHROMIUM (CR) (UG/L) (01030)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED VANADIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970											
12...	0955	150	10	<10	--	--	<5	--	--	<1000	13
APR., 1971											
19...	1020	10	27	<10	11	13	5	30	50	<1000	6

INSTANTANEOUS SUSPENDED-SEDIMENT,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY) (80155)
OCT., 1970					
12...	0950	2.5	62	15	2.5
JAN., 1971					
20...	1030	.0	37	23	2.3
APR.					
19...	1015	1.5	44	314	37
JULY					
22...	1215	20.5	48	25	3.2
OCT.					
18...	1530	6.5	46	14	2.0

SAN JUAN RIVER BASIN

09346400 SAN JUAN RIVER NEAR CARRACAS, COLO.
(Surveillance network station)

LOCATION (revised).--Lat 37°00'49", long 107°18'42", in SE $\frac{1}{4}$ sec.17, T.32 N., R.4 W., Archuleta County, at gaging station just upstream from flow line of Navajo Reservoir, 3 miles northwest of Carracas, 7.2 miles upstream from Piedra River, and at mile 178.8.

DRAINAGE AREA.--1,230 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: July 1969 to December 1971.
Sediment records: July 1970 to December 1971.

REMARKS.--Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED CHARGE (CFS) (000600)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	CAR- BONATE (CO ₃) (MG/L) (00445)	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)
OCT., 1970											
12...	1230	278	19	20	26	5.1	14	1.9	91	0	42
JAN., 1971											
20...	1345	140	21	--	32	7.4	26	2.9	107	0	74
APR.											
19...	1530	650	18	60	16	3.6	11	1.9	63	0	25
JULY											
21...	1030	165	18	20	30	7.0	17	2.6	119	0	48
OCT.											
19...	1100	278	17	10	31	9.2	19	2.2	97	0	76

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO ₃) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)
OCT., 1970										
12...	1.0	.3	.02	.10	.00	--	.00	.67	.69	.04
JAN., 1971										
20...	4.5	.3	--	--	--	.10	--	--	--	--
APR.										
19...	1.4	.1	.00	.00	.00	.00	.09	--	--	.09
JULY										
21...	2.4	.3	.29	1.3	.00	.28	.00	--	--	.07
OCT.										
19...	4.1	.4	.00	.00	.00	.00	.19	.77	.96	.58

DATE	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (MG/L) (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (MG/L) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
OCT., 1970										
12...	--	165	154	84	10	.7	234	7.8	8.5	60
JAN., 1971										
20...	1.9	222	230	110	22	1.1	353	7.9	.0	--
APR.										
19...	.01	112	108	55	3	.6	164	8.0	5.5	10
JULY										
21...	.01	184	185	100	6	.7	285	8.1	20.5	30
OCT.										
19...	.03	244	207	120	36	.8	319	7.7	3.0	40

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	HEXA- VALENT CHRO- MIUM (CR6) (UG/L) (01032)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970								
12...	1230	<10	0	0	1	0	<.5	0

09346400 SAN JUAN RIVER NEAR CARRACAS, COLO.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970							
12...	1230	278	255	8.1	8.5	16.5	5
JAN., 1971							
20...	1345	140	--	8.5	.0	7.5	5
APR.							
19...	1530	650	160	8.2	5.5	7.5	--
JULY							
21...	1030	165	280	8.5	20.5	21.5	10
OCT.							
19...	1100	278	318	8.0	3.0	3.5	20

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER (31501)	FECAL COLI- FORM (COL. PER (31616)	STREP- TOCOCCI (COL- ONIES PER (31679)
OCT., 1970							
12...	3	9.2	--	.2	<10	<10	<10
JAN., 1971							
20...	15	11.8	4	3.4	50	<10	<10
APR.							
19...	10	11.2	6	.4	<10	<10	<10
JULY							
21...	20	7.9	6	1.2	20	10	0
OCT.							
19...	350	10.8	4	.4	<400	<400	<400

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED PHOS- PHORUS (P) (MG/L) (00677)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANG- NESE (MNI) (UG/L) (01056)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)
OCT., 1970							
12...	1235	<.01	.01	2900	30	<10	--
APR., 1971							
19...	1535	.02	.02	50	12	<10	<10

DATE	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970						
12...	--	<5	--	--	<1000	140
APR., 1971						
19...	20	<5	30	35	<1000	11

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- 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)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)
OCT., 1970										
12...	1230	8.5	278	4	3.0	--	--	--	--	--
JAN., 1971										
20...	1345	.0	140	10	3.8	--	--	--	--	--
APR.										
19...	1530	5.5	650	33	58	--	--	--	--	--
JULY										
21...	1030	20.5	165	34	15	--	--	--	--	--
OCT.										
19...	1100	3.0	278	703	528	64	75	91	99	100

SAN JUAN RIVER BASIN

09349800 PIEDRA RIVER NEAR ARBOLES, COLO.
(Surveillance network station)

LOCATION.--Lat 37°05'18", long 107°23'50", in NE¼SW¼ sec.21, T.33 N., R.5 W., Archuleta County, at gaging station
3 miles downstream from Ignacio Creek, 5.2 miles northeast of Arboles Post Office, 8 miles upstream from mouth.

DRAINAGE AREA.--629 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1969 to December 1971.
Sediment records: July 1970 to December 1971.

REMARKS.--Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (MG/L) (00955)	DIS- SOLVED IRON (FE) (MG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED 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., 1970											
12...	1400	164	15	30	39	5.0	12	1.8	108	0	52
JAN., 1971											
20...	1530	100	17	--	52	7.2	19	2.5	130	0	94
APR.											
19...	1415	490	13	40	30	3.8	7.1	2.0	82	0	29
JULY											
21...	1230	103	15	20	47	6.1	14	2.6	141	0	59
OCT.											
19...	1400	202	16	20	36	5.3	11	2.0	102	0	55

DATE	DIS- SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUORIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)
OCT., 1970										
12...	.8	.3	.02	.10	.00	--	.00	.66	.68	.04
JAN., 1971										
20...	4.0	.4	--	--	--	.10	--	--	--	--
APR.										
19...	7.3	.3	.20	.89	.00	.20	.07	--	--	.06
JULY										
21...	2.5	.4	.09	.40	.01	.10	.02	--	--	.80
OCT.										
19...	3.3	.3	.00	.00	.00	.01	.22	.05	.28	.10

DATE	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (MG/L) (01020)
OCT., 1970										
12...	--	196	179	119	30	.5	290	7.9	10.0	60
JAN., 1971										
20...	1.5	260	260	160	53	.7	406	7.6	.0	--
APR.										
19...	.02	120	134	90	23	.3	204	8.0	6.5	0
JULY										
21...	.01	--	217	140	27	.5	332	7.9	20.5	50
OCT.										
19...	.01	214	179	110	28	.5	273	7.4	6.5	20

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	HEXA- VALENT CHRO- MIUM (CR6) (UG/L) (01032)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970								
12...	1400	<10	0	0	0	0	<.5	0

09349800 PIEDRA RIVER NEAR ARBOLES, COLO.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970							
12...	1400	164	320	8.2	10.0	20.0	5
JAN., 1971							
20...	1530	100	380	8.1	.0	8.5	3
APR.							
19...	1415	490	200	8.0	6.5	5.5	--
JULY							
21...	1230	103	340	7.9	20.5	24.0	250
OCT.							
19...	1400	202	305	8.0	6.5	8.0	15

DATE	TIME	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970								
12...	3	8.9	2	.7	<10	<10	<10	
JAN., 1971								
20...	1	12.4	4	.3	200	<10	<10	
APR.								
19...	9	10.8	3	.4	<10	<10	<10	
JULY								
21...	900	6.9	5	2.0	--	--	--	
OCT.								
19...	35	10.4	6	.2	--	70	120	

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED ORTH + HYDRO- PHOS- PHORUS (P) (MG/L) (00677)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)
OCT., 1970							
12...	1405	.05	<.01	1600	12	<10	--
APR., 1971							
19...	1420	.03	.04	100	19	<10	14

DATE	TIME	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970							
12...	--	<5	--	--	<1000	16	
APR., 1971							
19...	19	6	40	30	<1.0	17	

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	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 .008 MM (70339)
OCT., 1970								
12...	1400	10.0	164	4	1.8	--	--	--
JAN., 1971								
20...	1530	.0	100	8	2.3	--	--	--
APR.								
19...	1415	6.5	490	49	65	--	--	--
JULY								
21...	1230	20.5	103	1230	342	81	95	100
OCT.								
19...	1400	6.5	202	63	34	--	--	--

SAN JUAN RIVER BASIN

09354500 LOS PINOS RIVER AT LA BOCA, COLO.
(Surveillance network station)

LOCATION.--Lat 37°00'37", long 107°35'49", in S $\frac{1}{2}$ sec.15, T.32 N., R.7 W., La Plata County, at gaging station at the Denver & Rio Grande Western Railroad Co. bridge at southeast edge of La Boca, 0.1 mile upstream from Spring Creek and 13 miles upstream from mouth.

DRAINAGE AREA.--510 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: July 1969 to December 1971.
Sediment records: July 1970 to December 1971.

REMARKS.--Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (000660)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	CAR- BONATE (CO ₃) (MG/L) (00445)	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)
OCT., 1970											
12...	1530	345	5.0	20	20	3.0	6.3	1.1	80	0	11
JAN., 1971											
20...	1700	125	4.7	--	27	4.5	13	1.7	110	0	17
APR.											
19...	1715	57	5.7	20	34	5.2	20	2.3	134	0	25
JULY											
21...	1530	190	9.2	30	32	5.1	13	2.6	143	0	16
OCT.											
19...	1630	132	6.9	0	34	5.6	18	2.2	147	0	28

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO ₃) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)
OCT., 1970										
12...	1.4	.3	.02	.10	.00	--	.00	.52	.54	.03
JAN., 1971										
20...	2.7	.3	--	--	--	--	--	--	--	--
APR.										
19...	4.0	.3	.10	.44	.00	.10	.07	--	--	.17
JULY										
21...	2.2	.4	.00	.00	.00	.03	.03	--	--	.15
OCT.										
19...	5.9	.4	.00	.00	.00	.01	.19	.11	.31	.10

DATE	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
OCT., 1970										
12...	--	96	88	61	0	.3	150	7.8	12.5	30
JAN., 1971										
20...	--	136	130	86	0	.6	193	7.8	.0	--
APR.										
19...	.00	166	163	110	0	.8	275	8.1	10.5	10
JULY										
21...	.04	144	151	100	0	.6	238	7.9	22.5	30
OCT.										
19...	.04	208	174	110	0	.8	284	7.9	10.0	10

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	HEXA- VALENT CHRO- MIUM (CR6) (UG/L) (01032)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970								
12...	1530	<10	0	0	0	0	<.5	0

SAN JUAN RIVER BASIN

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09354500 LOS PINOS RIVER AT LA BOCA, COLO.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970							
12...	1530	345	160	8.4	12.5	20.5	15
JAN., 1971							
20...	1700	125	215	8.1	.0	5.5	6
APR.							
19...	1715	57	280	8.8	10.5	3.5	--
JULY							
21...	1530	190	240	8.8	22.5	25.5	35
OCT.							
19...	1630	132	300	8.1	10.0	11.0	10

DATE	TIME	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970								
12...	15		7.8	7	.8	--	40	<10
JAN., 1971								
20...	4		12.4	5	.6	<10	<10	60
APR.								
19...	60		10.0	2	1.3	<10	<10	<10
JULY								
21...	35		7.2	5	1.6	20	0	0
OCT.								
19...	40		10.0	6	.3	--	70	70

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANGANESE (MN) (UG/L) (01056)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CADMIUM (CD) (UG/L) (01025)	DIS- SOLVED CHROMIUM (CR) (UG/L) (01030)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED VANADIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970											
12...	1535	120	25	<10	--	--	<5	--	--	<1000	22
APR., 1971											
19...	1720	15	20	<10	<10	17	7	45	35	<1000	7

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDIMENT (MG/L) (80154)	SUS- PENDED SEDIMENT (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)
OCT., 1970									
12...	1530	12.5	345	26	24	--	--	--	--
JAN., 1971									
20...	1700	.0	125	18	6.1	--	--	--	--
APR.									
19...	1715	10.5	57	119	18	77	87	95	100
JULY									
21...	1530	22.5	190	181	93	--	--	--	--
OCT.									
19...	1630	10.0	132	68	24	--	--	--	--

SAN JUAN RIVER BASIN

09355500 SAN JUAN RIVER NEAR ARCHULETA, N. MEX.
(Irrigation network station)

LOCATION.--Lat 36°48'05", long 107°41'51", in N½ sec.20, T.30 N., R.8 W., San Juan County, at gaging station, 0.5 mile upstream from Gobernador Canyon, 0.8 mile northeast of Archuleta, 7.2 miles downstream from Navajo Dam, and at river mile 136.8.

DRAINAGE AREA.--3,260 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: December 1954 to December 1971.

Water temperatures: December 1954 to January 1969.

Sediment records: December 1954 to September 1965.

REMARKS.--Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CF8) (00060)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (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)
OCT., 1970												
12...	1715	1800	12	0	--	30	4.9	12	1.7	78	8	42
NOV.												
16...	1020	1750	12	10	--	28	5.1	12	1.7	88	2	42
DEC.												
14...	1025	1750	12	10	--	29	4.7	13	1.8	92	0	38
JAN., 1971												
21...	1130	2620	12	120	--	26	5.1	12	1.8	92	0	34
FEB.												
16...	1015	480	12	100	--	29	5.5	14	1.9	93	0	32
MAR.												
08...	1015	2700	12	120	--	30	5.3	13	2.0	100	0	36
APR.												
19...	1800	492	13	10	--	34	5.2	15	2.8	91	6	52
MAY												
19...	1030	510	12	20	--	30	5.4	15	1.8	101	0	47
JUNE												
23...	1030	492	11	10	--	31	5.4	14	1.8	101	0	53
JULY												
20...	1445	492	11	10	--	34	5.1	15	1.8	105	0	49
AUG.												
17...	1315	468	12	10	--	31	5.2	15	1.9	102	0	48
SEP.												
27...	1430	510	11	10	--	30	5.3	15	1.8	97	0	50
OCT.												
20...	1100	314	11	10	--	32	5.8	15	1.9	102	0	58
NOV.												
15...	1530	310	11	20	40	33	5.6	16	1.9	101	0	57
DEC.												
27...	1500	1640	13	20	--	33	5.6	15	2.9	102	0	44

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	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., 1970											
12...	2.3	.3	.02	.10	.00	--	.00	.71	.73	.02	--
NOV.											
16...	2.2	.3	.07	.30	--	--	--	--	--	.02	--
DEC.											
14...	2.2	.2	.07	.30	--	--	--	--	--	.00	--
JAN., 1971											
21...	2.0	.3	--	--	--	.00	--	--	--	.09	--
FEB.											
16...	2.6	.3	--	--	--	.00	--	--	--	.07	--
MAR.											
08...	5.9	.3	--	--	--	.10	--	--	--	.02	--
APR.											
19...	2.9	.3	--	--	--	.30	--	--	--	--	.01
MAY											
19...	2.3	.2	--	--	--	.01	--	--	--	--	.01
JUNE											
23...	3.4	.2	--	--	--	.00	--	--	--	--	.02
JULY											
20...	2.7	.3	--	--	--	.07	--	--	--	--	.00
AUG.											
17...	7.0	.6	--	--	--	.03	--	--	--	--	.00
SEP.											
27...	1.7	.2	--	--	--	.01	--	--	--	--	.01
OCT.											
20...	4.1	.3	.00	.00	.00	.01	.20	.20	.41	.03	.01
NOV.											
15...	3.0	.2	--	--	--	.04	--	--	--	--	.01
DEC.											
27...	3.0	.0	--	--	--	.08	--	--	--	--	.04

09355500 SAN JUAN RIVER NEAR ARCHULETA, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
OCT., 1970									
12...	158	152	92	28	.5	239	8.5	10.5	60
NOV.									
16...	160	149	92	16	.5	232	8.3	7.5	20
DEC.									
14...	162	147	86	11	.6	233	7.8	7.0	60
JAN., 1971									
21...	170	140	86	11	.6	210	7.5	5.5	60
FEB.									
16...	180	140	95	19	.6	227	7.6	4.5	70
MAR.									
08...	160	150	97	15	.6	245	7.7	4.0	30
APR.									
19...	169	183	110	22	.6	264	8.5	7.0	10
MAY									
19...	164	163	97	14	.7	269	7.8	5.0	0
JUNE									
23...	174	170	100	17	.6	262	7.7	9.0	40
JULY									
20...	160	171	110	20	.6	258	8.1	11.5	30
AUG.									
17...	154	171	99	15	.7	262	8.0	11.0	0
SEP.									
27...	164	163	97	17	.7	268	8.0	10.0	30
OCT.									
20...	194	179	100	20	.6	278	7.7	6.0	30
NOV.									
15...	214	178	110	23	.7	283	8.2	8.0	30
DEC.									
27...	156	167	110	22	.6	268	8.1	7.0	20

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	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 CUBALT (CO) (UG/L) (01035)
MAY, 1971											
19...	1030	8	--	52	<1	<2	12	<14	<3	--	<2
OCT.											
20...	1100	9	--	92	<1	<3	30	<35	<3	--	<3
NOV.											
15...	1530	--	3	100	--	--	30	0	--	0	--

DATE	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED GALLIUM (GA) (UG/L) (01120)	DIS- SOLVED GER- MANIUM (GE) (UG/L) (01125)	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)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)
MAY, 1971										
19...	3	<1	<2	20	--	<2	11	7	--	1
OCT.										
20...	2	<1	<4	10	--	<3	10	12	--	1
NOV.										
15...	1	--	--	20	49	--	--	40	.3	--

DATE	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED RUBI- DIUM (RB) (UG/L) (01135)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED TIN (SN) (UG/L) (01100)	DIS- SOLVED TAN- IUM (TI) (UG/L) (01150)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED ZIR- CONIUM (ZR) (UG/L) (01160)
MAY, 1971										
19...	<3	<1	<1	--	230	<29	<2	<2.0	<140	<7
OCT.										
20...	<3	--	<1	--	290	<4	2	<3.0	<150	<7
NOV.										
15...	--	--	1	7	--	--	--	--	20	--

SAN JUAN RIVER BASIN

09355500 SAN JUAN RIVER NEAR ARCHULETA, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970							
12...	1715	1800	250	8.8	10.5	20.0	10
NOV.							
16...	1020	1750	250	8.6	7.5	3.5	15
DEC.							
14...	1025	1750	245	8.1	7.0	10.5	4
JAN., 1971							
21...	1130	2620	230	8.2	5.5	5.0	--
FEB.							
16...	1015	480	255	8.3	4.5	10.0	15
MAR.							
08...	1015	2700	242	8.8	4.0	8.5	17
APR.							
19...	1800	492	260	9.2	7.0	6.5	--
MAY							
19...	1030	510	275	8.1	5.0	10.0	8
JUNE							
23...	1030	492	260	7.6	9.0	28.0	5
JULY							
20...	1445	492	260	8.8	11.5	27.0	5
AUG.							
17...	1315	468	270	8.1	11.0	32.0	5
SEP.							
27...	1430	510	267	8.7	10.0	24.5	5
OCT.							
20...	1100	314	285	8.1	6.0	7.0	3
NOV.							
15...	1530	310	--	8.7	8.0	13.5	5
DEC.							
27...	1500	1640	261	8.5	7.0	14.0	5

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970							
12...	6	11.6	16	.1	<10	<10	<10
NOV.							
16...	9	9.8	3	.5	10	<10	--
DEC.							
14...	13	11.2	23	.8	1160	360	<10
JAN., 1971							
21...	15	12.6	5	.5	50	<10	<10
FEB.							
16...	5	11.0	8	.7	10	<10	<10
MAR.							
08...	7	13.3	2	.4	<100	<10	<10
APR.							
19...	6	12.2	4	.4	<10	<10	<10
MAY							
19...	5	10.0	6	.1	<100	<100	<10
JUNE							
23...	4	10.5	3	.4	20	<10	10
JULY							
20...	5	11.0	4	.6	5	0	0
AUG.							
17...	2	11.8	8	.8	--	--	--
SEP.							
27...	4	10.3	8	1.0	--	--	--
OCT.							
20...	3	11.0	9	.2	--	--	--
NOV.							
15...	3	9.6	6	.5	--	--	--
DEC.							
27...	8	11.0	3	.6	--	--	--

09357300 SAN JUAN RIVER ABOVE ANIMAS RIVER, AT FARMINGTON, N. MEX.

LOCATION.--Lat 36°43'10", long 108°12'45", in NE¹/₄SE¹/₄NE¹/₄ sec.20, T.29 N., R.13 W., San Juan County, 100 ft upstream from mouth of Animas River, at south edge of Farmington, and at river mile 99.

DRAINAGE AREA.--5,800 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: March 1963 to December 1971.

REMARKS.--Discharges are estimated from the streamflow records of the San Juan River at Farmington and Animas River at Farmington stations. Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	CAR- BONATE (CO ₃) (MG/L) (00445)	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
OCT., 1970											
13...	1500	1860	12	37	5.5	22	--	101	0	72	2.1
NOV.											
17...	1045	1770	12	36	5.1	21	--	99	0	72	2.0
DEC.											
15...	0855	2180	15	32	5.5	22	2.0	104	0	62	3.0
JAN., 1971											
22...	1010	2460	13	31	5.9	21	2.0	95	0	58	2.2
FEB.											
17...	0745	558	12	52	7.6	48	2.1	116	0	160	3.4
MAR.											
09...	1140	635	12	45	7.1	34	2.3	114	0	100	5.1
APR.											
21...	1215	469	10	60	8.8	65	3.1	139	0	200	5.1
MAY											
18...	1645	690	11	58	9.0	50	2.2	134	0	180	4.3
JUNE											
21...	1645	517	10	58	8.2	46	2.1	133	0	170	4.9
JULY											
20...	1045	338	9.3	57	8.6	48	2.3	136	0	160	4.0
AUG.											
16...	1645	252	11	61	8.8	50	2.6	144	0	180	7.0
SEP.											
26...	1030	503	11	57	8.4	45	2.0	150	0	160	4.5
OCT.											
21...	1130	481	12	68	10	70	1.7	142	0	240	6.1
NOV.											
16...	1420	378	10	69	8.0	120	2.8	168	0	330	8.2
DEC.											
28...	1500	1870	13	41	6.6	27	3.0	109	0	82	3.4

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO ₃) (N) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00631)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT., 1970											
13...	--	.09	.40	--	201	115	32	.9	329	8.0	11.5
NOV.											
17...	--	.11	.50	--	197	111	30	.9	323	8.1	6.0
DEC.											
15...	--	--	--	.40	190	100	15	.9	310	7.4	4.5
JAN., 1971											
22...	--	--	--	.00	180	100	22	.9	272	7.6	4.5
FEB.											
17...	--	--	--	.00	340	160	65	1.6	474	7.6	6.0
MAR.											
09...	.2	--	--	.20	260	140	46	1.2	420	8.2	6.0
APR.											
21...	.3	--	--	.40	423	190	76	2.1	619	7.9	10.0
MAY											
18...	.2	--	--	.15	381	180	72	1.6	587	8.0	14.0
JUNE											
21...	.3	--	--	.06	365	180	69	1.5	561	8.7	28.0
JULY											
20...	.3	--	--	.02	356	180	66	1.6	530	8.0	22.0
AUG.											
16...	.5	--	--	.19	393	190	70	1.6	583	8.0	26.5
SEP.											
26...	.2	--	--	.21	363	180	54	1.5	543	8.0	11.0
OCT.											
21...	.4	--	--	.45	480	210	94	2.1	714	7.9	9.0
NOV.											
16...	.3	--	--	.52	633	210	67	3.6	952	7.3	8.0
DEC.											
28...	.1	--	--	.22	231	130	40	1.0	369	7.8	6.0

SAN JUAN RIVER BASIN

09357300 SAN JUAN RIVER ABOVE ANIMAS RIVER, AT FARMINGTON, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970								
13...	1500	1860	330	11.5	--	200	120	<10
NOV.								
17...	1045	1770	320	6.0	7.0	200	80	10
DEC.								
15...	0855	2180	320	4.5	3.5	800	170	<10
JAN., 1971								
22...	1010	2460	300	4.5	3.5	370	10	<10
FEB.								
17...	0745	558	535	6.0	19.5	1300	540	50
MAR.								
09...	1140	635	410	6.0	11.0	<1000	<100	<160
APR.								
21...	1215	469	625	10.0	16.0	E2000	500	20
MAY								
18...	1645	690	595	14.0	14.5	<10	<10	30
JUNE								
21...	1645	517	550	28.0	32.0	<10	<10	10
JULY								
20...	1045	338	540	22.0	23.5	180	30	10
AUG.								
16...	1645	252	595	26.5	30.5	--	--	--
SEP.								
28...	1030	503	540	11.0	16.0	--	--	--
OCT.								
21...	1130	481	690	9.0	14.0	--	--	--
NOV.								
16...	1420	378	920	8.0	9.5	--	--	--
DEC.								
28...	1500	1870	--	6.0	10.0	--	--	--

E ESTIMATED

SAN JUAN RIVER BASIN

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09363500 ANIMAS RIVER NEAR CEDAR HILL, N. MEX.
(Surveillance network station)

LOCATION.--Lat 37°02'17", long 107°52'25", in sec.7, T.32 N., R.9 W., La Plata County, at gaging station 0.8 mile downstream from Florida River, 2.5 miles upstream from Colorado-New Mexico State line, and 8.5 miles north of Cedar Hill.

DRAINAGE AREA.--1,090 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: July 1969 to December 1971.
Sediment records: July 1970 to December 1971.

REMARKS.--Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS-SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (000671)	DIS-SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MMOS) (00095)	PH (UNITS) (00400)	TEMPE- RATURE (DEG C) (00010)	DIS-SOLVED BORON (B) (UG/L) (01020)
OCT., 1970										
13...	--	267	258	187	84	.4	427	8.4	7.5	80
JAN., 1971										
21...	--	356	300	210	84	.6	466	7.9	.5	--
APR.										
20...	.01	206	189	140	55	.3	318	8.1	3.5	20
AUG.										
17...	.05	364	374	240	75	.8	606	8.1	17.5	50
OCT.										
20...	.03	300	305	210	85	.6	491	8.0	8.0	50
NOV.										
15...	.05	336	316	210	94	.6	501	8.1	7.0	--

DATE	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED NITRATE (N) (MG/L) (00618)	DIS-SOLVED NITRATE (NO3) (MG/L) (71851)	DIS-SOLVED NITRITE (N) (MG/L) (00613)	DIS-SOLVED NITRITE PLUS NITRATE (MG/L) (00631)	DIS-SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)
OCT., 1970										
13...	11	.5	.05	.20	.00	--	.00	.29	.34	.03
JAN., 1971										
21...	16	.6	--	--	--	.00	--	--	--	--
APR.										
20...	5.8	.3	.20	.89	.00	.20	.08	--	--	.08
AUG.										
17...	21	.8	.10	.44	.01	.13	.08	--	--	.26
OCT.										
20...	6.0	.5	.50	2.2	.00	.48	.12	.14	.74	.13
NOV.										
15...	17	.3	--	--	--	.18	--	--	--	--

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS-SOLVED SILICA (SiO2) (MG/L) (00955)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS-SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (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)
OCT., 1970											
13...	1000	596	7.2	0	58	8.7	14	2.3	126	6	88
JAN., 1971											
21...	1000	340	7.4	--	66	11	19	3.3	153	0	100
APR.											
20...	0945	976	7.3	20	46	6.4	8.1	2.1	104	0	61
AUG.											
17...	1000	335	10	10	77	12	28	4.0	203	0	120
OCT.											
20...	1330	446	12	10	68	10	19	1.9	153	0	110
NOV.											
15...	1715	434	7.5	--	68	10	20	2.6	142	0	120

SAN JUAN RIVER BASIN

09363500 ANIMAS RIVER NEAR CEDAR HILL, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970							
13...	1000	596	440	8.1	7.5	18.0	5
NOV.							
16...	1145	360	480	8.8	2.0	13.5	3
DEC.							
14...	1225	258	625	7.8	.0	10.0	--
JAN., 1971							
21...	1000	340	505	8.3	.5	7.0	4
FEB.							
16...	1225	308	560	8.5	5.5	20.5	20
MAR.							
08...	1215	278	542	8.4	4.5	12.5	7
APR.							
20...	0945	976	310	8.5	3.5	2.0	--
MAY							
19...	1245	1500	285	8.2	7.5	15.0	20
JUNE							
22...	1445	3230	165	7.8	15.0	29.0	50
JULY							
19...	1330	690	375	8.8	19.5	30.0	5
AUG.							
17...	1000	335	600	8.4	17.5	26.5	10
SEP.							
27...	1610	231	650	8.9	15.5	22.5	3
OCT.							
20...	1330	446	480	8.2	8.0	14.5	5
NOV.							
15...	1715	434	510	7.6	7.0	6.0	5
DEC.							
27...	1645	560	529	8.5	3.0	.0	20

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970							
13...	4	10.3	22	.3	20	20	10
NOV.							
16...	4	10.4	3	.7	<10	<10	<10
DEC.							
14...	4	13.8	11	1.6	<10	<10	<10
JAN., 1971							
21...	4	12.3	7	.6	20	<10	<10
FEB.							
16...	37	11.0	3	1.8	620	220	40
MAR.							
08...	4	13.1	3	1.2	<10	<10	<10
APR.							
20...	9	12.1	4	.4	30000	450	20
MAY							
19...	20	8.7	8	.2	40	10	10
JUNE							
22...	70	8.2	2	.9	2900	240	130
JULY							
19...	8	9.1	8	.5	65	0	0
AUG.							
17...	40	5.8	5	1.5	--	--	--
SEP.							
27...	4	9.5	8	1.4	--	--	--
OCT.							
20...	25	11.2	3	.3	30	10	<10
NOV.							
15...	7	10.7	6	.9	10	<10	<10
DEC.							
27...	360	10.1	6	1.8	--	--	--

SAN JUAN RIVER BASIN

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09363500 ANIMAS RIVER NEAR CEDAR HILL, N. MEX.--Continued

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- ORTHO + HYDRO- PHOS- PHORUS (P) (MG/L) (00677)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANGANESE (MN) (UG/L) (01056)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)
OCT., 1970											
13...	1005	.03	<.01	--	--	--	--	--	--	--	--
JAN., 1971											
21...	1005	--	--	<50	60	<10	19	<10	<5	30	15
APR.											
20...	0950	.08	.03	60	38	<10	11	11	5	50	30
AUG.											
17...	1005	--	--	25	27	--	<10	97	5	10	10

DATE	TIME	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED ALPHA (PC/L) (01503)	SUS- PENDE ALPHA (PC/L) (01505)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDE GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED RADIUM 226 (RA) (PC/L) (09503)	TOTAL STRON- TIUM 89 (PC/L) (15501)	TOTAL STRON- TIUM 90 (PC/L) (13501)	DIS- SOLVED TRITIUM (PC/L) (07005)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
OCT., 1970												
13...	--	--	--	2.0	.2	2.0	1.0	.0	.0	.4	660	1.8
JAN., 1971												
21...	<1000	70	3.2	.1	7.1	.5	.0	.0	.2	630	1.4	
APR.												
20...	<1000	16	.4	.4	7.0	3.2	.0	.0	.3	790	.5	
AUG.												
17...	--	4	--	--	--	--	--	<.1	--	--	--	1.5

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CF5) (00060)	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)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)
OCT., 1970									
13...	1000	7.5	596	13	21	--	--	--	--
JAN., 1971									
21...	1000	.5	340	5	4.7	--	--	--	--
APR.									
20...	0945	3.5	976	25	66	--	--	--	--
JUNE									
22...	1445	15.0	3190	162	1400	--	--	--	--
AUG.									
17...	1000	17.5	335	121	109	--	--	--	--
OCT.									
20...	1330	8.0	446	219	264	--	--	--	--

09364500 ANIMAS RIVER AT FARMINGTON, N. MEX.

LOCATION.--Lat 36°43'12", long 108°12'08", in SE¼ sec.16, T.29 N., R.13 W., San Juan County, at gaging station at bridge on former State Highway 17, 0.6 mile downstream from bridge on State Highway 17, and 1.3 miles upstream from mouth.

DRAINAGE AREA.--1,360 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: June 1940 to December 1971.

Specific conductance: October 1969 to December 1971.

Water temperatures: December 1950 to December 1971.

Sediment records: December 1950 to December 1971.

EXTREMES, 1970-71.--Specific conductance: Maximum daily, 935 micromhos July 31, 1971; minimum daily, 221 micromhos June 8, 1971. Water temperatures: Maximum, 28°C July 15, 1971; minimum, freezing point on several days during January, March, and December 1971.

Sediment concentrations: Maximum daily, 17,200 mg/l Aug. 20, 1971; minimum daily, 14 mg/l July 14, 1971.

Sediment discharge: Maximum daily, 24,600 tons Aug. 20, 1971; minimum daily, 8.6 tons Sept. 28, 1971.

EXTREMES, 1940-71.--Specific conductance (1941-71): Maximum daily, 1,980 micromhos Aug. 19, 1944; minimum daily, 170 micromhos June 27, 1944.

Water temperatures (1950-71): Maximum, 32°C Aug. 26, 1966; minimum, freezing point on many days during winter months.

Sediment concentrations (1950-71): Maximum daily, 36,800 mg/l July 23, 1954; minimum daily, 1 mg/l on several days during September 1956, and September 1958.

Sediment discharge (1950-71): Maximum daily, 337,000 tons July 23, 1954; minimum daily, less than 0.50 tons on many days during 1955-57, 1959, 1960, and 1963.

REMARKS.--Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CF8) (00060)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (CO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
OCT., 1970											
13...	1530	512	7.9	0	80	11	24	2.6	154	0	142
NOV.											
17...	1200	448	6.3	0	88	13	27	2.6	173	3	158
DEC.											
15...	1050	351	6.5	0	92	13	32	2.7	189	0	174
JAN., 1971											
22...	1130	393	7.4	120	79	12	28	3.3	169	0	150
FEB.											
17...	1045	365	6.3	140	81	14	29	3.2	182	0	160
MAR.											
09...	1400	288	6.5	60	93	13	31	3.5	171	0	170
APR.											
21...	0915	873	7.3	20	61	7.9	15	2.3	122	0	96
MAY											
18...	1430	1770	6.7	50	46	6.6	8.9	1.4	113	0	61
JUNE											
21...	1215	2560	5.5	20	32	4.3	7.9	1.1	78	0	54
JULY											
20...	1200	608	7.0	10	74	10	25	2.6	160	0	130
AUG.											
16...	1445	270	9.0	10	99	15	43	3.7	199	0	210
SEP.											
28...	0920	82	6.1	10	110	18	53	3.7	216	0	260
OCT.											
21...	1000	464	9.2	10	88	13	30	1.9	184	0	160
NOV.											
16...	1700	600	7.4	20	85	12	38	2.8	173	0	180
DEC.											
28...	1645	488	8.8	10	79	14	37	4.4	168	0	160

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)
OCT., 1970										
13...	13	.4	.02	.10	.00	--	.00	.33	.35	.02
NOV.										
17...	18	.6	.02	.10	--	--	--	--	--	.01
DEC.										
15...	20	.4	.11	.50	--	--	--	--	--	.01
JAN., 1971										
22...	17	.4	--	--	--	.00	--	--	--	.08
FEB.										
17...	18	.5	--	--	--	.00	--	--	--	.08
MAR.										
09...	21	.4	--	--	--	.10	--	--	--	.02
APR.										
21...	8.6	.3	--	--	--	.20	--	--	--	--
MAY										
18...	4.3	.3	--	--	--	.22	--	--	--	--
JUNE										
21...	4.0	.1	--	--	--	.16	--	--	--	--
JULY										
20...	13	.5	--	--	--	.30	--	--	--	--
AUG.										
16...	24	.6	--	--	--	.06	--	--	--	--
SEP.										
28...	22	.4	--	--	--	.01	--	--	--	--
OCT.										
21...	21	.5	.20	.89	.00	.15	.14	.43	.72	.14
NOV.										
16...	19	.4	--	--	--	.11	--	--	--	--
DEC.										
28...	18	.3	--	--	--	.35	--	--	--	--

09364500 ANIMAS RIVER AT FARMINGTON, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS-SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS-SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF TUNENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS-SOLVED BORON (B) (UG/L) (01020)
OCT., 1970										
13...	--	357	357	240	114	.7	562	8.2	13.0	110
NOV.										
17...	--	424	402	272	125	.7	610	8.3	4.5	60
DEC.										
15...	--	458	434	282	127	.8	676	8.1	2.0	150
JAN., 1971										
22...	--	440	380	250	111	.8	568	7.8	1.5	120
FEB.										
17...	--	448	400	260	111	.8	589	7.9	6.0	100
MAR.										
09...	--	438	420	290	150	.8	648	8.0	8.0	70
APR.										
21...	.13	254	260	180	80	.5	418	8.0	6.5	20
MAY										
18...	.02	172	192	140	49	.3	322	7.4	11.0	60
JUNE										
21...	.01	142	148	98	34	.3	239	7.6	14.5	20
JULY										
20...	.01	348	342	230	95	.7	519	8.0	21.0	70
AUG.										
16...	.01	492	503	310	150	1.1	751	7.9	26.5	130
SEP.										
28...	.01	512	580	350	170	1.2	907	7.8	13.0	110
OCT.										
21...	.02	418	415	270	120	.8	640	7.9	7.5	60
NOV.										
16...	.02	488	431	260	120	1.0	682	7.6	7.5	60
DEC.										
28...	.02	416	406	250	120	1.0	633	7.7	3.5	50

TRACE ELEMENT AND RADIOCHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS-SOLVED ALUM- INUM (AL) (UG/L) (01106)	DIS-SOLVED ARSENIC (AS) (UG/L) (01000)	DIS-SOLVED BARIUM (BA) (UG/L) (01005)	DIS-SOLVED BERYL- LIUM (BE) (UG/L) (01010)	DIS-SOLVED BISMUTH (BI) (UG/L) (01015)	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)
MAY, 1971										
18...	1430	28	--	70	<1	<2	60	<17	<4	--
OCT.										
21...	1000	5	--	100	<2	<5	60	<75	<5	--
NOV.										
16...	1700	--	1	100	--	--	60	0	--	0

DATE	DIS-SOLVED COBALT (CO) (UG/L) (01035)	DIS-SOLVED COPPER (CU) (UG/L) (01040)	DIS-SOLVED GALLIUM (GA) (UG/L) (01120)	DIS-SOLVED GER- MANIUM (GE) (UG/L) (01125)	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)	DIS-SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)
MAY, 1971										
18...	<2	6	<1	<2	50	--	<2	9	15	--
OCT.										
21...	<5	9	<2	<8	10	--	<5	40	11	--
NOV.										
16...	--	1	--	--	20	43	--	--	50	4.0

DATE	DIS-SOLVED MOLYB- DENUM (MO) (UG/L) (01060)	DIS-SOLVED NICKEL (NI) (UG/L) (01065)	DIS-SOLVED RUBI- DIUM (RB) (UG/L) (01135)	DIS-SOLVED SILVER (AG) (UG/L) (01075)	DIS-SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS-SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS-SOLVED TIN (SN) (UG/L) (01100)	DIS-SOLVED TAN- IUM (TI) (UG/L) (01150)	DIS-SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS-SOLVED ZINC (ZN) (UG/L) (01090)
MAY, 1971										
18...	1	<4	2	<1	--	380	<35	<2	<2.0	<170
OCT.										
21...	2	<5	--	<1	--	460	<8	<5	<5.0	<340
NOV.										
16...	--	--	--	1	6	--	--	--	--	60

DATE	DIS-SOLVED ZIR- CONIUM (ZR) (UG/L) (01160)	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)	DIS-SOLVED GROSS BETA AS (PC/L) (80050)	SUS- PENDE GROSS BETA AS (PC/L) (80060)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS-SOLVED NATURAL URANIUM (U) (UG/L) (22703)
MAY, 1971									
18...	<8	--	--	--	--	--	--	--	--
OCT.									
21...	<16	--	--	--	--	--	--	--	--
NOV.									
16...	--	14	61	5.2	43	4.1	34	.09	2.2

SAN JUAN RIVER BASIN

09364500 ANIMAS RIVER AT FARMINGTON, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970							
13...	1530	512	560	8.5	13.0	20.5	5
NOV.							
17...	1200	448	600	8.7	4.5	9.0	5
DEC.							
15...	1050	351	660	7.8	2.0	3.0	5
JAN., 1971							
22...	1130	393	630	8.4	1.5	5.0	--
FEB.							
17...	1045	365	650	8.6	6.0	11.5	15
MAR.							
09...	1400	288	650	8.9	8.0	13.0	7
APR.							
21...	0915	873	410	8.4	6.5	10.5	--
MAY							
18...	1430	1770	325	8.3	11.0	13.0	50
JUNE							
21...	1215	2560	240	7.8	14.5	29.0	30
JULY							
20...	1200	608	530	8.5	21.0	25.0	15
AUG.							
16...	1445	270	770	8.5	26.5	30.5	5
SEP.							
28...	0920	82	920	8.4	13.0	13.0	5
OCT.							
21...	1000	464	620	8.3	7.5	9.5	3
NOV.							
16...	1700	600	690	7.8	7.5	6.5	10
DEC.							
28...	1645	488	617	8.4	3.5	7.0	10

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970							
13...	8	9.5	9	.4	20	10	10
NOV.							
17...	14	12.5	6	.8	90	30	10
DEC.							
15...	10	13.0	12	1.5	<10	<10	<10
JAN., 1971							
22...	25	12.8	2	.3	1000	90	20
FEB.							
17...	22	10.8	--	1.6	1500	500	<10
MAR.							
09...	7	11.3	2	1.1	<100	<10	<10
APR.							
21...	20	10.6	13	.7	3300	900	70
MAY							
18...	50	7.2	13	1.0	3800	700	90
JUNE							
21...	50	8.3	4	.8	1500	100	120
JULY							
20...	15	8.3	5	1.1	580	40	50
AUG.							
16...	35	8.4	7	1.4	--	--	--
SEP.							
28...	15	8.7	9	1.4	--	--	--
OCT.							
21...	45	10.3	5	.7	--	--	--
NOV.							
16...	310	10.4	6	2.4	--	--	--
DEC.							
28...	320	10.2	4	2.0	--	--	--

SAN JUAN RIVER BASIN

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09364500 ANIMAS RIVER AT FARMINGTON, N. MEX.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	606	622	644	620	663	412	568	370	325	743	543	743	627	642
2	---	603	642	---	639	683	415	568	371	352	743	543	670	610	626
3	---	605	634	---	648	681	428	525	349	352	715	587	652	607	615
4	---	614	628	669	628	673	438	483	330	---	618	608	661	573	618
5	---	617	627	797	628	657	450	422	331	368	622	610	679	600	333
6	---	611	625	790	644	653	458	420	323	370	732	595	690	607	641
7	---	605	646	795	657	658	457	448	291	394	690	625	706	578	678
8	---	612	656	802	655	655	445	481	221	---	574	731	703	590	676
9	---	607	660	835	670	630	440	464	280	372	711	668	685	610	643
10	---	607	645	817	666	653	---	464	284	391	707	650	685	613	668
11	---	603	619	708	655	651	453	456	283	411	732	607	682	595	664
12	---	607	622	689	649	664	429	435	312	430	729	643	697	621	659
13	---	605	---	659	622	674	411	398	339	432	772	683	697	559	652
14	562	613	659	645	640	702	370	358	312	450	700	701	685	629	658
15	550	596	685	653	657	674	369	335	300	355	771	628	701	625	654
16	549	585	694	659	682	634	360	335	258	449	669	702	703	663	638
17	549	632	662	665	664	630	364	333	250	494	678	705	710	634	649
18	542	632	639	685	647	529	366	320	252	513	790	---	---	603	729
19	550	613	639	682	656	664	380	341	280	---	757	763	650	623	687
20	564	614	656	687	622	653	391	370	256	532	783	702	625	637	648
21	564	608	625	644	636	623	418	403	242	236	626	742	652	645	678
22	563	600	635	625	637	614	442	406	246	510	580	729	630	648	667
23	597	608	630	632	642	653	466	---	232	525	625	764	618	638	658
24	563	618	652	647	657	638	478	410	243	554	635	740	570	633	---
25	563	618	---	668	653	584	497	438	251	542	765	748	649	---	---
26	573	618	---	677	642	565	499	401	250	528	683	780	718	625	---
27	573	618	693	682	655	545	504	378	252	589	610	---	613	625	646
28	594	625	---	658	643	523	524	318	266	612	558	796	587	638	672
29	607	638	631	655	---	456	541	374	284	642	445	814	600	626	639
30	605	635	646	654	---	430	557	284	300	549	473	913	592	633	666
31	603	---	645	---	---	424	---	334	---	935	507	---	593	---	659
MONTH	---	612	634	693	646	621	440	409	285	472	564	690	662	618	645

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	13.0	10.0	7.0	2.0	6.0	0.0	9.0	10.0	15.0	22.0	23.0	25.0	13.0	9.0	5.0
2	20.0	9.0	5.0	---	6.0	0.0	14.0	14.0	15.0	19.0	20.0	24.0	15.0	8.0	4.0
3	12.0	9.0	6.0	---	6.0	4.0	9.0	20.0	11.0	18.0	23.0	26.0	11.0	8.0	4.0
4	16.0	9.0	6.0	0.0	6.0	8.0	12.0	15.0	16.0	---	20.0	20.0	12.0	9.0	4.0
5	17.0	9.0	6.0	0.0	5.0	5.0	13.0	15.0	---	16.0	25.0	20.0	15.0	10.0	3.0
6	16.0	9.0	5.0	0.0	5.0	7.0	15.0	15.0	15.0	20.0	24.0	19.0	18.0	9.0	4.0
7	12.0	8.0	5.0	0.0	5.0	7.0	10.0	15.0	15.0	17.0	25.0	23.0	17.0	10.0	4.0
8	10.0	8.0	5.0	0.0	4.0	8.0	15.0	20.0	---	---	19.0	25.0	20.0	10.0	3.0
9	11.0	10.0	5.0	0.0	4.0	9.0	15.0	20.0	15.0	23.0	25.0	20.0	22.0	10.0	3.0
10	10.0	7.0	5.0	0.0	5.0	8.0	---	17.0	15.0	22.0	25.0	25.0	17.0	10.0	3.0
11	12.0	10.0	5.0	0.0	7.0	10.0	10.0	15.0	15.0	23.0	23.0	23.0	15.0	9.0	3.0
12	---	7.0	4.0	0.0	7.0	11.0	15.0	17.0	13.0	25.0	26.0	25.0	16.0	9.0	2.0
13	13.0	7.0	---	0.0	7.0	7.0	17.0	20.0	15.0	24.0	25.0	23.0	12.0	10.0	3.0
14	13.0	8.0	3.0	0.0	7.0	8.0	15.0	15.0	19.0	25.0	25.0	23.0	16.0	10.0	1.0
15	12.0	6.0	4.0	0.0	8.0	10.0	12.0	12.0	17.0	28.0	26.0	22.0	16.0	10.0	1.0
16	10.0	10.0	3.0	1.0	10.0	10.0	15.0	13.0	20.0	22.0	26.5	23.0	13.0	8.0	0.0
17	10.0	4.5	4.0	3.0	12.0	11.0	10.0	15.0	15.0	25.0	20.0	18.0	16.0	6.0	0.0
18	12.0	6.0	4.0	1.0	7.0	8.0	8.0	13.0	15.0	19.0	25.0	---	---	5.0	3.0
19	12.0	4.0	3.0	3.0	7.0	9.0	9.0	15.0	20.0	26.0	26.0	13.0	9.0	5.0	0.0
20	10.0	2.0	3.0	5.0	5.0	9.0	9.0	11.0	20.0	25.0	20.0	18.0	14.0	6.0	1.0
21	14.0	8.0	3.0	3.0	3.0	6.0	10.0	15.0	20.0	14.5	24.0	20.0	12.0	8.0	0.0
22	10.0	5.0	3.0	1.5	4.0	12.0	15.0	10.0	18.0	23.0	22.0	20.0	13.0	5.0	1.0
23	10.0	10.0	2.0	4.0	5.0	13.0	12.0	---	18.0	24.0	23.0	20.0	12.0	5.0	4.0
24	10.0	7.0	1.0	4.0	9.0	13.0	9.0	15.0	20.0	25.0	25.0	21.0	12.0	5.0	---
25	10.0	7.0	---	4.0	7.0	14.0	10.0	14.0	20.0	14.0	25.0	22.0	12.0	---	---
26	9.0	6.0	---	4.0	4.0	15.0	13.0	20.0	18.0	25.0	27.0	---	10.0	10.0	---
27	8.0	7.0	1.0	4.0	4.0	18.0	15.0	20.0	17.0	24.0	20.0	---	12.0	5.0	2.0
28	8.0	7.0	2.0	5.0	1.0	14.0	15.0	15.0	20.0	25.0	20.0	13.0	12.0	7.0	3.0
29	8.0	7.0	1.0	5.0	---	15.0	16.0	11.0	18.0	24.0	22.0	15.0	16.0	5.0	2.0
30	9.0	7.0	1.0	5.0	---	18.0	17.0	12.0	19.0	27.0	25.0	20.0	12.0	5.0	4.5
31	9.0	---	2.0	---	---	11.0	---	20.0	---	20.0	25.0	---	20.0	---	1.0
MONTH	11.5	7.5	3.5	2.0	6.0	9.5	12.5	15.5	17.0	22.0	23.5	21.0	14.5	8.0	2.5

SAN JUAN RIVER BASIN

09364500 ANIMAS RIVER AT FARMINGTON, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	600	41	66	456	18	22	408	24	26
2	584	43	68	440	18	21	408	34	37
3	528	31	44	448	20	24	386	24	25
4	520	44	62	424	152	174	408	53	58
5	456	54	66	448	158	191	393	50	53
6	520	648	957	464	87	109	386	31	32
7	528	189	269	448	75	91	365	19	19
8	536	64	93	488	73	96	372	21	21
9	504	52	71	464	61	76	379	29	30
10	480	37	48	448	50	60	393	30	32
11	512	35	48	464	53	66	400	29	31
12	496	28	37	464	45	56	365	30	30
13	496	26	35	448	44	53	330	44	39
14	488	28	37	456	50	62	318	94	81
15	552	46	69	440	54	64	344	37	34
16	544	26	38	416	58	65	358	32	31
17	616	36	60	408	64	71	373	34	34
18	592	32	51	448	304	368	408	52	57
19	576	26	40	440	82	97	393	56	59
20	568	21	32	424	42	48	372	42	42
21	568	21	32	408	36	40	400	37	40
22	616	95	158	416	35	39	408	24	26
23	680	262	481	408	28	31	408	23	25
24	640	64	111	424	28	32	386	26	27
25	616	23	38	424	22	25	358	23	22
26	616	23	38	456	36	44	324	31	27
27	616	22	37	480	62	80	379	30	31
28	560	18	27	424	87	100	393	35	37
29	520	16	22	408	44	48	372	32	32
30	520	15	21	408	30	33	350	32	30
31	488	15	20	--	--	--	330	34	30
TOTAL	17136	--	3176	13192	--	2286	11667	--	1098

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	356	32	31	416	56	63	288	21	16
2	360	26	25	416	74	83	288	36	28
3	390	24	25	416	100	112	276	28	21
4	360	24	23	393	71	75	294	24	19
5	330	17	15	365	106	104	312	30	25
6	320	17	15	351	95	90	306	30	25
7	305	17	14	344	41	38	288	24	19
8	300	99	80	330	35	31	288	23	18
9	315	82	70	330	28	25	294	46	37
10	335	56	51	337	26	24	300	45	36
11	350	106	100	337	25	23	300	43	35
12	360	158	154	344	32	30	294	75	60
13	365	160	158	358	26	25	300	127	103
14	375	94	95	358	26	25	312	860	724
15	351	101	96	358	28	27	306	470	388
16	330	68	61	365	39	38	294	600	476
17	324	60	52	358	76	73	288	94	73
18	318	40	34	365	38	37	300	60	49
19	337	64	58	358	43	42	300	165	134
20	344	37	34	358	32	31	294	106	84
21	358	35	34	365	26	26	288	76	59
22	386	56	58	324	26	23	324	53	46
23	365	40	39	312	29	24	340	377	346
24	324	26	23	312	20	17	350	450	425
25	294	24	19	344	22	20	360	468	455
26	294	21	17	330	26	23	379	306	313
27	337	23	21	312	24	20	386	192	200
28	337	22	20	300	27	22	616	369	614
29	337	25	23	--	--	--	720	450	875
30	330	28	25	--	--	--	712	280	538
31	393	28	30	--	--	--	783	424	896
TOTAL	10580	--	1500	9856	--	1171	11180	--	7137

SAN JUAN RIVER BASIN

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09364500 ANIMAS RIVER AT FARMINGTON, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	810	330	722	300	50	41	1310	122	432
2	696	210	395	294	68	54	1440	122	474
3	640	148	256	365	69	68	1550	135	565
4	592	118	189	688	131	243	1710	142	656
5	528	158	225	963	179	465	1710	105	485
6	472	115	147	882	145	345	1820	152	747
7	496	97	130	837	115	260	2220	378	2270
8	608	93	153	900	123	299	2440	361	2380
9	568	88	135	940	154	391	2350	172	1090
10	512	87	120	920	162	402	2270	160	981
11	632	94	160	1000	133	359	2090	124	700
12	704	110	209	1140	215	662	1970	102	543
13	1040	232	651	1400	299	1130	1880	93	472
14	1040	275	772	1640	476	2110	1740	80	376
15	1040	268	753	1800	418	2030	2030	149	811
16	1090	258	759	1800	262	1270	2440	260	1710
17	1020	172	474	1740	472	2220	2610	267	1880
18	1110	172	515	1790	480	2320	2580	270	1880
19	1060	115	329	1570	508	2150	2650	215	1540
20	954	100	258	1310	527	1860	2730	224	1650
21	855	75	173	1200	208	674	2750	423	3140
22	720	62	121	1180	102	325	2980	234	1880
23	624	60	101	1220	90	296	2980	240	1930
24	576	50	78	1100	75	223	2770	185	1380
25	536	50	72	972	117	307	2770	213	1590
26	472	50	64	1180	120	382	2650	172	1230
27	496	51	68	1370	175	647	2410	115	748
28	416	78	88	1820	240	1180	2140	102	589
29	400	57	62	2020	530	2890	1900	87	446
30	324	40	35	1790	610	2950	1670	82	370
31	--	--	--	1490	203	817	--	--	--
TOTAL	21031	--	8214	37621	--	29370	66560	--	34945

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1430	68	263	760	8680	17800	560	1300	1970
2	1260	54	184	530	720	1030	488	560	738
3	1310	51	180	351	305	289	432	440	513
4	1250	37	125	282	261	199	386	360	375
5	1140	24	74	270	193	141	386	280	292
6	1080	34	99	255	165	114	424	220	252
7	1130	142	433	420	1590	1800	393	160	170
8	1180	96	306	370	1050	1050	600	4190	8680
9	1060	62	177	320	187	162	432	840	980
10	945	41	105	265	127	91	432	390	455
11	864	25	58	270	111	81	416	270	303
12	774	23	48	250	99	67	365	208	205
13	729	19	37	230	535	332	312	191	161
14	688	14	26	240	290	188	260	178	125
15	632	15	26	280	270	204	205	130	72
16	616	20	33	255	165	114	230	91	57
17	544	20	29	240	500	324	156	76	32
18	488	23	30	250	570	385	130	61	21
19	480	23	30	290	1530	1390	138	34	13
20	558	47	78	530	17200	24600	152	55	23
21	800	142	307	520	12300	17300	138	51	19
22	780	168	354	600	2630	4260	143	72	28
23	860	955	2220	830	4110	9210	125	51	17
24	840	4710	10700	380	1160	1190	125	48	16
25	780	281	592	490	2360	3120	125	58	20
26	700	118	223	440	2480	2950	105	56	16
27	620	646	1080	624	2800	4720	82	50	11
28	540	153	223	670	7860	14200	71	45	8.6
29	500	181	244	600	740	1200	113	394	256
30	460	75	93	608	890	1460	471	8700	11700
31	680	11800	21700	624	3170	5340	--	--	--
TOTAL	25718	--	40077	13044	--	115311	8395	--	27528.6

SAN JUAN RIVER BASIN

09364500 ANIMAS RIVER AT FARMINGTON, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	520	510C	7160	440	172	204	360	72	70
2	512	4870	6730	472	158	201	350	41	39
3	464	83C	1040	432	140	163	340	39	36
4	400	500	540	424	167	191	330	44	39
5	393	325	345	424	180	206	320	127	110
6	365	228	225	424	186	213	300	278	225
7	351	204	193	416	137	154	320	101	87
8	358	163	158	408	119	131	340	132	121
9	358	124	120	393	100	106	350	112	106
10	351	94	89	393	120	127	340	102	94
11	330	174	155	379	84	86	320	80	69
12	300	82	66	372	81	81	290	56	44
13	306	61	50	386	87	91	270	92	67
14	300	56	45	372	75	75	250	89	9.0
15	288	53	41	386	240	250	290	110	86
16	288	65	51	496	1120	1500	320	117	101
17	379	913	1420	456	720	886	290	67	52
18	616	901C	15000	416	181	203	300	23	19
19	496	2000	2680	408	102	112	320	73	63
20	440	320	380	386	75	78	260	150	105
21	432	220	257	386	200	208	250	121	82
22	440	185	220	393	52	55	300	176	143
23	432	190	222	393	44	47	390	166	175
24	408	330	364	386	41	43	410	132	146
25	496	875	1170	386	38	40	432	93	108
26	592	3490	5580	379	39	40	560	50	76
27	584	2220	3500	372	38	38	715	2050	4080
28	520	810	1140	379	43	44	624	1420	2390
29	496	450	603	372	37	37	472	450	573
30	520	960	1350	365	35	34	416	257	289
31	432	400	467				372	172	173
TOTAL	13167	--	51361	12094	--	5644	11201	--	9777.0
TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)									245980
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)									271813.6
TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)									240447
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)									332035.6

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDIMENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70326)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70327)	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70339)	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70328)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)
MAR., 1971												
15...	1600	10.0	300	385	312	70	--	85	--	--	--	92
MAY												
18...	1545	11.0	1770	3860	18400	2	--	2	--	--	--	4
JUNE												
21...	1300	14.5	2560	600	4150	7	--	10	--	--	--	16
JULY												
24...	1700	25.0	840	4710	10700	58	--	75	--	--	--	97
AUG.												
01...	1800	23.0	760	8730	18000	52	--	70	--	--	--	94
23...	0700	18.0	830	10300	23100	47	--	65	--	--	--	95
28...	1930	20.0	670	6590	11900	33	--	48	--	--	--	77
SEP.												
08...	2000	25.0	496	2400	3210	52	--	61	--	--	--	84
OCT.												
01...	1000	13.0	498	4750	6390	57	--	71	--	--	--	93
18...	1700	9.0	560	4770	7210	44	--	59	--	--	--	86
21...	1000	7.5	464	541	678	12	--	15	--	--	--	20
NOV.												
16...	1700	7.5	600	1500	2400	29	--	34	--	--	--	51
DEC.												
28...	0915	3.0	640	1230	2120	46	--	56	--	--	--	60

SAN JUAN RIVER BASIN

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09364500 ANIMAS RIVER AT FARMINGTON, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	SUS. SED. FALL DIAM. % FINER THAN (70329)	SUS. SED. FALL DIAM. % FINER THAN (70341)	SUS. SED. FALL DIAM. % FINER THAN (70330)	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. FALL DIAM. % FINER THAN (70331)	SUS. SED. FALL DIAM. % FINER THAN (70343)	SUS. SED. FALL DIAM. % FINER THAN (70332)	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. FALL DIAM. % FINER THAN (70333)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. FALL DIAM. % FINER THAN (70334)	SUS. SED. FALL DIAM. % FINER THAN (70346)
MAR., 1971												
15...	--	--	--	--	98	--	99	--	100	--	--	--
MAY												
18...	--	--	--	8	--	10	--	23	--	89	--	100
JUNE												
21...	--	--	--	28	--	39	--	59	--	88	--	100
JULY												
24...	--	--	--	--	100	--	--	--	--	--	--	--
AUG.												
01...	--	--	--	--	100	--	--	--	--	--	--	--
23...	--	--	--	--	100	--	--	--	--	--	--	--
28...	--	--	--	98	--	100	--	--	--	--	--	--
SEP.												
08...	--	--	--	--	99	--	100	--	--	--	--	--
OCT.												
01...	--	--	--	--	99	--	100	--	--	--	--	--
18...	--	--	--	--	97	--	100	--	--	--	--	--
21...	--	--	--	43	--	82	--	97	--	100	--	--
NOV.												
16...	--	--	--	75	--	86	--	98	--	100	--	--
DEC.												
28...	--	--	--	--	95	--	99	--	100	--	--	--

SAN JUAN RIVER BASIN

09365000 SAN JUAN RIVER AT FARMINGTON, N. MEX.
(Surveillance network station)

LOCATION.--Lat 36°43'22", long 108°13'30", in SE¼ sec.17, T.29 N., R.13 W., San Juan County, at gaging station 4,000 ft downstream from Animas River, and 1 mile west of Farmington, river mile 97.4.

DRAINAGE AREA.--7,240 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: May 1962 to December 1971.
Water temperatures: June 1962 to December 1971.

EXTREMES, 1970-71.--Dissolved solids: Maximum, 1,190 mg/l Sept. 30, 1971; minimum, 170 mg/l Jan 5-8, 1971.
Hardness: Maximum, 370 mg/l July 31, 1971; minimum, 90 mg/l Jan. 5-8, 1971.
Specific conductance: Maximum daily, 1,600 micromhos Sept. 30 1971; minimum daily, 276 micromhos Jan. 8, 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (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)
OCT., 1970											
01-31	2240	12	--	46	5.8	23	--	112	0	81	2.5
NOV.											
01-08	2050	16	40	45	7.5	23	1.9	113	0	81	7.0
09-..	1340	13	--	54	7.8	41	--	114	0	--	6.2
10-30	2140	16	60	44	7.5	24	2.1	118	0	81	6.3
DEC.											
01-31	2390	13	--	38	8.0	27	2.6	108	0	84	5.7
JAN., 1971											
01-04	2540	14	32	7.0	19	2.1	108	0	58	7.0	--
05-08	2310	15	27	5.5	16	1.8	98	0	49	5.5	--
09-20	2400	14	34	6.7	19	2.0	112	0	61	8.0	--
21-31	2840	13	28	6.6	19	2.1	106	0	52	8.5	--
FEB.											
01-12	2950	13	37	9.9	17	2.3	106	0	74	6.4	.5
13-18	967	11	64	9.4	42	2.6	133	0	170	10	.6
19-..	1610	11	43	8.0	26	2.5	119	0	92	9.9	.6
20-28	2930	13	37	6.3	18	2.3	105	0	66	4.6	.6
MAR.											
01-08	3060	16	39	6.7	22	2.8	111	0	74	8.1	.4
09-31	1030	13	55	9.1	38	3.1	131	0	130	9.9	.4
APR.											
01-15	1090	8.5	51	8.0	29	2.1	132	0	120	7.4	.4
16-..	1490	11	60	9.4	47	2.4	134	0	170	14	.4
17-25	1180	8.3	59	8.8	35	2.1	136	0	140	7.2	.4
26-30	789	12	65	10	43	2.4	143	0	170	7.3	.4
MAY											
01-13	1070	12	64	9.7	43	2.4	148	0	150	12	.5
14-31	1860	9.6	57	7.8	27	2.0	142	0	110	10	.4
JUNE											
01-16	2250	8.4	51	6.9	20	1.8	123	0	87	7.9	.4
17-30	2640	7.8	40	5.2	15	1.5	101	0	70	5.3	.4
JULY											
01-10	1410	8.9	55	7.6	27	2.3	123	0	120	9.8	.5
11-30	900	11	65	8.9	39	2.8	145	0	160	14	.6
31-..	923	14	130	11	44	5.3	223	0	270	18	.5
AUG.											
01-09	646	13	81	9.8	59	3.4	172	0	200	20	.3
10-19	442	14	70	9.2	59	2.9	157	0	190	12	.3
20-29	1560	16	91	9.3	100	4.5	254	0	260	12	.4
30-31	1220	13	67	7.4	52	3.3	201	0	160	7.1	.3
SEP.											
01-29	662	13	61	8.6	44	2.6	138	0	160	7.1	.2
30-..	1820	15	120	12	240	5.5	251	0	660	16	.6
OCT.											
01-02	1860	17	93	9.7	96	5.2	257	0	220	20	.5
03-31	862	13	72	10	56	3.0	158	0	200	10	.5
NOV.											
01-30	689	11	77	11	58	2.9	153	0	210	11	.4
DEC.											
01-12	599	12	74	11	53	2.5	152	0	200	11	.7
13-31	1910	13	53	7.8	28	2.4	134	0	--	10	.4
CALENDAR YEAR											
WTD. AVG.	--	12	52	8.0	33	2.4	132	0	118	8.8	.4
TIME WTD.											
AVG.	1440	12	59	8.6	39	2.6	140	0	144	9.6	.4
TONS											
PER DAY	--	46	202	31	127	9.4	510	0	451	34	1.6
WATER YEAR											
WTD. AVG.	--	12	--	47	7.5	28	--	122	0	99	7.3
TIME WTD.											
AVG.	1750	12	--	52	7.9	33	--	129	0	116	8.2
TONS											
PER DAY	--	58	--	222	35	133	--	578	0	468	34

SAN JUAN RIVER BASIN

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09365000 SAN JUAN RIVER AT FARMINGTON, N. MEX.--Continued

EXTREMES, 1970-71--Continued

Water temperatures: Maximum, 26°C on several days during July to Sept. 1971; minimum, freezing point on several days during January and March 1971.

EXTREMES, 1962-71.--Dissolved solids: Maximum, 1,720 mg/l Aug. 8, 1970; minimum, 103 mg/l May 11-15, 1962.

Hardness: Maximum, 820 mg/l Aug. 6, 1968; minimum, 65 mg/l May 11-15, 1962.

Specific conductance: Maximum daily, 2,290 micromhos Aug. 8, 1970; minimum daily, 154 micromhos May 13, 1962.

Water temperatures: Maximum, 33°C July 6, 1967; minimum, freezing point on several days during December and January of most years.

REMARKS.--Daily chemical samples are collected by transversing the stream cross section. Bacteria and aquatic biology analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS) PER AC-FT (MG/L) (70303)	DIS- SOLVED SOLIDS (TONS) PER DAY (MG/L) (70302)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)
OCT., 1970											
01-31	--	--	--	227	.31	1370	139	47	.8	384	7.8
NOV.											
01-08	--	.50	--	230	.31	1270	140	47	.8	372	7.3
09...	.4	3.7	--	--	--	--	170	76	1.4	472	8.0
10-30	--	.50	--	240	.33	1390	140	43	.9	374	7.4
DEC.											
01-31	--	.30	--	233	.32	1500	130	41	1.0	356	8.1
JAN., 1971											
01-04		.60	.03	190	.26	1300	110	21	.8	345	7.6
05-08		.20	.05	170	.23	1060	90	10	.7	298	7.7
09-20		.20	.02	200	.27	1300	110	18	.8	360	7.8
21-31		.30	.03	180	.24	1380	97	10	.8	345	7.6
FEB.											
01-12		.20	--	213	.29	1700	130	43	.6	324	7.6
13-18		.30	--	376	.51	982	200	91	1.3	561	7.7
19...		.30	--	253	.34	1100	140	42	1.0	420	8.2
20-28		.10	--	200	.27	1580	120	34	.7	321	7.6
MAR.											
01-08		.40	--	225	.31	1860	120	29	.9	352	7.7
09-31		.30	--	324	.44	901	170	63	1.3	507	7.7
APR.											
01-15		.15	--	292	.40	859	160	52	1.0	441	7.7
16...		.46	--	382	.52	1540	190	79	1.5	561	8.0
17-25		.20	--	329	.45	1050	180	72	1.1	494	7.7
26-30		.16	--	381	.52	812	200	86	1.3	560	7.7
MAY											
01-13		.42	--	368	.50	1060	200	78	1.3	566	7.7
14-31		.43	--	296	.40	1490	170	58	.9	443	6.9
JUNE											
01-16		.35	--	245	.33	1490	160	55	.7	385	7.8
17-30		.26	--	196	.27	1400	120	38	.6	313	7.8
JULY											
01-10		.49	--	294	.40	1120	170	68	.9	462	7.6
11-30		.23	--	374	.51	909	200	80	1.2	564	7.6
31...		1.4	--	609	.83	1520	370	190	1.0	906	7.8
AUG.											
01-09		.93	--	475	.65	828	240	100	1.6	718	7.5
10-19		.57	--	437	.59	522	210	84	1.8	662	7.6
20-29		.95	--	622	.85	2620	270	57	2.7	930	7.4
30-31		.54	--	411	.56	1420	200	33	1.6	602	7.7
SEP.											
01-29		.45	--	366	.50	679	190	74	1.4	570	7.7
30...		.45	--	1190	1.62	6010	350	140	5.6	1600	8.3
OCT.											
01-02		2.3	--	598	.81	3000	270	61	2.5	880	7.7
03-31		.45	--	444	.60	1050	220	91	1.6	659	7.7
NOV.											
01-30		.51	--	459	.62	861	240	110	1.6	673	7.8
DEC.											
01-12		.58	--	442	.60	724	230	110	1.5	663	7.8
13-31		.44	--	302	.41	1550	160	55	1.0	430	7.9
CALENDAR YEAR											
WTD. AVG.		.38	--	301	.41	--	162	54	1.1	465	7.7
TIME WTD.											
AVG.		.41	--	345	.47	--	182	67	1.2	525	7.7
TONS											
PER DAY		1.5	--	1170	--	--	--	--	--	--	--
WATER YEAR											
WTD. AVG.	--	--	--	265	.36	--	148	47	1.0	418	7.7
TIME WTD.											
AVG.	--	--	--	297	.40	--	162	55	1.1	462	7.7
TONS											
PER DAY	--	--	--	1250	--	--	--	--	--	--	--

SAN JUAN RIVER BASIN

09365000 SAN JUAN RIVER AT FARMINGTON, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	CROSS SECTION LOC- ATION (FT) (00001)	DIS- CHARGE (CF8) (00060)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (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)
OCT., 1970											
13...	1300	60	2230	10	10	58	8.7	23	2.3	136	0
13...	1340	20	2230	12	20	38	6.4	21	1.8	107	0
NOV.											
17...	0815	20	2080	12	10	36	6.0	21	1.8	102	0
17...	1000	60	2090	9.5	0	61	9.1	25	2.2	142	0
DEC.											
15...	0755	20	2420	12	30	36	5.5	21	1.8	96	0
15...	0925	60	2420	9.9	0	58	8.7	26	2.3	137	0
JAN., 1971											
22...	0900	20	2850	12	--	31	5.9	21	2.0	96	0
22...	0930	60	2850	10	--	57	9.4	25	2.5	129	0
FEB.											
17...	0820	60	923	7.8	--	85	13	36	3.0	167	0
17...	0905	20	923	11	--	61	8.5	43	2.3	129	0
MAR.											
09...	0915	20	902	12	--	46	7.1	31	2.3	118	0
09...	1045	60	902	8.4	--	77	12	33	3.1	160	0
APR.											
21...	1045	20	1210	9.3	20	56	8.8	41	2.9	126	0
21...	1145	60	1210	7.9	20	62	7.9	24	2.9	125	0
MAY											
18...	1730	20	2320	8.0	--	52	7.1	22	1.7	119	0
18...	1830	60	2320	7.1	--	47	6.7	13	1.5	116	0
JUNE											
21...	1500	20	2920	6.7	--	37	5.0	15	1.3	89	0
21...	1600	60	2920	6.0	--	36	4.5	10	1.2	87	0
JULY											
20...	0830	20	820	8.8	--	59	8.4	41	2.3	145	0
AUG.											
16...	1815	20	390	11	--	60	8.9	52	2.6	155	0
SEP.											
28...	1145	20	510	11	--	60	8.5	43	2.1	148	0
OCT.											
21...	1330	20	770	12	10	74	17	63	1.8	178	0
NOV.											
16...	1600	20	840	9.6	--	73	9.0	96	2.9	154	0
DEC.											
28...	1600	20	2350	12	--	42	6.6	28	3.1	113	0

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 NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)
OCT., 1970											
13...	109	8.3	.4	.36	1.6	.01	--	.00	.29	.66	.15
13...	78	2.8	.3	.11	.50	.00	--	.00	.42	.53	.03
NOV.											
17...	76	2.8	.3	.14	.60	--	--	--	--	--	--
17...	115	11	.4	.41	1.8	--	--	--	--	--	--
DEC.											
15...	70	2.6	.3	.16	.70	--	--	--	--	--	--
15...	112	10	.3	.32	1.4	--	--	--	--	--	--
JAN., 1971											
22...	64	2.4	.4	--	1.3	--	--	--	--	--	--
22...	98	9.4	.6	--	.40	--	--	--	--	--	--
FEB.											
17...	160	17	.7	--	4.0	--	.90	--	--	--	--
17...	140	7.6	.4	--	--	--	.00	--	--	--	--
MAR.											
09...	91	5.5	.2	--	--	--	.10	--	--	--	--
09...	160	16	.8	--	--	--	.10	--	--	--	--
APR.											
21...	150	6.6	.2	.29	1.3	.00	.30	.08	--	--	.18
21...	110	12	.4	.50	2.2	.00	.50	.45	--	--	.49
MAY											
18...	92	4.7	.3	--	--	--	.19	--	--	--	--
18...	70	5.3	.3	--	--	--	2.8	--	--	--	--
JUNE											
21...	77	7.0	--	--	--	--	.16	--	--	--	--
21...	57	9.9	--	--	--	--	.18	--	--	--	--
JULY											
20...	150	6.3	.3	--	--	--	.04	--	--	--	--
AUG.											
16...	170	6.7	.6	--	--	--	.15	--	--	--	--
SEP.											
28...	150	4.6	.2	--	--	--	.18	--	--	--	--
OCT.											
21...	280	8.6	.4	.43	1.9	.00	.43	.09	.24	.76	.16
NOV.											
16...	290	11	.3	--	--	--	.44	--	--	--	--
DEC.											
28...	89	4.3	.1	--	--	--	.21	--	--	--	--

SAN JUAN RIVER BASIN

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09365000 SAN JUAN RIVER AT FARMINGTON, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED ORTHO- PHOS- (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	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 ZINC (ZN) (UG/L) (01090)
OCT., 1970											
13...	--	293	288	182	71	.7	461	8.1	10.5	80	0
13...	--	214	214	124	36	.8	338	7.9	10.5	70	0
NOV.											
17...	--	220	207	116	32	.8	321	8.2	5.0	--	--
17...	--	324	305	190	74	.8	472	8.1	4.0	--	--
DEC.											
15...	--	220	197	108	29	.9	310	7.8	4.5	--	--
15...	--	325	296	178	66	.8	464	7.9	3.5	--	--
JAN., 1971											
22...	--	224	190	100	21	.9	276	7.4	4.5	--	--
22...	--	312	270	180	74	.8	511	7.6	3.5	--	--
FEB.											
17...	--	436	410	270	133	1.0	571	7.4	6.0	--	--
17...	--	396	340	190	84	1.4	493	7.8	6.0	--	--
MAR.											
09...	--	278	250	140	43	1.1	411	7.9	4.0	--	--
09...	--	404	390	240	109	.9	607	7.9	5.0	--	--
APR.											
21...	.02	350	338	180	77	1.3	539	8.0	8.0	20	--
21...	.20	296	292	190	87	.8	469	7.7	9.0	20	--
MAY											
18...	.02	248	247	160	61	.8	401	7.9	13.0	--	--
18...	.15	206	221	140	50	.5	350	7.5	12.5	--	--
JUNE											
21...	.01	188	194	110	40	.6	303	7.9	19.0	--	--
21...	.10	166	168	110	37	.4	265	7.6	18.0	--	--
JULY											
20...	.01	360	348	180	63	1.3	524	8.0	20.5	--	--
AUG.											
16...	.01	386	389	190	59	1.7	597	8.1	26.5	--	--
SEP.											
28...	.01	302	353	180	63	1.4	546	7.9	12.5	--	--
OCT.											
21...	.01	520	546	250	110	1.7	877	7.7	9.5	50	--
NOV.											
16...	.01	652	570	220	93	2.8	856	7.6	8.5	--	--
DEC.											
28...	.01	248	242	130	39	1.1	378	7.8	5.5	--	--

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	CROSS	DIS-	DIS-	DIS-	HEXA-	DIS-	DIS-	DIS-	DIS-	
		SECTION	SOLVED	SOLVED	SOLVED	VALENT	SOLVED	SOLVED	SOLVED	SOLVED	
		LOC-	ARSENIC	BORON	CAD-	CHRO-	COBALT	IRON	LEAD	MERCURY	ZINC
		ATION	(AS)	(B)	MIUM	MIUM	(CO)	(FE)	(PB)	(HG)	(ZN)
		(FT)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	
		(00001)	(01000)	(01020)	(01025)	(01032)	(01035)	(01046)	(01049)	(71890)	(01090)
OCT., 1970											
13...	1300	60	<10	80	0	0	0	10	0	<.5	0
13...	1340	20	<10	70	0	0	0	20	0	<.5	

SAN JUAN RIVER BASIN

09365000 SAN JUAN RIVER AT FARMINGTON, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	CROSS SECTION LOC- ATION (FT) (00001)	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970								
13...	1300	60	2230	475	8.4	10.5	20.5	10
13...	1340	20	2230	355	8.3	10.5	20.5	10
NOV.								
17...	0815	20	2080	330	8.5	5.0	5.0	10
17...	1000	60	2080	480	8.4	4.0	6.0	3
DEC.								
15...	0755	20	2420	330	--	4.5	1.5	10
15...	0925	60	2420	480	--	3.5	3.0	7
JAN., 1971								
22...	0900	20	2850	--	8.3	4.5	2.0	20
22...	0930	60	2850	460	8.2	3.5	3.0	15
FEB.								
17...	0820	60	923	640	8.3	6.0	16.5	10
17...	0905	20	923	--	8.4	6.0	8.5	15
MAR.								
09...	0915	20	902	405	8.4	4.0	5.0	17
09...	1045	60	902	600	8.5	5.0	8.0	11
APR.								
21...	1045	20	1210	520	8.4	8.0	15.0	30
21...	1145	60	1210	460	8.4	9.0	17.0	--
MAY								
18...	1730	20	2320	398	8.4	13.0	14.5	55
18...	1830	60	2320	348	8.2	12.5	13.0	50
JUNE								
21...	1500	20	2920	300	8.2	19.0	33.5	20
21...	1600	60	2920	265	7.9	18.0	30.0	20
JULY								
20...	0830	20	820	--	8.5	20.5	21.0	20
20...	1015	60	820	560	8.3	20.5	22.0	10
AUG.								
16...	1730	60	390	690	8.4	27.0	29.0	--
16...	1815	20	390	590	8.6	26.5	27.0	10
SEP.								
28...	1115	60	510	640	8.2	12.0	18.5	--
28...	1145	20	510	540	8.4	12.5	21.0	5
OCT.								
21...	1245	60	770	660	8.0	9.0	14.5	--
21...	1330	20	770	670	8.2	9.5	16.0	3
NOV.								
16...	1530	60	840	740	7.8	7.5	8.5	--
16...	1600	20	840	850	8.0	8.5	8.5	10
DEC.								
28...	1530	60	2350	--	8.4	5.0	10.0	--
28...	1600	20	2350	370	8.5	5.5	8.5	5

SAN JUAN RIVER BASIN

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09365000 SAN JUAN RIVER AT FARMINGTON, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970							
13...	40	8.8	2	1.1	E22000	E6600	100
13...	60	9.2	3	.2	140	100	10
NOV.							
17...	40	10.5	4	.7	100	<100	300
17...	25	10.5	2	1.2	47000	2240	130
DEC.							
15...	30	10.6	22	1.0	300	210	<10
15...	25	11.2	9	1.5	68000	5000	220
JAN., 1971							
22...	50	11.8	7	.4	480	<10	<10
22...	35	12.1	13	1.0	E6000	4000	<10
FEB.							
17...	21	9.6	4	2.4	E800000	E50000	1500
17...	12	9.6	6	1.2	32000	1600	<100
MAR.							
09...	20	11.1	1	.4	1000	200	<100
09...	15	11.3	5	2.6	310000	4700	1400
APR.							
21...	45	10.4	7	.8	1000	700	70
21...	30	10.0	--	2.5	200000	26000	40
MAY							
18...	55	7.2	11	.6	6000	1400	130
18...	50	7.6	12	2.0	69000	7200	520
JUNE							
21...	50	7.6	5	.8	<100	<10	70
21...	65	7.8	6	1.9	<100000	<100	330
JULY							
20...	20	6.9	1	1.0	696	230	70
20...	15	7.5	2	2.0	12800	4120	220
AUG.							
16...	--	7.0	--	--	--	--	--
16...	85	7.2	5	1.0	--	--	--
SEP.							
28...	--	6.6	--	--	--	--	--
28...	70	8.6	12	.8	--	--	--
OCT.							
21...	--	10.0	--	--	--	4200	1500
21...	75	10.0	8	.5	460	260	80
NOV.							
16...	--	10.0	--	--	--	>10000	<10
16...	850	10.0	8	3.2	--	1180	<10
DEC.							
28...	--	10.4	--	--	--	3000	750
28...	95	9.7	4	.8	300	150	40

E Estimated.

SAN JUAN RIVER BASIN

09365000 SAN JUAN RIVER AT FARMINGTON, N. MEX.--Continued

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: October 13, 1970

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Diptera: Chironomidae (Chironominae), 1

Simuliidae, 1

Ephemeroptera: Baetidae, Baetis sp., 15

Plecoptera: Perlodidae, 2

Trichoptera: Hydropsychidae; Hydropsyche sp., 8Cheumatopsyche sp., 1

Date: April 21, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Diptera: Chironomidae, 203

Ephemeroptera: Baetidae; Ephemerella sp., 10Baetis sp., 2

Heptageniidae; 1

Plecoptera: Perlodidae, 1

Trichoptera: Hydropsychidae; Hydropsyche sp., 3

Date: June 21, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Ephemeroptera: Baetidae; Baetis sp., 3Ephemerella sp., 14

Plecoptera: Perlodidae, 1

Trichoptera: Hydropsychidae; Hydropsyche sp., 1

Date: July 20, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Diptera: Chironomidae, 10

Tabanidae, 1

Ephemeroptera: Baetidae; Ephemerella sp., 42Heptageniidae; Cinygma sp., 3Trichoptera: Hydropsychidae; Hydropsyche sp., 47Cheumatopsyche sp., 5

Date: September 28, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Ephemeroptera: Baetidae; Pseudocleon sp., 59Trichoptera: Hydropsychidae; Hydropsyche sp., 43SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	346	392	362	344	338	355	426	614	456	409	805	526	894	---	644
2	374	385	365	---	352	354	428	632	428	417	606	532	859	629	648
3	377	336	368	---	346	320	630	624	408	442	569	543	660	627	648
4	379	341	368	337	342	365	441	589	423	---	579	543	623	662	673
5	356	408	348	290	321	355	459	523	387	423	589	551	552	650	648
6	383	385	313	283	346	344	457	542	402	477	589	558	564	642	---
7	360	334	363	283	294	313	467	537	359	486	798	541	544	646	669
8	382	352	366	276	354	340	463	592	338	---	805	529	---	642	677
9	378	451	362	336	335	506	468	560	360	459	873	617	541	642	665
10	383	364	374	357	319	550	483	554	374	459	652	565	554	635	660
11	389	340	365	382	292	540	---	572	375	482	590	588	592	635	662
12	382	385	358	379	283	523	---	548	370	512	632	---	580	642	654
13	399	389	350	378	513	505	476	534	416	491	595	520	590	697	515
14	389	336	369	365	565	524	457	462	413	525	652	521	585	679	---
15	380	368	366	349	568	513	465	427	353	530	642	529	595	671	461
16	360	336	362	341	603	483	561	414	346	530	600	514	605	797	425
17	402	382	351	286	555	489	452	436	317	525	617	581	638	716	412
18	387	383	348	352	556	492	441	440	314	527	563	---	834	479	366
19	376	360	354	342	420	465	483	423	304	528	576	594	710	667	362
20	398	368	358	362	345	476	512	515	304	547	810	561	690	667	410
21	390	328	344	304	295	456	491	495	297	---	963	568	683	650	410
22	400	325	338	362	288	439	325	470	298	530	723	558	---	671	457
23	433	329	335	351	348	522	516	---	233	556	1110	---	658	658	457
24	361	371	334	340	290	536	508	500	303	547	836	580	658	662	453
25	387	383	---	305	338	510	516	580	315	536	990	542	790	658	---
26	395	366	---	291	344	490	542	515	297	559	911	549	762	654	---
27	401	391	353	402	344	458	546	479	303	574	779	---	692	679	587
28	378	390	336	331	285	486	543	424	341	591	---	568	652	679	477
29	387	370	358	340	---	449	591	358	332	583	873	567	681	662	438
30	392	386	298	355	---	441	597	363	362	497	607	1600	654	658	389
31	396	---	361	---	---	441	---	422	---	906	557	---	840	---	395
MONTH	394	368	353	336	378	453	491	505	353	526	716	590	658	664	528

SAN JUAN RIVER BASIN

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09365000 SAN JUAN RIVER AT FARMINGTON, N. MEX.--Continued

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	13.0	10.0	7.0	4.0	7.0	0.0	10.0	11.0	16.0	20.0	19.0	23.0	15.0	10.0	7.0
2	20.0	9.0	6.0	---	7.0	1.0	15.0	15.0	16.0	20.0	20.0	20.0	18.0	9.0	6.0
3	12.0	9.0	7.0	---	7.0	5.0	10.0	20.0	16.0	19.0	20.0	24.0	14.0	9.0	5.0
4	16.0	9.0	7.0	0.0	6.0	9.0	13.0	16.0	18.0	---	18.0	21.0	15.0	10.0	4.0
5	17.0	9.0	7.0	0.0	6.0	6.0	12.0	16.0	14.0	17.0	22.0	21.0	15.0	11.0	4.0
6	17.0	9.0	6.0	0.0	6.0	8.0	16.0	22.0	16.0	17.0	24.0	20.0	18.0	10.0	5.0
7	12.0	8.0	6.0	0.0	6.0	8.0	11.0	15.0	15.0	15.0	26.0	24.0	20.0	11.0	4.0
8	10.0	9.0	6.0	0.0	5.0	9.0	16.0	22.0	16.0	---	19.0	24.0	15.0	9.0	4.0
9	11.0	10.0	6.0	0.0	5.0	10.0	16.0	19.0	10.0	23.0	21.0	25.0	20.0	11.0	4.0
10	10.0	7.0	5.0	0.0	6.0	11.0	11.0	18.0	11.0	23.0	24.0	26.0	18.0	11.0	4.0
11	12.0	10.0	6.0	0.0	8.0	11.0	---	16.0	16.0	24.0	23.0	26.0	18.0	10.0	4.0
12	13.0	8.0	5.0	0.0	8.0	12.0	14.0	20.0	14.0	26.0	24.0	20.0	18.0	10.0	3.0
13	13.0	8.0	5.0	0.0	7.0	8.0	16.0	20.0	15.0	25.0	26.0	20.0	13.0	10.0	4.0
14	13.0	8.0	4.0	0.0	8.0	9.0	16.0	16.0	20.0	23.0	24.0	24.0	17.0	11.0	2.0
15	13.0	6.0	5.0	0.0	8.0	11.0	14.0	13.0	18.0	25.0	25.0	20.0	17.0	10.0	2.0
16	11.0	10.0	4.0	2.0	11.0	11.0	16.0	14.0	22.0	23.0	24.0	20.0	14.0	9.0	1.0
17	10.0	6.0	5.0	2.0	11.0	12.0	10.0	17.0	16.0	25.0	19.0	19.0	14.0	7.0	1.0
18	12.0	6.0	5.0	2.0	8.0	9.0	9.0	15.0	16.0	20.0	23.0	---	10.0	7.0	4.0
19	12.0	5.0	4.0	4.0	8.0	10.0	9.0	16.0	22.0	25.0	24.0	14.0	11.0	6.0	1.0
20	10.0	3.0	4.0	6.0	6.0	10.0	10.0	16.0	21.0	24.0	19.0	20.0	16.0	9.0	2.0
21	14.0	8.0	4.0	4.0	2.0	7.0	10.0	15.0	21.0	---	18.0	23.0	13.0	6.0	1.0
22	11.0	5.0	4.0	5.0	3.0	10.0	11.0	11.0	19.0	24.0	23.0	18.0	14.0	8.0	2.0
23	11.0	10.0	4.0	5.0	6.0	14.0	11.0	---	19.0	25.0	20.0	21.0	13.0	6.0	5.0
24	10.0	8.0	2.0	5.0	10.0	14.0	10.0	14.0	18.0	25.0	23.0	22.0	15.0	6.0	5.0
25	10.0	7.0	---	5.0	8.0	15.0	10.0	17.0	19.0	18.0	20.0	21.0	14.0	12.0	---
26	9.0	7.0	---	5.0	5.0	16.0	10.0	18.0	19.0	26.0	18.0	23.0	11.0	6.0	---
27	8.0	7.0	2.0	6.0	5.0	19.0	15.0	20.0	18.0	20.0	20.0	---	14.0	10.0	4.0
28	9.0	8.0	3.0	6.0	1.0	15.0	16.0	10.0	21.0	26.0	22.0	18.0	13.0	6.0	4.0
29	9.0	8.0	2.0	6.0	---	15.0	17.0	12.0	19.0	23.0	23.0	16.0	14.0	6.0	3.0
30	10.0	7.0	2.0	6.0	---	18.0	17.0	13.0	20.0	26.0	26.0	18.0	22.0	6.0	4.5
31	10.0	---	3.0	---	---	12.0	---	20.0	---	21.0	24.0	---	20.0	---	2.0
MONTH	12.0	8.0	4.5	2.5	6.5	10.5	13.0	16.0	17.5	22.5	22.0	21.0	15.5	8.5	3.5

SAN JUAN RIVER BASIN

09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

LOCATION.--Lat 36°59'59", long 108°11'17", in NW¼SE¼ sec. 10, T.32 N., R.13 W., La Plata County, Colorado, at gaging station at Colorado-New Mexico State line, 0.2 mile downstream from Ponds Arroyo, and 4.8 miles north of La Plata, N. Mex.

DRAINAGE AREA.--331 sq mi.

PERIOD OF RECORD.--Chemical analyses: December 1969 to December 1971.

REMARKS.--Chemical quality data collected by the Colorado District of the U.S. Geological Survey.. Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (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)
MAY, 1971										
13...	1430	35	9.2	67	36	22	2.2	184	0	200
SEP.										
02...	1715	9.2	14	120	65	40	2.7	245	0	390
DEC.										
06...	1600	8.5	14	160	82	64	2.2	294	0	590

DATE	TIME	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (MG/L) (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
MAY, 1971											
13...	10	.40	.02	439	320	170	.5	709	7.9	17.0	
SEP.											
02...	18	.10	.01	771	570	370	.7	1140	7.9	22.0	
DEC.											
06...	29	.35	.01	1090	740	500	1.0	1510	7.9	.0	

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970												
13...	0830	2.5	1260	--	9.0	--	5	1	--	--	--	--
NOV.												
09...	0945	6.0	1290	--	4.0	--	3	1	--	--	--	--
DEC.												
04...	1415	8.0	1400	8.3	2.0	--	--	--	12.3	--	--	--
10...	1350	15	1440	--	.0	--	3	9	--	--	--	--
JAN., 1971												
07...	0800	10	1510	--	.0	--	3	3	--	--	--	--
APR.												
20...	1200	35	800	--	6.0	9.0	3	10	--	<10	<10	70
MAY												
13...	1430	35	600	8.2	17.0	--	--	--	7.3	--	--	--
19...	1500	42	650	--	14.5	19.5	15	100	--	E500	10	80
JUNE												
21...	1745	51	510	--	29.0	31.0	7	20	--	30	<10	<10
AUG.												
11...	0800	3.0	1050	--	18.0	--	10	2	--	--	--	--
SEP.												
02...	0800	8.6	1060	--	18.0	--	15	20	--	--	--	--
02...	1715	9.2	900	8.6	22.0	--	--	--	6.4	--	--	--
DEC.												
06...	1600	8.5	1350	8.1	.0	--	--	--	12.0	--	--	--

E ESTIMATED

SAN JUAN RIVER BASIN

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09367500 LA PLATA RIVER NEAR FARMINGTON, N. MEX.

LOCATION.--Lat 36°44'23", long 108°14'51", in SW¼ sec.7, T.29 N., R.13 W., San Juan County, at gaging station 1,300 ft upstream from bridge on U.S. Highway 550, 1,800 ft upstream from mouth, and 2.5 miles northwest of Farmington.

DRAINAGE AREA.--583 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1970 to December 1971.

REMARKS.--Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TUR- BID- ITY (JTU) (00070)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970											
14...	0850	.60	5000	8.0	5.0	--	5	20	<10	20	<10
NOV.											
17...	1110	9.1	2650	7.8	3.0	7.0	3	75	10	<10	30
DEC.											
15...	1030	14	2300	--	.5	5.0	4	105	100	40	60
JAN., 1971											
22...	1030	47	1520	--	.0	4.0	7	170	E10000	--	180
FEB.											
16...	1700	20	1900	--	12.0	21.5	3	70	<10	<10	<10
MAR.											
09...	1210	22	2620	--	9.0	13.0	5	70	<100	<10	<10
APR.											
20...	1230	2.9	4400	--	12.0	12.0	2	10	110	80	60
MAY											
19...	1550	1.9	4600	--	23.0	25.0	10	40	200	<10	100
JUNE											
21...	1830	.10	2300	--	26.0	33.0	7	1	10	<10	<10
25...	0930	.10	670	--	18.0	--	10	15	--	--	--
JULY											
19...	1445	.10	1800	--	32.0	34.0	5	70	110	20	40
AUG.											
17...	1500	.10	1500	--	32.0	34.0	5	20	--	--	--
SEP.											
28...	1430	.10	1430	--	23.5	25.5	5	4	--	--	--
OCT.											
21...	1415	2.4	2960	--	13.5	17.0	5	480	--	--	--
NOV.											
16...	1330	18	1880	--	9.0	11.5	10	8500	--	--	--
DEC.											
28...	1400	10	1770	--	6.5	10.5	5	850	--	--	--

E ESTIMATED

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.
(Surveillance network station)

LOCATION (revised).--Lat 36°47'32", long 108°43'54", in NW¼ sec.27, T.30 N., R.18 W., San Juan County, at gaging station 3 miles west of Shiprock, 6 miles downstream from Chaco River, and at river mile 61.0.

DRAINAGE AREA.--12,900 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February 1941 to September 1945, July 1957 to December 1971.

Water temperatures: December 1950 to December 1971.

Sediment records: December 1950 to December 1971.

EXTREMES, 1970-71.--Dissolved solids: Maximum, 1,230 mg/l Sept. 8-9, 1971; minimum, 236 mg/l June 17-30, 1971.

Hardness: Maximum, 610 mg/l Sept. 8-9, 1971; minimum, 140 mg/l Jan. 1-31, Mar. 1-8, June 17-30, 1971.

Specific conductance: Maximum daily, 1,790 micromhos Sept. 8, 1971; minimum daily, 333 micromhos June 23-24, 1971.

Water temperatures: Maximum, 22.5°C July 18, 1971; minimum, freezing point on several days during January and December 1971.

Sediment concentrations: Maximum daily, 82,600 mg/l Oct. 1, 1971; minimum daily, 74 mg/l Apr. 11, 1971.

Sediment discharge: Maximum daily, 888,000 tons Oct. 1, 1971; minimum daily, 92 tons May 1, 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG/L) (00925)	DIS- SOLVED SODIUM (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)
OCT., 1970											
01-22	2140	13	56	12	27	--	124	0	127	8.1	.4
23-24	2660	13	66	8.6	39	--	127	0	159	9.8	.4
25-31	2390	13	58	11	30	--	124	0	134	8.2	.4
NOV.											
01-08	2170	15	53	10	30	1.9	124	0	130	8.0	.5
09-..	1670	15	56	12	35	2.2	129	0	150	12	1.0
10-30	2140	15	51	9.2	30	1.9	120	0	120	9.5	.5
DEC.											
01-31	2290	12	43	9.1	29	2.6	118	0	110	6.5	.4
JAN., 1971											
01-31	2580	13	43	9.0	25	2.2	120	0	93	7.2	.4
FEB.											
01-12	3150	12	46	7.8	25	2.4	120	0	98	7.0	.5
13-..	2090	11	45	9.8	34	2.6	122	0	120	12	.4
14-19	1010	9.9	72	15	53	3.0	162	0	200	16	.4
20-28	2800	12	43	9.2	24	2.5	122	0	93	8.0	.5
MAR.											
01-08	2970	12	43	8.6	25	2.1	113	0	92	5.9	.2
09-..	2020	12	48	10	32	2.2	118	0	120	7.7	.2
10-31	1010	10	67	14	46	2.5	141	0	190	14	.3
APR.											
01-08	1070	--	48	12	39	2.0	98	0	160	11	.5
09-12	791	--	43	12	42	1.9	77	0	170	12	.5
13-20	1080	--	52	14	49	2.2	95	0	200	15	.5
21-22	974	--	60	13	47	1.9	114	0	180	24	.5
23-30	581	--	67	16	57	2.6	124	0	220	16	.5
MAY											
01-05	441	8.7	89	21	76	3.1	170	0	290	20	.5
06-14	1090	10	71	16	52	2.7	157	0	200	20	.5
15-21	1740	9.4	60	11	32	2.1	145	0	130	8.4	.5
22-28	1180	8.9	70	13	42	2.3	155	0	160	11	.5
29-31	2360	8.0	54	9.3	26	1.9	128	0	100	7.4	.4
JUNE											
01-07	1610	8.0	60	12	35	2.0	143	0	140	9.7	.4
08-16	2170	7.3	51	8.4	25	1.8	126	0	110	7.8	.4
17-30	2580	7.1	46	6.8	19	1.6	110	0	93	6.6	.3
JULY											
01-10	1270	8.3	64	12	38	2.3	136	0	170	12	.6
11-19	772	6.6	79	16	48	2.7	162	0	220	15	.6
20-21	820	7.7	95	21	93	4.4	170	0	320	49	.6
22-..	1160	14	99	14	250	5.6	226	0	640	35	.9
23-28	836	11	84	15	57	3.4	176	0	230	16	.6
29-31	560	8.4	83	19	67	3.1	190	0	260	19	.6
AUG.											
01-19	443	11	110	20	83	3.6	211	0	340	18	.4
20-21	1780	13	150	21	150	5.0	243	0	540	28	.5
22-26	2160	15	97	10	110	4.4	217	0	340	13	.5
27-31	1930	13	86	9.7	82	3.9	186	0	270	11	.5
SEP.											
01-07	828	12	78	13	60	3.5	166	0	230	14	.3
08-09	772	13	200	28	140	6.0	203	0	690	45	.3
10-29	470	10	86	17	69	3.3	173	0	280	17	.3
30-..	2750	16	52	4.8	200	5.5	193	0	400	15	.8
OCT.											
01-02	2830	17	72	6.9	190	5.3	192	0	400	16	.6
03-31	870	12	92	16	70	3.4	181	0	270	20	.4
NOV.											
01-30	744	10	89	17	67	3.1	176	0	280	21	.4
DEC.											
01-13	949	11	91	19	67	2.8	179	0	285	21	.4
14-31	1990	13	57	11	40	2.6	139	0	150	11	.4
CALENDAR YEAR											
WTD. AVG.	--	11	62	11	45	2.6	141	0	171	12	.4
TIME WTD.											
AVG.	1410	10	71	14	53	2.8	152	0	208	14	.4
TONS											
PER DAY	--	41	236	44	172	9.9	538	0	650	45	1.6
WATER YEAR											
WTD. AVG.	--	11	--	56	11	37	2.4	131	0	143	9.6
TIME WTD.											
AVG.	1690	11	--	63	12	44	2.6	139	0	174	12
TONS											
PER DAY	--	52	--	254	48	167	11	597	0	654	44

09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.--Continued

EXTREMES, 1941-45, 1950-71.--Dissolved solids (1941-45, 1957-71): Maximum, 2,980 mg/l July 30, 31, 1959; minimum, 115 mg/l June 21-28, 30, 1944.

Hardness (1941-45, 1957-71): Maximum, 1,100 mg/l July 30, 31, 1959; minimum, 70 mg/l June 21-28, 30, 1944.

Specific conductance (1957-71): Maximum daily, 4,360 micromhos July 31, 1959; minimum daily, 188 micromhos June 6, 1958.

Water temperatures (1950-71): Maximum, 34°C July 20, 1968; minimum, freezing point on many days during winter months of most years.

Sediment concentrations (1950-71): Maximum daily, 114,000 mg/l Aug. 11, 1967; minimum daily, 2 mg/l May 4, 1963.

Sediment discharge (1950-71): Maximum daily, 2,000,000 tons Aug. 11, 1967; minimum daily, 1 ton on several days during July and September 1959, September 1962, May and July 1963.

REMARKS.--Bacteria and aquatic biology analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey. Additional chemical analysis on August 17 at 1800 hours, performed on native water used in sediment particle-size analysis.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971
(COMPOSITES OF DAILY SAMPLES)

DATE	DIS- SOLVED NITRITE PLUS NITRATE (MG/L) (00631)	DIS- SOLVED ORTHOPHOSPHATE (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS) PER AC-FT (70303)	DIS- SOLVED SOLIDS (TONS) PER DAY (70302)	HARD- NESS (CA, MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)
OCT., 1970										
01-22	--	--	305	.41	1760	188	86	.9	473	8.2
23-24	--	--	359	.49	2580	200	96	1.2	549	8.2
25-31	--	--	316	.43	2040	188	86	.9	490	8.1
NOV.										
01-08	.10	--	310	.42	1820	170	68	1.0	480	7.8
09...	.80	--	350	.48	1580	190	84	1.1	532	7.6
10-30	.70	--	300	.41	1730	160	62	1.0	466	7.7
DEC.										
01-31	.40	--	272	.37	1680	140	43	1.0	448	7.9
JAN., 1971										
01-31	.20	.00	250	.34	1740	140	42	.9	410	7.9
FEB.										
01-12	.30	--	259	.35	2200	150	52	.9	395	7.9
13...	.60	--	298	.41	1680	150	50	1.2	465	8.0
14-19	.70	--	452	.61	1230	240	110	1.5	745	8.1
20-28	.30	--	254	.35	1920	150	50	.9	397	8.1
MAR.										
01-08	.24	--	245	.33	1970	140	50	.9	399	7.7
09...	.39	--	292	.40	1590	160	64	1.1	469	7.7
10-31	.61	--	416	.57	1130	220	110	1.3	651	7.5
APR.										
01-08	.11	--	--	.44	930	170	89	1.3	499	8.0
09-12	.11	--	321	.44	686	160	94	1.5	502	8.0
13-20	.06	--	381	.52	1110	190	110	1.6	570	8.1
21-22	.14	--	384	.52	1010	200	110	1.4	584	8.1
23-30	.36	--	444	.60	697	230	130	1.6	680	7.9
MAY										
01-05	1.4	--	598	.81	712	310	170	1.9	876	7.8
06-14	1.3	--	455	.62	1340	240	110	1.5	668	7.8
15-21	.77	--	328	.45	1540	200	76	1.0	524	7.8
22-28	.85	--	388	.53	1240	230	100	1.2	600	8.0
29-31	.78	--	273	.37	1740	170	68	.9	447	7.8
JUNE										
01-07	.56	--	340	.46	1480	200	82	1.1	522	7.8
08-16	.49	--	276	.38	1620	160	59	.9	441	7.9
17-30	.43	--	236	.32	1640	140	53	.7	374	7.6
JULY										
01-10	.66	--	377	.51	1290	210	98	1.1	586	7.8
11-19	.63	--	470	.64	980	240	130	1.3	710	7.8
20-21	1.8	--	682	.93	1510	320	180	2.3	1050	7.7
22...	1.0	--	1170	1.59	3660	300	120	6.2	1700	8.0
23-28	1.2	--	509	.69	1150	270	130	1.5	759	7.8
29-31	1.5	--	560	.76	847	290	130	1.7	856	8.0
AUG.										
01-19	1.5	--	696	.95	836	360	180	1.9	1010	7.7
20-21	.75	--	1030	1.40	5730	460	260	3.0	1440	7.3
22-26	.43	--	699	.95	4340	280	110	2.8	1050	7.6
27-31	.64	--	570	.78	3600	250	100	2.2	844	7.5
SEP.										
01-07	1.1	--	497	.68	1110	250	110	1.7	758	8.1
08-09	2.6	--	1230	1.67	2560	610	450	2.5	1630	7.7
10-29	.97	--	572	.78	726	280	140	1.8	851	8.3
30...	1.4	--	795	1.08	5900	150	0	7.1	1210	7.8
OCT.										
01-02	.36	--	804	1.09	6140	210	51	5.7	1260	7.8
03-31	1.1	--	578	.79	1360	300	150	1.8	843	8.0
NOV.										
01-30	1.0	--	578	.79	1150	290	150	1.7	858	8.0
DEC.										
01-13	1.1	--	595	.81	1360	310	160	1.7	866	8.1
14-31	.64	--	356	.48	1930	190	74	1.3	537	7.9
CALENDAR YEAR										
WTD. AVG.	.58	--	387	.53	--	201	86	1.3	591	7.9
TIME WTD.	.74	--	454	.62	--	234	109	1.5	681	7.9
AVG. TONS	2.2	--	1480	--	--	--	--	--	--	--
PER DAY	2.2	--	1480	--	--	--	--	--	--	--
WATER YEAR										
WTD. AVG.	.49	--	335	.46	--	180	74	1.1	522	7.9
TIME WTD.	.63	--	391	.53	--	206	92	1.3	597	7.9
AVG. TONS	2.2	--	1540	--	--	--	--	--	--	--
PER DAY	2.2	--	1540	--	--	--	--	--	--	--

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- SIUM (K) (MG/L) (00935)	BICAR- BONATE (MCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
UCT., 1970											
14...	0945	1860	11	20	52	9.6	29	2.1	125	0	121
NOV.											
16...	1545	2030	11	0	52	9.3	30	2.2	122	0	123
DEC.											
14...	1610	2250	11	20	51	9.5	31	2.1	121	0	122
JAN., 1971											
21...	1400	2870	13	--	42	8.6	28	2.2	119	0	110
FEB.											
16...	1445	990	9.7	--	79	15	61	2.8	154	0	220
MAR.											
08...	1515	2920	8.3	--	45	8.0	27	2.4	118	0	86
APR.											
20...	1445	1140	8.3	50	68	12	45	3.1	130	0	180
MAY											
19...	1730	1770	8.4	--	55	11	31	1.8	129	0	130
JUNE											
22...	1100	2730	6.8	--	42	6.6	17	1.4	94	0	95
JULY											
19...	1600	574	5.5	--	74	16	60	2.9	139	0	240
AUG.											
17...	1715	281	9.9	--	110	22	92	3.6	188	0	370
17...	1800	290	11	--	110	23	91	3.9	175	0	370
SEP.											
28...	1600	347	10	--	95	21	84	2.9	232	0	320
OCT.											
20...	1630	860	11	0	95	17	74	2.6	149	0	280
NOV.											
16...	1045	914	8.5	--	90	19	82	2.8	170	0	290
DEC.											
28...	1000	2310	11	--	58	10	45	3.6	139	0	150

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	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)
UCT., 1970											
14...	6.8	.3	.36	1.6	.00	--	.00	.32	.68	.05	--
NOV.											
16...	8.0	.3	.36	1.6	--	--	--	--	--	--	--
DEC.											
14...	7.8	.3	.41	1.8	--	--	--	--	--	--	--
JAN., 1971											
21...	7.0	.2	--	.50	--	.50	--	--	--	--	1.2
FEB.											
16...	16	.4	--	.40	--	.00	--	--	--	--	--
MAR.											
08...	11	.3	--	--	--	.20	--	--	--	--	--
APR.											
20...	12	.3	.99	4.4	.00	1.0	.13	--	--	.23	.05
MAY											
19...	7.9	.3	--	--	--	.52	--	--	--	--	.05
JUNE											
22...	8.9	.1	--	--	--	.34	--	--	--	--	.03
JULY											
19...	16	.4	--	--	--	.37	--	--	--	--	.00
AUG.											
17...	24	.6	--	--	--	2.5	--	--	--	--	.04
17...	32	.4	--	--	--	1.3	--	--	--	--	--
SEP.											
28...	15	.4	--	--	--	1.4	--	--	--	--	.04
OCT.											
20...	20	.5	1.0	4.4	.00	1.0	.13	.60	1.7	.55	.05
NOV.											
16...	31	.4	--	--	--	1.0	--	--	--	--	.06
DEC.											
28...	11	.1	--	--	--	.47	--	--	--	--	.01

SAN JUAN RIVER BASIN

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09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	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 ZINC (ZN) (UG/L) (01090)
OCT., 1970										
14...	304	295	170	67	1.0	468	7.9	9.5	70	0
NOV.										
16...	320	297	170	70	1.0	467	8.2	6.5	--	--
DEC.										
14...	312	296	164	65	1.1	460	7.9	4.5	--	--
JAN., 1971										
21...	264	270	140	42	1.0	425	7.6	6.0	--	--
FEB.										
16...	522	480	260	134	1.6	670	7.8	9.0	--	--
MAR.										
08...	262	250	150	53	1.0	396	8.1	6.5	--	--
APR.										
20...	400	398	220	110	1.3	615	7.9	9.0	40	--
MAY										
19...	318	311	180	77	1.0	506	7.8	15.0	--	--
JUNE										
22...	220	226	130	55	.6	351	7.5	19.5	--	--
JULY										
19...	498	485	250	140	1.7	718	8.0	27.5	--	--
AUG.										
17...	704	736	370	210	2.1	1030	8.1	29.0	--	--
17...	720	733	370	230	2.1	1080	7.6	30.0	--	--
SEP.										
28...	556	669	320	130	2.0	933	8.1	18.0	--	--
OCT.										
20...	504	578	310	180	1.8	707	7.9	11.5	80	--
NOV.										
16...	688	612	300	160	2.1	956	7.6	8.0	--	--
DEC.										
28...	366	359	190	72	1.4	558	7.6	4.0	--	--

TRACE ELEMENT AND RADIOCHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	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 COBALT (CO) (UG/L) (01035)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)
OCT., 1970									
14...	0945	<10	70	0	0	1	20	0	<.5
NOV., 1971									
16...	1045	--	--	--	--	--	--	--	--

DATE	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED 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) (UG/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
OCT., 1970									
14...	0	--	--	--	--	--	--	--	--
NOV., 1971									
16...	--	13	170	6.8	82	5.5	67	.15	2.9

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970							
14...	0945	1860	480	8.3	9.5	11.0	10
NOV.							
16...	1545	2030	475	8.6	6.5	10.0	3
DEC.							
14...	1610	2250	470	8.2	4.5	2.5	8
JAN., 1971							
21...	1400	2870	420	8.3	6.0	11.0	17
FEB.							
16...	1445	990	--	8.3	9.0	17.5	5
MAR.							
08...	1515	2920	400	8.4	6.5	14.0	20
APR.							
20...	1445	1140	600	8.5	9.0	12.0	--
MAY							
19...	1730	1770	505	8.2	15.0	18.0	35
JUNE							
22...	1100	2730	350	7.9	19.5	31.0	10
JULY							
19...	1600	574	740	8.7	27.5	37.0	5
AUG.							
17...	1715	281	990	8.7	29.0	32.0	10
SEP.							
28...	1600	347	949	8.6	18.0	24.0	5
OCT.							
20...	1630	860	840	8.1	11.5	14.5	15
NOV.							
16...	1045	914	940	7.4	8.0	7.5	10
DEC.							
28...	1000	2310	540	8.7	4.0	7.0	15

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970							
14...	50	8.8	3	.9	<21000	2900	50
NOV.							
16...	35	8.5	7	.8	1000	520	50
DEC.							
14...	35	10.8	11	1.2	3000	3000	10
JAN., 1971							
21...	65	10.8	6	.6	E4000	--	60
FEB.							
16...	20	9.5	9	1.4	19000	200	<100
MAR.							
08...	15	10.6	2	.6	40000	100	<100
APR.							
20...	35	10.4	10	.9	3400	1400	40
MAY							
19...	60	7.8	14	1.0	11000	1000	180
JUNE							
22...	60	7.5	5	1.0	16000	1400	170
JULY							
19...	10	8.8	5	1.3	50	10	10
AUG.							
17...	90	7.7	7	1.4	--	--	--
SEP.							
28...	70	8.1	14	1.4	--	--	--
OCT.							
20...	250	9.1	11	1.2	>3000	3000	160
NOV.							
16...	650	11.0	9	2.1	>4000	4000	<10
DEC.							
28...	760	9.9	5	1.4	--	1500	250

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SAN JUAN RIVER BASIN

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09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.--Continued

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: October 14, 1970
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Diptera: Chironomidae, 4
 Ephemeroptera: Baetidae; Baetis sp., 5
 Plecoptera: Perlodidae, 1

Date: April 20, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Diptera: Chironomidae, 37
 Ephemeroptera: Baetidae, 12
 Trichoptera: Hydropsychidae; Cheumatopsyche sp., 1

Date: June 22, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Ephemeroptera: Baetidae, 1
 Heptageniidae, 5
 Plecoptera: Perlodidae, 1

Date: July 19, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Diptera: Chironomidae, 14
 Ephemeroptera: Baetidae; Ephemerella sp., 6
 Unidentified, 5
 Trichoptera: Hydropsychidae; Hydropsyche sp., 4
 Cheumatopsyche sp., 5

Date: September 28, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Ephemeroptera: Baetidae; Baetis sp., 4
 Pseudocleon sp., 11
 Tricorythodes sp., 2
 Heptageniidae: (early instar), 1
 Trichoptera: Hydropsychidae; Hydropsyche sp., 2
 Cheumatopsyche sp., 1

Date: November 11, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Ephemeroptera: Baetidae; Ephemerella sp., 2
 Baetis sp., 1
 Trichoptera: Hydropsychidae; Hydropsyche sp., 1
 Cheumatopsyche sp., 4

PESTICIDE ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	ALDRIN (UG/L) (39330)	CHLOR- DANE (UG/L) (39350)	DDD (UG/L) (39360)	BDE (UG/L) (39365)	DDT (UG/L) (39370)	DI- AZINON (UG/L) (39570)	DI- ELDRIN (UG/L) (39380)	ENDRIN (UG/L) (39390)	HEPTA- CHLOR (UG/L) (39410)
APR., 1971										
20...	1445	.00	.0	.00	.00	.00	.00	.00	.00	.00
JUNE										
22...	1100	.00	.0	.00	.00	.00	.00	.00	.00	.00
JULY										
19...	1600	.00	.0	.00	.00	.00	--	.00	.00	.00
SEP.										
28...	1600	.00	.0	.00	.00	.00	--	.00	.00	.00

DATE	HEPTA- CHLOR EPOXIDE (UG/L) (39420)	LINDANE (UG/L) (39340)	MALA- THION (UG/L) (39530)	METHYL PARA- THION (UG/L) (39600)	PARA- THION (UG/L) (39540)	TOX- APHENE (UG/L) (39400)	2,4-D (UG/L) (39730)	2,4,5-T (UG/L) (39740)	SILVEX (UG/L) (39760)
APR., 1971									
20...	.00	.00	.00	.00	.00	.0	.00	.00	.00
JUNE									
22...	.00	.00	.00	.00	.00	--	.00	.00	.00
JULY									
19...	.00	.00	--	--	--	--	.00	.00	.00
SEP.									
28...	.00	.00	--	--	--	--	.00	.00	.00

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.--Continued

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- ORTHO + HYDRO- PHOS- PHORUS (P) (MG/L) (00677)	DIS- SOLVED ALPHA (PC/L) (01503)	SUS- PENDE ALPHA (PC/L) (01505)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDE GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED RADIUM 226 (RA) (PC/L) (09503)	TOTAL STRON- TIUM 89 (PC/L) (15501)	TOTAL STRON- TIUM 90 (PC/L) (13501)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)
OCT., 1970											
14...	0950	.25	.02	2.0	3.4	2.0	9.6	.0	.0	.7	1.0
JAN., 1971											
21...	1405	--	--	2.0	4.0	3.2	11	.0	.0	.6	1.1
APR.											
20...	1450	.51	.08	2.0	1.1	6.3	4.2	.0	.0	.6	1.7
JULY											
19...	1605	.38	<.01	--	--	--	--	.1	--	--	3.2

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	477	484	467	417	402	364	478	886	505	481	880	705	1340	862	937
2	474	488	472	422	403	366	474	980	549	508	1060	673	1050	817	859
3	478	484	461	407	409	390	548	673	442	549	888	761	869	796	857
4	472	483	470	405	387	398	533	934	512	567	888	734	770	306	844
5	487	492	452	394	410	408	508	788	504	567	920	756	757	906	831
6	480	484	449	393	390	385	522	675	492	577	929	745	757	835	865
7	478	473	448	392	387	382	524	661	485	598	1040	736	775	835	858
8	478	503	447	389	373	395	548	673	442	623	860	1790	775	834	831
9	472	532	458	392	386	463	608	720	400	591	1060	1360	768	804	838
10	466	495	469	395	386	584	565	722	399	594	1250	887	754	811	842
11	465	476	466	402	380	662	575	700	399	613	919	773	778	837	857
12	464	484	460	404	387	659	581	716	428	610	920	750	780	829	825
13	469	476	453	445	465	651	555	653	442	637	1030	745	791	839	788
14	471	473	461	432	703	648	492	634	448	654	945	773	805	870	---
15	464	475	469	420	735	671	497	541	490	662	954	792	800	843	580
16	465	478	445	398	724	655	587	508	431	694	963	780	820	856	515
17	484	471	443	401	725	652	501	512	390	704	1020	780	896	932	473
18	473	483	435	410	738	622	511	507	367	783	1050	805	889	378	504
19	473	481	434	425	722	659	475	472	358	758	1130	810	886	842	503
20	492	459	436	421	627	627	490	513	351	1110	1370	887	845	828	487
21	478	462	434	415	384	573	586	578	---	909	1420	864	879	818	484
22	475	462	440	412	380	571	612	619	341	1700	1010	888	851	847	477
23	567	463	---	405	365	567	677	618	333	828	937	866	853	825	503
24	534	464	430	398	385	653	680	608	333	735	1270	850	860	332	606
25	499	458	424	395	395	655	680	625	353	694	920	844	809	843	562
26	490	467	422	396	391	638	678	674	347	699	1000	851	966	837	535
27	492	492	422	398	380	635	710	628	370	732	858	851	892	823	660
28	483	468	422	400	383	610	716	575	370	732	888	866	851	816	544
29	487	468	411	396	---	584	709	470	394	777	805	858	841	816	522
30	493	472	415	396	---	564	741	431	434	855	824	1210	760	843	508
31	491	---	417	397	---	577	---	448	---	894	680	---	796	---	488
MONTH	483	479	444	406	464	560	577	646	421	721	990	864	847	839	666

TEMPERATURE (°C) OF WATER, OCTOBER 1970 TO DECEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	13.0	10.0	7.0	4.5	7.5	1.5	11.0	10.5	12.5	18.5	19.0	19.5	13.0	8.0	2.0
2	12.0	9.5	6.0	3.0	8.0	3.0	13.0	11.0	13.0	18.5	19.0	20.5	9.5	8.0	4.0
3	12.0	8.5	6.0	0.5	4.5	5.0	13.0	12.5	14.0	18.5	19.0	19.0	10.0	7.5	3.0
4	10.5	8.5	5.5	0.0	2.5	7.5	12.5	12.0	12.5	18.5	19.0	14.5	8.5	8.0	3.0
5	17.0	10.0	6.0	0.0	5.0	5.5	14.0	10.0	14.0	21.0	19.0	15.0	10.0	9.5	2.5
6	16.5	10.0	6.0	0.0	4.0	4.0	16.0	11.5	17.0	19.5	19.0	14.5	11.0	9.0	2.0
7	11.5	9.0	6.0	0.0	3.5	5.5	14.0	11.0	14.5	18.0	19.0	18.0	11.0	8.5	2.0
8	9.0	9.0	7.0	0.0	4.0	6.5	15.0	11.5	15.5	19.0	20.0	17.0	12.0	9.5	1.5
9	12.0	7.0	5.0	0.5	5.0	9.0	17.0	9.5	14.0	19.0	19.0	15.5	12.0	9.5	1.0
10	11.5	8.0	5.0	3.0	5.5	10.0	16.0	11.0	14.0	22.0	19.0	15.0	17.5	9.5	1.0
11	11.5	8.5	5.0	4.0	6.5	9.0	17.5	13.0	16.0	20.5	21.0	16.5	19.0	9.5	2.5
12	13.5	7.5	5.0	6.0	7.0	11.5	18.0	12.0	15.0	20.0	19.5	17.0	16.5	9.5	1.0
13	9.0	7.0	4.5	4.5	7.5	9.5	19.5	14.0	17.0	21.0	17.5	18.0	18.0	9.0	1.5
14	8.5	8.0	4.0	4.5	9.0	9.0	16.0	15.0	15.0	22.0	19.5	17.5	18.0	10.0	0.0
15	12.0	7.0	4.5	4.5	8.5	9.0	14.5	14.5	17.0	21.5	21.0	16.0	17.0	9.0	0.0
16	10.5	6.5	4.0	4.5	10.5	11.0	13.0	15.0	18.0	22.0	20.5	13.5	14.0	8.0	0.5
17	12.5	7.0	5.5	5.5	10.0	10.5	11.5	13.0	17.0	22.0	21.0	14.0	12.0	6.0	0.0
18	12.5	7.0	5.0	7.0	7.0	8.0	9.5	9.5	17.5	21.0	20.0	19.5	11.5	4.5	0.0
19	12.0	6.0	4.5	8.0	7.5	8.0	7.0	8.5	18.5	22.0	21.0	16.0	11.0	3.5	0.0
20	12.0	6.5	4.5	7.5	4.5	9.5	6.0	9.5	16.5	21.5	20.0	18.0	12.0	4.5	1.5
21	13.0	7.0	4.5	6.5	2.0	10.5	6.0	12.0	17.0	21.0	19.0	19.0	12.0	4.0	1.5
22	10.0	7.0	5.0	6.0	3.0	7.0	12.0	12.0	18.0	21.5	21.5	19.5	14.5	4.5	2.5
23	11.5	8.5	4.0	5.5	5.0	6.0	7.0	12.5	18.0	21.0	20.0	19.5	14.0	5.5	4.5
24	7.5	8.5	2.5	5.5	6.0	9.0	9.0	11.5	18.0	21.0	20.0	20.5	12.0	6.0	6.0
25	7.5	9.0	2.0	5.5	6.0	8.0	9.5	14.0	18.5	20.0	19.5	20.0	13.0	6.5	6.0
26	8.0	8.0	2.0	6.5	4.5	9.5	9.0	14.5	18.0	21.0	20.0	19.5	10.0	6.0	7.5
27	7.0	9.0	4.5	6.5	3.0	11.5	6.5	15.5	18.0	20.5	21.5	19.5	12.0	5.5	5.5
28	7.0	8.0	4.5	7.0	2.5	15.0	8.5	15.5	17.0	19.0	20.5	19.5	11.5	4.0	5.0
29	8.5	9.0	4.5	7.0	---	16.0	8.5	14.5	17.0	18.5	20.0	14.0	8.5	4.5	5.0
30	9.5	8.0	4.0	7.5	---	17.0	9.0	10.0	17.5	20.5	20.0	16.0	7.5	4.5	5.0
31	10.0	---	4.5	8.0	---	12.0	---	13.5	---	19.5	19.5	---	6.0	---	3.0
MONTH	11.0	8.0	5.0	4.5	5.5	9.0	11.5	12.5	16.0	20.5	20.0	17.0	12.5	7.0	2.5

09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2210	1320	7880	2190	2130	12600	2210	1390	8290
2	2040	1130	6220	2190	2200	13000	2230	1140	6860
3	2000	1290	6970	2150	1320	7660	2270	1210	7420
4	2140	2020	11700	2110	1340	7630	2210	1250	7460
5	2190	1520	8990	2090	1310	7390	2270	1250	7660
6	2100	1120	6350	2250	1240	7530	2230	1210	7290
7	2020	1110	6050	2210	520	3100	2290	1440	8900
8	2020	1150	6270	2170	1870	11000	2350	1270	8060
9	1980	1210	6470	1670	1350	6090	2350	1620	10300
10	2020	1750	9540	1940	1580	8280	2410	1400	9110
11	1980	1150	6150	2150	1630	9460	2330	1000	6290
12	2030	1300	7130	2150	1600	9290	2350	1000	6350
13	2060	1920	10700	2120	1600	9160	2270	950	5820
14	2060	1230	6840	2090	1590	8970	2210	1150	6860
15	2250	1180	7170	2100	1700	9640	2290	1410	8720
16	2170	1090	6390	2040	1420	7820	2470	1860	12400
17	2370	1210	7740	2060	1100	6120	2510	1630	11000
18	2310	1150	7170	2090	1000	5640	2510	1960	13300
19	2250	1200	7290	2120	1400	8010	2290	1520	9400
20	2250	1450	8810	2100	1180	6690	2230	970	5840
21	2290	1100	6800	2140	1050	6070	2250	1350	8200
22	2410	400	2600	2090	1400	7900	2270	1450	8890
23	2670	1150	8290	2190	1300	7690	2250	1370	8320
24	2650	1580	11300	2250	1220	7410	2210	940	5610
25	2430	1300	8530	2290	1140	7050	2140	690	3990
26	2510	1410	9560	2120	1130	6470	2140	790	4560
27	2390	1400	9030	2190	1430	8460	2190	960	5680
28	2430	1130	7410	2230	830	5000	2270	910	5580
29	2350	990	6280	2290	940	5810	2290	1540	9520
30	2350	1320	8380	2250	1390	8440	2310	610	3800
31	2250	1650	10000	--	--	--	2270	340	2080
TOTAL	69180	--	240010	64030	--	235380	70870	--	233560

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2290	710	4390	3220	875	7610	2950	940	7490
2	2330	840	5280	3250	960	8420	2900	790	6190
3	2470	720	4800	3300	480	4280	2920	475	3740
4	2370	510	3260	3180	1280	11000	3080	516	4290
5	1850	570	2850	3300	975	8690	3100	310	2590
6	1920	940	4870	3120	820	6910	2900	350	2740
7	1940	980	5130	3120	940	7920	2920	640	5050
8	2060	1180	6560	3020	800	6520	3020	660	5380
9	2430	1050	6890	3020	760	6200	2020	909	5420
10	2140	960	5550	3020	950	7750	1050	216	612
11	2150	1210	7020	3120	750	6320	900	218	530
12	2250	970	5890	3150	600	5100	920	221	549
13	2370	850	5440	2090	500	2820	940	234	594
14	2370	780	4990	1020	540	1490	1000	276	745
15	2370	725	4640	923	500	1250	1000	332	896
16	2510	780	5290	942	460	1170	980	381	1010
17	2610	690	4860	960	330	855	980	276	730
18	2670	610	4400	942	340	865	990	282	754
19	2670	610	4400	1260	610	2080	1070	292	844
20	2710	640	4680	2510	1150	7790	1120	212	641
21	2850	1250	9620	2820	1500	11400	1200	148	480
22	3100	2080	17400	2570	2940	20400	1170	228	720
23	3120	1910	16100	2650	1500	10700	1030	178	495
24	3020	1410	11500	2730	910	6710	860	134	311
25	2950	1340	10700	2900	470	3680	905	225	550
26	2950	1150	9160	3080	240	2000	914	239	590
27	3080	1090	9060	2980	660	5310	887	213	510
28	3050	1000	8240	2950	840	6690	896	172	416
29	3050	1090	8980	--	--	--	1060	273	781
30	3080	800	6650	--	--	--	1170	270	853
31	3100	880	7370	--	--	--	1260	328	1120
TOTAL	79830	--	215970	71147	--	171930	48112	--	57621

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1280	419	1450	351	97	92	1600	290	1250
2	1240	298	998	321	154	133	1450	260	1020
3	1160	198	620	335	147	133	1520	258	1060
4	1070	146	422	409	140	155	1600	380	1640
5	1050	188	533	788	337	717	1640	330	1460
6	960	522	1350	960	499	1290	1620	343	1500
7	923	859	2140	950	250	641	1850	410	2050
8	896	142	344	1000	97	262	2390	790	5100
9	905	161	393	950	198	508	2470	840	5600
10	780	92	194	930	473	1190	2330	622	3910
11	732	74	146	1000	222	599	2330	480	3020
12	748	86	174	1090	234	689	1910	340	1750
13	804	122	265	1320	463	1650	2090	340	1920
14	1000	240	648	1620	1680	7350	1800	268	1300
15	1070	282	815	1970	1160	6170	1840	262	1300
16	1170	338	1070	1880	660	3350	2350	720	4570
17	1140	281	865	1800	510	2480	2800	940	7110
18	1130	295	900	1970	730	3880	2800	635	4800
19	1180	265	844	1780	510	2450	2900	780	6110
20	1160	248	777	1540	340	1410	2710	665	4870
21	1080	148	432	1240	275	921	2730	460	3390
22	869	190	446	1090	200	589	2630	518	3680
23	780	145	305	1160	330	1030	2980	812	6530
24	658	130	231	1200	260	842	2750	618	4590
25	567	128	196	980	190	503	2670	398	2870
26	560	151	228	980	200	529	2690	530	3850
27	602	146	237	1180	390	1240	2470	390	2600
28	574	161	250	1660	560	2510	2290	362	2240
29	485	139	182	2410	1260	8200	1940	305	1600
30	422	120	137	2590	1010	7060	1700	252	1160
31	--	--	--	2080	1140	6400	--	--	--
TOTAL	26995	--	17592	39534	--	64973	66850	--	93850

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1520	235	964	960	9890	35400	1090	6620	19500
2	1260	145	493	779	6930	15400	1080	8320	25800
3	1240	238	797	490	1430	1890	905	8180	20000
4	1210	240	784	427	420	484	724	3350	6550
5	1170	225	711	362	480	469	679	1220	2240
6	1160	185	579	354	250	239	672	1000	1810
7	1180	300	956	391	1800	1900	644	850	1480
8	1290	645	2250	560	1920	2900	732	25600	54000
9	1320	200	713	524	1850	2620	812	18400	40300
10	1310	120	424	436	6000	7060	724	5200	10200
11	1340	120	434	383	1480	1530	658	2210	3930
12	960	125	324	362	950	929	630	1560	2650
13	828	140	313	350	970	917	616	1360	2260
14	756	125	255	321	480	416	588	1360	2160
15	716	125	242	314	450	382	530	840	1200
16	623	100	168	350	1030	973	480	740	959
17	588	92	146	297	470	377	465	790	992
18	560	105	159	293	280	222	422	610	695
19	581	170	267	458	5050	15900	441	600	714
20	560	645	1520	1310	27000	112000	422	1070	1220
21	1080	11800	41500	2240	41200	249000	400	730	788
22	1160	36600	129000	1730	30000	140000	400	2460	2660
23	1000	5200	14000	3300	54300	597000	409	2640	2920
24	960	2520	6530	2170	46800	295000	370	1610	1610
25	860	2550	5920	2000	30700	177000	375	890	901
26	804	920	2000	1610	27200	118000	370	530	529
27	740	495	989	2700	39600	297000	370	410	410
28	650	790	1390	2040	20100	111000	347	340	319
29	580	376	589	1910	18600	95900	383	427	535
30	560	326	493	1580	19100	81500	2750	45300	468000
31	540	324	472	1420	7800	29900	--	--	--
TOTAL	29106	--	215382	32421	--	2393308	19488	--	677332

09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO DECEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3620	82600	888000	780	1460	3070	896	850	2060
2	2040	48700	268000	772	1020	2130	896	890	2150
3	1600	22000	95000	764	1020	2100	1090	810	2380
4	1200	9000	29200	724	1120	2190	941	770	1960
5	960	5460	14200	724	728	1420	878	1530	3630
6	887	3390	8120	716	781	1510	896	1230	2980
7	860	2220	5150	686	670	1240	932	1240	5860
8	844	1850	4220	658	725	1290	1000	1440	3890
9	836	1930	4360	623	810	1360	990	1190	3180
10	780	1030	2170	595	790	1270	950	1140	2920
11	748	890	1800	574	753	1170	941	2140	5440
12	708	1100	2100	581	637	999	941	999	2540
13	708	1100	2100	595	550	884	980	930	2460
14	732	1020	2020	602	547	889	1210	2090	6830
15	748	820	1660	644	1110	1930	1820	5850	28700
16	756	370	755	844	4070	9270	2030	4450	24400
17	804	1310	3250	836	3140	7090	2040	3940	21700
18	869	2650	6220	820	3070	6800	1960	4000	21200
19	860	3130	7270	764	2000	4130	1940	5780	30300
20	836	2050	4630	740	1800	3600	1960	5370	28400
21	764	540	1110	764	420	866	1850	4250	21200
22	772	1530	3190	796	840	1810	1820	3270	16100
23	764	1090	2250	828	2320	5190	2020	6430	35100
24	764	220	454	804	1080	2340	2120	5340	30600
25	836	3100	7000	828	1250	2790	2090	2700	15200
26	1070	12200	35200	860	820	1900	2090	4180	26600
27	1080	8400	24500	836	630	1420	2230	3280	19700
28	932	4400	11100	844	760	1730	2270	3930	24100
29	852	2170	4990	869	790	1850	2250	2450	14900
30	860	2240	5200	860	730	1700	2100	2940	16700
31	812	2020	4430				2020	1520	8290
TOTAL	30902	--	1449649	22331	--	75938	48151	--	428470

TOTAL DISCHARGE FOR 1971 WATER YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 WATER YEAR (TONS)

TOTAL DISCHARGE FOR 1971 CALENDAR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR 1971 CALENDAR YEAR (TONS)

617563

4616908

514867

5862015

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDIMENT (MG/L) (80154)	SUS- PENDED SEDIMENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70326)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70327)	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70339)	SUS. SED. FALL DIAM. % FINER THAN .008 MM (70328)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)
OCT., 1970												
23...	1645	11.5	2650	1600	11400	15	--	19	--	--	--	21
JAN., 1971												
21...	1345	6.0	2880	1370	10700	4	--	6	--	--	--	8
APR.												
01...	1645	11.0	1320	443	1580	22	--	26	--	--	--	32
MAY												
02...	0730	11.0	317	155	133	52	--	66	--	--	--	77
JUNE												
22...	0930	--	2750	592	4400	8	--	11	--	--	--	18
JULY												
22...	1700	26.0	1370	46600	172000	58	--	69	--	--	--	85
24...	1945	26.0	1050	2450	6950	58	--	71	--	--	--	82
AUG.												
01...	1800	25.5	1130	11600	35400	53	--	65	--	--	--	92
09...	0830	19.0	490	7510	9940	64	--	80	--	--	--	96
17...	1800	30.0	290	253	198	49	4	67	9	82	25	91
23...	1415	24.0	6020	145000	2360000	45	--	53	--	--	--	64
28...	0630	20.5	1690	15800	72100	54	--	64	--	--	--	78
SEP.												
01...	0630	19.5	1090	6970	20500	49	--	61	--	--	--	79
10...	0615	15.0	756	7180	14700	49	--	59	--	--	--	75
20...	1645	18.0	404	1470	1600	8	--	9	--	--	--	12
OCT.												
01...	1645	14.0	3080	79400	660000	43	--	53	--	--	--	70
20...	1630	11.5	860	1680	3900	20	--	25	--	--	--	33
26...	1645	10.0	1090	12100	35600	44	--	51	--	--	--	64
NOV.												
16...	1045	8.0	914	4240	10500	28	--	34	--	--	--	44
DEC.												
15...	1645	.0	1880	8070	41000	11	--	14	--	--	--	23
24...	1230	6.0	2210	9270	55300	13	--	16	--	--	--	21

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.--Continued

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70329)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70341)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70330)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70332)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70333)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70345)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70334)	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM (70346)
OCT., 1970												
23...	--	--	--	36	--	68	--	91	--	100	--	--
JAN., 1971												
21...	--	--	--	28	--	50	--	85	--	95	--	100
APR.												
01...	--	--	--	50	--	59	--	80	--	99	--	100
MAY												
02...	--	--	--	--	87	--	89	--	92	--	100	--
JUNE												
22...	--	--	--	36	--	55	--	78	--	99	--	100
JULY												
22...	--	--	--	98	--	100	--	--	--	--	--	--
24...	--	--	--	95	--	99	--	100	--	--	--	--
AUG.												
01...	--	--	--	97	--	99	--	100	--	--	--	--
09...	--	--	--	98	--	99	--	100	--	--	--	--
17...	91	95	93	--	96	--	98	--	100	--	--	--
23...	--	--	--	79	--	91	--	98	--	100	--	--
28...	--	--	--	91	--	97	--	100	--	--	--	--
SEP.												
01...	--	--	--	91	--	96	--	99	--	100	--	--
10...	--	--	--	89	--	97	--	100	--	--	--	--
20...	--	--	--	20	--	26	--	51	--	91	--	100
OCT.												
01...	--	--	--	87	--	95	--	99	--	100	--	--
20...	--	--	--	60	--	84	--	97	--	100	--	--
26...	--	--	--	83	--	94	--	98	--	100	--	--
NOV.												
16...	--	--	--	74	--	93	--	98	--	100	--	--
DEC.												
15...	--	--	--	79	--	97	--	100	--	--	--	--
24...	--	--	--	50	--	88	--	98	--	100	--	--

09430600 MCGILLON CREEK NEAR CLIFF, N. MEX.
(Hydrologic bench-mark station)

LOCATION.--Lat 33°10'00", long 108°38'57", in SE¼ sec.13, T.13 S., R.18 W., Grant County, at gaging station 12 miles upstream from mouth, and 14.2 miles north of Cliff.

DRAINAGE AREA.--69 sq mi.

PERIOD OF RECORD.--Chemical analyses: February 1967 to December 1971.
Sediment records: October 1968 to December 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CF3) (000660)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01946)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	DIS- SOLVED BICAR- BONATE (MCO3) (MG/L) (00440)	DIS- SOLVED CAR- BONATE (CO3) (MG/L) (00445)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)
OCT., 1970											
14...	1030	1.7	18	10	16	2.7	5.8	.6	57	0	14
NOV.											
17...	1030	1.2	18	10	14	3.1	5.3	.7	55	0	15
DEC.											
15...	1015	1.6	18	10	15	2.9	6.2	.7	53	0	14
JAN., 1971											
19...	1530	1.1	20	60	11	2.7	6.1	.8	46	0	14
FEB.											
17...	1030	1.4	19	80	12	3.0	6.1	.8	54	0	10
MAR.											
09...	1030	1.4	18	80	13	2.8	6.7	.6	54	0	12
APR.											
22...	1030	1.9	22	10	13	3.0	8.3	1.2	60	0	9.3
AUG.											
19...	1000	9.8	23	10	16	3.2	8.2	1.0	59	0	25
SEP.											
21...	1000	1.7	15	20	22	4.0	8.1	1.0	76	0	31

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)
OCT., 1970										
14...	.6	.5	.00	.00	.00	--	.00	.32	.32	.01
NOV.										
17...	1.6	.5	.02	.10	--	--	--	--	--	.01
DEC.										
15...	1.6	.4	.02	.10	--	--	--	--	--	.00
JAN., 1971										
19...	1.5	.4	--	.10	--	.10	--	--	--	.03
FEB.										
17...	2.2	.6	--	--	--	.00	--	--	--	.03
MAR.										
09...	1.9	.5	--	--	--	.00	--	--	--	.02
APR.										
22...	1.5	.4	--	--	--	.10	--	--	--	--
AUG.										
19...	2.2	.5	--	--	--	.01	--	--	--	--
SEP.										
21...	1.6	.6	--	--	--	.01	--	--	--	--

DATE	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (MG/L) (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
OCT., 1970										
14...	--	94	86	44	0	.4	121	7.4	10.0	50
NOV.										
17...	--	91	85	48	3	.3	122	7.9	4.0	20
DEC.										
15...	--	98	85	45	2	.4	121	7.8	1.5	30
JAN., 1971										
19...	--	80	80	38	0	.4	112	8.0	5.0	24
FEB.										
17...	--	112	81	42	0	.4	120	7.8	7.5	40
MAR.										
09...	--	86	83	44	0	.4	114	7.9	7.0	20
APR.										
22...	.02	84	89	45	0	.5	126	8.1	10.5	7
AUG.										
19...	.01	108	108	53	5	.5	151	7.2	17.0	20
SEP.										
21...	.02	120	121	71	9	.4	176	7.7	13.5	20

GILA RIVER BASIN

09430600 MOGOLLON CREEK NEAR CLIFF, N. MEX.--Continued

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS-SOLVED ALUMINUM (AL) (UG/L) (01106)	DIS-SOLVED ARSENIC (AS) (UG/L) (01000)	DIS-SOLVED BARIUM (BA) (UG/L) (01005)	DIS-SOLVED BERYLLIUM (BE) (UG/L) (01010)	DIS-SOLVED BISMUTH (BI) (UG/L) (01015)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED CADMIUM (CD) (UG/L) (01025)	DIS-SOLVED CHROMIUM (CR) (UG/L) (01030)	HEXAVALENT CHROMIUM (CR6) (UG/L) (01032)
OCT., 1970										
14...	1030	75	<10	5	<1	<1	50	<20	<1	0
APR., 1971										
22...	1030	6	--	6	<1	<2	7	<9	<2	--

DATE	DIS-SOLVED COBALT (CO) (UG/L) (01035)	DIS-SOLVED COPPER (CU) (UG/L) (01040)	DIS-SOLVED GALLIUM (GA) (UG/L) (01120)	DIS-SOLVED GERMANIUM (GE) (UG/L) (01125)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED LEAD (PB) (UG/L) (01049)	DIS-SOLVED LITHIUM (LI) (UG/L) (01130)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)	DIS-SOLVED MERCURY (HG) (UG/L) (71890)	DIS-SOLVED MOLYBDENUM (MO) (UG/L) (01060)
OCT., 1970										
14...	<1	1	<1	<2	10	<1	<1	6	<.5	<1
APR., 1971										
22...	<9	<1	<1	<2	10	<2	1	1	--	<1

DATE	DIS-SOLVED NICKEL (NI) (UG/L) (01065)	DIS-SOLVED RUBIDIUM (RB) (UG/L) (01135)	DIS-SOLVED SILVER (AG) (UG/L) (01075)	DIS-SOLVED STRONTIUM (SR) (UG/L) (01080)	DIS-SOLVED TIN (SN) (UG/L) (01100)	DIS-SOLVED TITANIUM (TI) (UG/L) (01150)	DIS-SOLVED VANADIUM (V) (UG/L) (01085)	DIS-SOLVED ZINC (ZN) (UG/L) (01090)	DIS-SOLVED ZIRCONIUM (ZR) (UG/L) (01160)
OCT., 1970									
14...	2	<1	<1	55	<1	4	<1.0	<70	<4
APR., 1971									
22...	<4	1	<1	64	<2	7	<1.0	<83	<2

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DISCHARGE (CFS) (00060)	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	AIR TEMPERATURE (DEG C) (00020)	COLOR (PLATINUM-COBALT UNITS) (00080)
OCT., 1970							
14...	1030	1.7	121	8.2	10.0	14.5	5
NOV.							
17...	1030	1.2	--	8.2	4.0	10.0	5
DEC.							
15...	1015	1.6	127	8.1	1.5	3.5	3
JAN., 1971							
19...	1530	1.1	109	8.6	5.0	13.5	5
FEB.							
17...	1030	1.4	--	8.4	7.5	14.5	5
MAR.							
09...	1030	1.4	122	7.4	7.0	12.5	5
APR.							
22...	1030	1.9	138	8.3	10.5	10.5	5
AUG.							
19...	1000	9.8	--	7.8	17.0	22.0	10
SEP.							
21...	1000	1.7	180	8.1	13.5	14.5	5

DATE	TURBIDITY (JTU) (00070)	DIS-SOLVED OXYGEN (MG/L) (00300)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIOCHEMICAL OXYGEN DEMAND (MG/L) (00310)	IMMEDIATE COLIFORM (COL. PER 100 ML) (31501)	FECAL COLIFORM (COL. PER 100 ML) (31616)	STREPTOCOCCI (COLONIES PER 100 ML) (31679)
OCT., 1970							
14...	1	9.2	5	.0	140	2	41
NOV.							
17...	1	11.0	2	.6	7	3	11
DEC.							
15...	1	11.3	4	.8	21	2	12
JAN., 1971							
19...	1	12.2	2	.2	5	1	2
FEB.							
17...	1	11.4	3	.5	1	0	2
MAR.							
09...	1	10.3	1	.2	6	0	2
APR.							
22...	1	8.7	1	.2	3	0	14
AUG.							
19...	1	8.0	4	.2	--	17	86
SEP.							
21...	0	8.6	6	.8	32	4	41

GILA RIVER BASIN

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09430600 MOGOLLON CREEK NEAR CLIFF, N. MEX.--Continued

PESTICIDE ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	ALDRIN (UG/L) (39330)	ALDRIN IN BOTTOM DE- POSITS (UG/KG) (39333)	CHLOR- DANE (UG/L) (39350)	CHLOR- DANE IN BOTTOM DE- POSITS (UG/KG) (39351)	DDD (UG/L) (39360)	DDD IN BOTTOM DE- POSITS (UG/KG) (39363)	DDE (UG/L) (39365)	DDE IN BOTTOM DE- POSITS (UG/KG) (39368)	DDT (UG/L) (39370)	DDT IN BOTTOM DE- POSITS (UG/KG) (39373)
APR., 1971 22...	1030	.00	<.2	.0	<.1	.00	<.2	.00	<.2	.00	<.2

DATE	DI- AZINON (UG/L) (39570)	DI- ELORIN (UG/L) (39380)	DI- ELDRIN IN BOTTOM DE- POSITS (UG/KG) (39383)	ENDRIN (UG/L) (39390)	ENDRIN IN BOTTOM DE- POSITS (UG/KG) (39393)	HEPTA- CHLOR (UG/L) (39410)	HEPTA- CHLOR IN BOTTOM DE- POSITS (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE (UG/L) (39420)	HEPTA- CHLOR EPOXIDE IN BOT- TOM DE- POSITS (UG/KG) (39423)	LINDANE (UG/L) (39340)
APR., 1971 22...	.00	.00	<.2	.00	<.2	.00	<.2	.00	<.2	.00

DATE	LINDANE IN BOTTOM DE- POSITS (UG/KG) (39343)	MALA- THION (UG/L) (39530)	MALA- THION IN BOTTOM DE- POSITS (UG/KG) (39531)	METHYL PARA- THION (UG/L) (39600)	METHYL PARA- THION IN BOT- TOM DE- POSITS (UG/KG) (39601)	PARA- THION (UG/L) (39540)	PARA- THION IN BOTTOM DE- POSITS (UG/KG) (39541)	2,4-D (UG/L) (39730)	2,4,5-T (UG/L) (39740)	SILVEX (UG/L) (39760)
APR., 1971 22...	<.2	.00	<.2	.00	<.2	.00	<.2	.00	.00	.00

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PEN- DED SED- IMENT (MG/L) (80154)	SUS- PEN- DED SED- IMENT 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)	SUS. SED. FALL DIAM. % FINER THAN (70343)	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. FALL DIAM. % FINER THAN (70345)
OCT., 1970												
14...	1030	10.0	1.7	1	.00	--	--	--	--	--	--	--
NOV.												
17...	1030	4.0	1.2	2	.01	--	--	--	--	--	--	--
DEC.												
15...	1015	1.5	1.6	1	.00	--	--	--	--	--	--	--
JAN., 1971												
19...	1530	5.0	1.1	1	.00	--	--	--	--	--	--	--
FEB.												
17...	1030	7.5	1.4	2	.01	--	--	--	--	--	--	--
MAR.												
09...	1030	7.0	1.4	1	.01	--	--	--	--	--	--	--
APR.												
22...	1030	10.5	1.9	2	.01	--	--	--	--	--	--	--
AUG.												
19...	1000	17.0	9.8	8	.21	--	--	--	--	--	--	--
SEP.												
21...	1000	13.5	1.7	6	.03	--	--	--	--	--	--	--

GILA RIVER BASIN

09431100 MANGAS CREEK BELOW MANGAS SPRINGS, N. MEX.

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, 0.1 mile upstream from Blacksmith Canyon and 15 miles southeast of Gila.

DRAINAGE AREA.--Unavailable.

PERIOD OF RECORD.--Chemical analyses: April 1970 to December 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	CAR- BONATE (CO ₃) (MG/L) (00445)	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
NOV., 1970												
13...	0930	1.5	39	--	68	13	28	2.9	263	0	47	12
JAN., 1971												
06...	1030	1.4	31	--	71	11	26	2.3	256	0	43	11
MAR.												
01...	1230	1.7	30	--	65	14	28	2.7	260	0	48	10
APR.												
05...	0950	1.3	32	20	65	13	27	2.1	243	0	51	11
JULY												
12...	1445	.72	28	--	36	11	26	2.5	159	0	38	9.4
SEP.												
27...	1300	1.2	26	10	47	10	25	3.6	184	0	60	9.4
NOV.												
22...	0915	1.5	31	--	63	13	29	3.5	221	0	68	20

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SURP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
NOV., 1970											
13...	.7	6.0	--	350	220	4	.8	534	7.7	12.0	--
JAN., 1971											
06...	.6	6.0	2.9	340	220	10	.8	532	7.8	.5	--
MAR.											
01...	.2	5.0	--	348	220	7	.8	534	8.2	16.0	--
APR.											
05...	.5	4.1	--	340	220	21	.8	519	8.2	20.0	40
JULY											
12...	.7	4.8	--	251	140	5	1.0	373	7.3	28.0	--
SEP.											
27...	.5	3.6	--	288	160	8	.9	421	7.7	28.0	30
NOV.											
22...	.5	4.4	--	356	210	30	.9	512	8.0	8.0	--

09431500 GILA RIVER NEAR REDROCK, N. MEX.

LOCATION.--Lat 32°43'37", long 108°40'30", in W $\frac{1}{2}$ sec.23, T.18 S., R.18 W., Grant County, at gaging station 0.2 mile downstream from Copper Canyon, 0.2 mile upstream from lower end of box canyon, 4.7 miles northeast of Redrock, and 14 miles downstream from Mangas Creek.

DRAINAGE AREA.--2,829 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1967 to December 1971.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (K) (MG/L) (00933)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)
OCT., 1970									
09...	1030	64	38	--	42	8.0	--	39	--
NOV.									
06...	1050	42	43	--	43	9.6	39	--	2.5
DEC.									
08...	1130	64	40	--	42	9.1	40	--	2.1
JAN., 1971									
04...	1050	83	39	--	35	7.7	38	--	2.0
FEB.									
03...	1125	68	40	--	45	8.0	38	--	2.0
MAR.									
29...	1015	37	35	--	39	11	47	--	3.7
APR.									
20...	1345	38	38	20	40	11	48	--	3.1
JUNE									
03...	1120	18	35	--	42	10	46	--	2.5
17...	1100	9.5	35	--	38	8.9	48	--	3.3
JULY									
07...	0915	12	37	--	48	11	49	--	4.2
AUG.									
18...	1500	70	41	--	37	6.2	35	--	3.4
SEP.									
17...	1230	14	40	--	46	10	44	--	3.2
OCT.									
06...	1230	28	--	--	--	--	--	--	--
19...	1630	185	32	20	28	5.5	28	--	2.1
27...	1430	2680	29	20	30	5.9	14	--	2.1
28...	1300	1500	--	--	--	--	--	--	--
NOV.									
11...	1215	192	38	--	35	7.6	35	--	2.7

DATE	BICAR- BONATE (HCO ₃) (MG/L) (00440)	CAR- BONATE (CO ₃) (MG/L) (00445)	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 NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO ₃) (MG/L) (71851)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)
OCT., 1970									
09...	199	0	32	14	2.6	.18	.80	--	--
NOV.									
06...	236	0	30	17	2.3	--	--	.10	--
DEC.									
08...	213	0	32	21	2.2	--	--	.31	--
JAN., 1971									
04...	189	0	30	18	2.7	--	--	.30	3.6
FEB.									
03...	200	0	33	19	3.1	--	--	.00	.03
MAR.									
29...	211	0	32	18	2.1	--	--	.10	--
APR.									
20...	221	0	32	19	2.4	--	--	.00	--
JUNE									
03...	242	0	35	16	2.2	--	--	.24	--
17...	231	0	35	15	2.2	--	--	.06	--
JULY									
07...	263	0	36	16	2.2	--	--	.11	--
AUG.									
18...	188	0	30	18	2.5	--	--	.26	--
SEP.									
17...	242	0	43	17	2.3	--	--	.10	--
OCT.									
06...	--	--	--	--	--	--	--	--	--
19...	142	0	27	13	1.9	--	--	.44	--
27...	107	0	36	6.7	1.5	--	--	.45	--
28...	--	--	--	--	--	--	--	--	--
NOV.									
11...	158	0	37	16	2.2	--	--	.33	--

GILA RIVER BASIN

09431500 GILA RIVER NEAR REDROCK, N. MEX.--Continued

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
OCT., 1970								
09...	274	138	0	1.5	421	8.2	12.0	--
NOV.								
06...	300	150	0	1.4	461	7.6	10.0	--
DEC.								
08...	295	140	0	1.5	436	8.0	.5	--
JAN., 1971								
04...	280	120	0	1.5	413	7.8	.0	--
FEB.								
03...	290	150	0	1.4	422	8.2	7.0	--
MAR.								
29...	292	140	0	1.7	447	8.2	16.0	--
APR.								
20...	303	150	0	1.7	458	7.8	18.0	130
JUNE								
03...	309	150	0	1.7	458	7.5	18.0	--
17...	299	130	0	1.8	450	8.1	25.0	--
JULY								
07...	333	170	0	1.7	490	7.6	24.0	--
AUG.								
18...	267	120	0	1.4	398	7.4	25.5	--
SEP.								
17...	325	160	0	1.5	493	8.3	22.0	--
OCT.								
06...	--	--	--	--	460	--	16.0	--
19...	209	92	0	1.3	323	7.7	14.5	90
27...	180	99	11	.6	271	7.6	12.0	70
28...	--	--	--	--	271	--	12.0	--
NOV.								
11...	253	120	0	1.4	379	8.0	12.0	--

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED BARIUM (BA) (UG/L) (01005)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	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 COBALT (CO) (UG/L) (01035)
OCT., 1970											
12...	1900	--	<10	--	--	--	--	0	--	0	1
AUG., 1971											
18...	1500	47	3	44	<2	<4	43	<55	<4	--	<4
OCT.											
19...	1630	130	--	24	<1	<3	90	<45	<3	--	<3

DATE	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED GALLIUM (GA) (UG/L) (01120)	DIS- SOLVED GER- MANIUM (GE) (UG/L) (01125)	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)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)
OCT., 1970										
12...	--	--	--	--	--	0	--	--	--	<.5
AUG., 1971										
18...	5	<2	<6	50	37	<4	30	<3	.2	--
OCT.										
19...	6	<1	<5	20	43	<3	20	7	.2	--

GILA RIVER BASIN

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09431500 GILA RIVER NEAR REDROCK, N. MEX.--Continued

TRACE ELEMENT ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED TIN (SN) (UG/L) (01100)	DIS- SOLVED TANIUM (TI) (UG/L) (01150)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED ZIR- CONIUM (ZR) (UG/L) (01160)
OCT., 1970										
12...	--	--	--	--	--	--	--	--	0	--
AUG., 1971										
18...	3	<4	<1	4	140	<6	4	11	<240	<12
OCT.										
19...	3	<3	<1	6	110	<5	12	13	<190	<9

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	DIS- SOLVED OXYGEN (MG/L) (00300)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970										
12...	1900	51	420	8.3	16.5	17.5	8.0	<10	<10	<10
AUG., 1971										
18...	1500	70	395	--	25.5	29.0	--	--	--	--
OCT.										
19...	1630	185	315	--	14.5	17.0	--	--	--	--

GILA RIVER BASIN

09433500 SUNSET CANAL ABOVE NEW MEXICO-ARIZONA STATE LINE, N. MEX.
(Surveillance network station)

LOCATION.--Lat 32°41'42", long 109°02'48", in NW 1/4 sec.31, T.18 S., R.21 W., Hidalgo County, north of U.S. Highway 70 and 2.8 miles west of Virden.

PERIOD OF RECORD.--Chemical analyses: August 1969 to December 1971.

REMARKS.--Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED 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)
AUG., 1971											
18...	0900	.05	31	30	43	7.2	30	4.0	248	0	33
OCT.											
19...	0915	5.0	34	20	34	6.5	33	2.7	159	0	40

DATE	DIS- SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUORIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)
AUG., 1971										
18...	9.5	1.3	1.4	6.2	.01	1.4	.02	--	--	1.2
OCT.										
19...	14	2.4	.20	.89	.00	.17	.15	.95	1.3	1.4

DATE	DIS- SOLVED ORTHOPHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
AUG., 1971										
18...	.11	252	288	140	0	1.1	439	7.9	24.0	80
OCT.										
19...	.09	246	246	110	0	1.4	365	7.6	10.5	70

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMPER- ATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
AUG., 1971							
18...	0900	.05	400	7.8	24.0	26.0	--
OCT.							
19...	0915	5.0	380	8.2	10.5	7.5	10

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	FECAL COLI- FORM (COL. PER (31616)	STREP- TOCOCCI (COL- ONIES PER (31679)
AUG., 1971						
18...	--	7.5	--	--	--	--
OCT.						
19...	440	9.3	7	3.1	100	10

09436500 NEW MODEL CANAL ABOVE NEW MEXICO-ARIZONA STATE LINE, N. MEX.
(Surveillance network station)

LOCATION.--Lat 32°40'54", long 109°02'48", in NW¼SW¼ sec.6, T.18 S., R.21 W., Hidalgo County, north of U.S. Highway 70, upstream from New Mexico-Arizona State line, and 2.8 miles west of Virden.

PERIOD OF RECORD.--Chemical analyses: July 1969 to December 1971.
Sediment records: July 1970 to December 1971.

REMARKS.--Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey. Chemical analyses probably represent ground water pumped into canal from nearby irrigation wells.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)
APR., 1971										
21...	1430	5.1	40	10	140	29	160	6.1	435	0
AUG.										
18...	1130	10	40	10	110	20	140	4.7	474	0

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 NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)
APR., 1971									
21...	290	77	1.8	5.2	.00	5.2	.09	.07	.07
AUG.									
18...	190	51	2.2	4.9	.00	4.9	.05	.13	.08

DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
APR., 1971									
21...	970	982	470	110	3.2	1440	7.5	17.0	220
AUG.									
18...	808	814	360	0	3.2	1220	7.4	17.0	610

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH	TEMPER- ATURE (DEG C) (00010)	AIR TEMPER- ATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
APR., 1971							
21...	1430	5.1	1420	7.2	17.0	22.5	5

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
APR., 1971							
21...	1	5.8	2	.0	<10	<10	<10

GILA RIVER BASIN

09346500 NEW MODEL CANAL ABOVE NEW MEXICO-ARIZONA STATE LINE, N. MEX.--Continued

PESTICIDE ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	ALDRIN (UG/L) (39330)	CHLOR- DANE (UG/L) (39350)	DDD (UG/L) (39360)	DDE (UG/L) (39365)	DDT (UG/L) (39370)	DI- AZINON (UG/L) (39570)	DI- ELDRIN (UG/L) (39380)	ENDPIN (UG/L) (39390)	HEPTA- CHLOR (UG/L) (39410)
APR., 1971	21...	1430	.00	.0	.00	.00	.00	.00	.00	.00

DATE	TIME	HEPTA- CHLOR EPOXIDE (UG/L) (39420)	LINDANE (UG/L) (39340)	MALA- THION (UG/L) (39530)	METHYL PARA- THION (UG/L) (39600)	PARA- THION (UG/L) (39540)	TOX- APHENE (UG/L) (39400)	2,4-D (UG/L) (39730)	2,4,5-T (UG/L) (39740)	SILVEX (UG/L) (39760)
APR., 1971	21...	.00	.00	.00	.00	.00	.0	.00	.00	.00

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED PHOS- PHORUS (P) (MG/L) (00677)	DIS- ORTHO + HYDRO- PHOS- PHORUS (P) (MG/L) (01046)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANG- NESE (MN) (UG/L) (01056)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)
APR., 1971	21...	1435	5.5	.22	55	17	<10	11

DATE	TIME	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
APR., 1971	21...	20	11	45	65	<1000	5

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PEN- DED SED- IMENT (MG/L) (80154)	SUS- PEN- DED SED- IMENT 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)
APR., 1971	21...	1430	17.0	5.1	24	.33	--	--	--

09438000 GILA RIVER ABOVE NEW MEXICO-ARIZONA STATE LINE, N. MEX.
(Surveillance network station)

LOCATION.--Lat 32°41'12", long 109°02'50", in SE 1/4 sec. 6, T.19 S., R.21 W., Hidalgo County, at State line, 2.8 miles west of Virden, N. Mex., and 3.5 miles southeast of Duncan, Ariz.

DRAINAGE AREA.--3,349 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to February 1969, July 1969 to December 1971.
Sediment records: January 1970 to December 1971.

REMARKS.--Bacteria and aquatic biology analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NESIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	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)
OCT., 1970											
13...	0930	21	36	0	49	9.8	42	3.0	222	6	36
JAN., 1971											
19...	0930	74	39	--	41	9.2	41	2.3	218	0	36
APR., 1971											
21...	1030	25	35	30	45	11	49	3.8	237	0	37
AUG., 1971											
18...	1000	100	33	40	39	6.2	33	3.9	256	0	34
OCT., 1971											
19...	1130	150	29	20	27	4.9	25	2.3	139	0	25

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)
OCT., 1970										
13...	12	2.2	.23	1.0	.00	--	.10	.43	.76	.08
JAN., 1971										
19...	18	2.5	--	.20	--	.20	--	--	--	--
APR., 1971										
21...	19	2.0	.41	1.8	.00	.40	.11	--	--	.27
AUG., 1971										
18...	16	1.9	1.1	4.9	.00	1.1	.02	--	--	1.4
OCT., 1971										
19...	11	1.9	.20	.89	.00	.18	.12	.82	1.1	1.6

DATE	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
OCT., 1970										
13...	--	311	307	163	0	1.4	485	8.3	10.5	100
JAN., 1971										
19...	3.6	284	310	140	0	1.5	465	7.7	8.5	--
APR., 1971										
21...	.07	312	321	160	0	1.7	506	8.2	13.0	50
AUG., 1971										
18...	.15	254	299	120	0	1.3	477	7.1	21.5	70
OCT., 1971										
19...	.10	190	196	88	0	1.2	296	7.6	11.5	60

GILA RIVER BASIN

09438000 GILA RIVER ABOVE NEW MEXICO-ARIZONA STATE LINE, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CF8) (000600)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970							
13...	0930	21	495	8.1	10.5	13.5	5
JAN., 1971							
19...	0930	74	452	8.7	8.5	11.0	8
APR.							
21...	1030	25	495	8.4	13.0	18.5	20
AUG.							
18...	1000	100	--	7.8	21.5	25.0	80
OCT.							
19...	1130	150	285	8.6	11.5	13.0	20

DATE	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT., 1970							
13...	110	9.2	2	1.0	<10	<10	40
JAN., 1971							
19...	25	10.1	4	.8	10	<10	<10
APR.							
21...	30	9.3	3	1.0	7000	960	510
AUG.							
18...	4100	7.5	15	6.4	--	--	--
OCT.							
19...	500	9.1	7	3.0	--	170	0

PESTICIDE ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	ALDRIN (UG/L) (39330)	CHLOR- DANE (UG/L) (39350)	DOD (UG/L) (39360)	DDE (UG/L) (39365)	DDE IN BOTTOM DE- POSITS (UG/KG) (39368)	DDT (UG/L) (39370)	DI- AZINON (UG/L) (39570)	DI- AZINON IN BOTTOM DE- POSITS (UG/KG) (39571)	DI- ELDRIN (UG/L) (39380)	ENDRIN (UG/L) (39390)	HEPTA- CHLOR (UG/L) (39410)
OCT., 1970												
13...	0930	.00	.0	.00	.01	--	.00	.00	--	.00	.00	.00
JAN., 1971												
19...	1000	.00	.0	.00	.00	--	.00	.00	--	.00	.00	.00
APR.												
21...	1030	.00	.0	.00	.00	--	.00	.00	--	.00	.00	.00
AUG.												
18...	1000	.00	.0	.00	.04	.0	.00	--	.0	.00	.00	.00

DATE	HEPTA- CHLOR EPOXIDE (39420)	LINDANE (UG/L) (39340)	MALA- THION (UG/L) (39530)	MALA- THION IN BOTTOM DE- POSITS (UG/KG) (39531)	METHYL PARA- THION (UG/L) (39600)	METHYL PARA- THION IN BOT- TOM DE- POSITS (UG/KG) (39601)	PARA- THION (UG/L) (39540)	PARA- THION IN BOTTOM DE- POSITS (UG/KG) (39541)	TOX- APHENE (UG/L) (39400)	2,4-D (UG/L) (39730)	2,4,5-T (UG/L) (39740)	SILVEX (UG/L) (39760)
OCT., 1970												
13...	.00	.00	.00	--	.00	--	.00	--	--	.00	.00	.00
JAN., 1971												
19...	.00	.00	.00	--	.00	--	.00	--	--	.00	.00	.00
APR.												
21...	.00	.00	.00	--	.00	--	.00	--	.0	.00	.00	.00
AUG.												
18...	.00	.00	--	.0	--	.0	--	.0	--	.00	.00	.00

GILA RIVER BASIN

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09438000 GILA RIVER ABOVE NEW MEXICO-ARIZONA STATE LINE, N. MEX.--Continued

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: October 13, 1970
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Ephemeroptera: Baetidae, 5
 Coleoptera: Gyrinidae, 1

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- ORTHO + HYDRO- PHOS- PHORUS (P) (MG/L) (00677)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MANGANESE (MN) (UG/L) (01056)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CADMIUM (CD) (UG/L) (01025)
OCT., 1970							
13...	0935	.09	.06	400	15	<10	--
APR., 1971							
21...	1035	.14	.16	40	14	<10	<10

DATE	DIS- SOLVED CHROMIUM (CR) (UG/L) (01030)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED VANADIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970						
13...	--	<5	--	--	<1000	73
APR., 1971						
21...	25	6	30	30	<1000	10

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	DIS- CHARGE (CFS) (00060)	SUS- PENDED SEDIMENT (MG/L) (80154)	SUS- PENDED 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. FALL DIAM. % FINER THAN .062 MM (70342)
OCT., 1970									
07...	1330	19.0	20	88	4.7	35	42	79	--
13...	0930	10.5	21	604	35	--	--	--	--
JAN., 1971									
19...	1000	8.5	74	183	37	23	29	46	--
APR.									
21...	1030	13.0	25	74	5.0	--	--	--	--
AUG.									
18...	1000	21.5	100	17500	4730	52	67	95	98
OCT.									
19...	1130	11.5	150	2270	919	39	49	72	83

DATE	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM (70332)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM (70333)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70345)	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM (70334)	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM (70346)	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM (70335)
OCT., 1970									
07...	96	--	97	--	100	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
JAN., 1971									
19...	74	--	77	--	84	--	99	--	100
APR.									
21...	--	--	--	--	--	--	--	--	--
AUG.									
18...	--	98	--	98	--	100	--	--	--
OCT.									
19...	--	83	--	84	--	89	--	100	--

GILA RIVER BASIN

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, N. MEX.
(Surveillance network station)

LOCATION.--Lat 33°14'48", long 108°52'47", in NE¼ sec. 23, T.12 S., R.20 W., Catron County, at gaging station 0.2 mile upstream from hot springs, 5 miles south of Glenwood, 6 miles downstream from Whitewater Creek, and at mile 64.6.

DRAINAGE AREA.--1,653 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1963 to December 1971.

Sediment records: April 1963 to July 1967, July 1970 to December 1971.

REMARKS.--Bacteria and aquatic biology analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CF3) (00080)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- 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., 1970											
13...	1600	50	39	0	37	9.8	32	2.7	171	14	11
NOV.											
16...	1900	20	37	10	38	9.7	35	3.0	185	8	12
DEC.											
14...	1900	15	38	20	38	10	40	3.2	193	0	13
JAN., 1971											
19...	2030	29	41	--	37	11	34	2.9	203	0	14
FEB.											
16...	1800	20	38	--	32	9.7	44	3.4	181	0	13
MAR.											
08...	1900	18	40	--	35	9.9	45	4.0	160	21	14
APR.											
21...	1800	9.5	42	10	38	10	56	4.8	196	0	12
MAY											
17...	1800	14	38	--	38	11	23	2.5	208	0	10
JUNE											
21...	1900	16	43	--	38	11	54	4.0	201	0	22
JULY											
21...	1200	6.9	42	--	42	11	55	4.1	217	0	23
AUG.											
19...	1300	56	30	--	28	5.4	16	2.9	152	0	13
SEP.											
21...	1430	11	27	--	37	9.2	27	3.1	196	0	25
OCT.											
18...	1530	302	31	30	28	6.1	17	2.2	116	0	24
NOV...											
17	1100	41	37	--	36	8.3	27	2.5	167	0	26

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRATE (NO3) (MG/L) (71851)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L) (00608)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)
OCT., 1970										
13...	26	.6	.20	.90	.00	--	.33	.13	.66	.08
NOV.										
16...	32	.5	.20	.90	--	--	--	--	--	--
DEC.										
14...	42	.4	.23	1.0	--	--	--	--	--	--
JAN., 1971										
19...	28	.5	--	--	--	.30	--	--	--	--
FEB.										
16...	46	.5	--	--	--	.20	--	--	--	--
MAR.										
08...	40	.5	--	--	--	.10	--	--	--	--
APR.										
21...	58	.5	.29	1.3	.00	.30	.12	--	--	.07
MAY										
17...	6.7	.4	--	--	--	.30	--	--	--	--
JUNE										
21...	62	.3	--	--	--	.12	--	--	--	--
JULY										
21...	59	.7	--	--	--	.13	--	--	--	--
AUG.										
19...	8.0	.5	--	--	--	1.4	--	--	--	--
SEP.										
21...	15	.4	--	--	--	.34	--	--	--	--
OCT.										
18...	17	.4	.10	.40	.00	.09	.13	.69	.91	2.0
NOV...										
17	22	.4	--	--	--	.29	--	--	--	--

GILA RIVER BASIN

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09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, N. MEX.--Continued

CHEMICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

DATE	DIS- SOLVED ORTHOPHOS- (P) (MG/L) (000671)	DIS- SOLVED SOLIDS (RESI- DUE AT (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF TUENTS) (MG/L) (70301)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED BORON (B) (UG/L) (01020)
OCT., 1970										
13...	--	248	258	134	0	1.2	401	8.4	21.0	70
NOV.										
16...	--	278	267	137	0	1.3	433	8.5	14.0	--
DEC.										
14...	--	282	281	138	0	1.5	452	8.1	11.5	--
JAN., 1971										
19...	3.6	278	280	140	0	1.3	412	7.9	14.5	--
FEB.										
16...	--	294	277	120	0	1.7	381	8.2	18.5	--
MAR.										
08...	--	286	290	130	0	1.7	456	8.5	19.5	--
APR.										
21...	.04	270	319	140	0	2.1	496	8.3	19.0	30
MAY										
17...	.07	210	233	140	0	.8	371	7.7	21.5	--
JUNE										
21...	.07	328	334	140	0	2.0	596	7.9	26.5	--
JULY										
21...	.04	314	344	150	0	2.0	529	8.2	28.0	--
AUG.										
19...	.12	166	185	92	0	.7	283	7.6	21.0	--
SEP.										
21...	.08	196	242	130	0	1.0	384	7.8	22.0	--
OCT.										
18...	.13	190	184	95	0	.8	249	7.5	10.0	60
NOV...										
17	.07	270	243	120	0	1.1	370	7.7	12.0	--

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMP- ERATURE (DEG C) (00020)	COLOR (PLAT- INUM- COBALT UNITS) (00080)
OCT., 1970							
13...	1600	50	420	8.5	21.0	24.5	5
NOV.							
16...	1900	20	450	8.7	14.0	11.0	4
DEC.							
14...	1900	15	450	8.6	11.5	5.0	4
JAN., 1971							
19...	2030	29	385	8.4	14.5	7.5	4
FEB.							
16...	1800	20	418	9.0	18.5	17.0	5
MAR.							
08...	1900	18	465	8.8	19.5	15.0	10
APR.							
21...	1800	9.5	490	9.0	19.0	16.0	3
MAY							
17...	1800	14	370	8.3	21.5	23.0	10
JUNE							
21...	1900	16	590	8.3	26.5	28.5	3
JULY							
21...	1200	6.9	535	8.4	28.0	28.0	3
AUG.							
19...	1300	56	260	7.9	21.0	25.0	60
SEP.							
21...	1430	11	390	8.2	22.0	26.0	5
OCT.							
18...	1530	302	240	8.1	10.0	12.5	40
NOV.							
17...	1100	40	355	8.0	12.0	9.5	15

GILA RIVER BASIN

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, N. MEX.--Continued

FIELD AND BIOCHEMICAL MEASUREMENTS, OCTOBER 1970 TO DECEMBER 1971

DATE	TUR- BIO- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) (00335)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER (31501)	FECAL COLI- FORM (COL. PER (31616)	STREP- TOCOCCI (COL- ONIES PER (31679)
OCT., 1970							
13...	15	7.2	2	.0	10	10	50
NOV.							
16...	4	8.4	7	1.0	10	10	80
DEC.							
14...	4	7.8	8	1.5	60	30	80
JAN., 1971							
19...	5	8.7	7	.5	570	60	40
FEB.							
16...	2	7.6	1	1.0	<10	<10	20
MAR.							
08...	3	--	2	.9	<10	<10	10
APR.							
21...	5	6.5	4	.8	20	10	160
MAY							
17...	10	7.7	4	2.0	100	80	190
JUNE							
21...	3	6.4	5	1.3	100	30	240
JULY							
21...	6	9.2	3	.8	29	20	125
AUG.							
19...	430	7.2	14	3.2	--	--	--
SEP.							
21...	20	7.5	10	1.5	--	--	--
OCT.							
18...	425	9.8	6	1.8	--	200	30
NOV.							
17...	25	8.7	8	.7	900	40	120

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: April 21, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Diptera: Chironomidae, 1

Coleoptera: Elmidae, 1

Haliplidae; *Peltodytes* sp., 11Ephemeroptera: Baetidae; *Ephemerella* sp., 1Odonata: Gomphidae; *Orphiogomphus* sp., 1Trichoptera: Hydropsychidae; *Hydropsyche* sp., 5*Cheumatopsyche* sp., 3

Limnephilidae and Brachycentridae cases

Gastropoda: Physidae; *Physa* sp., 91

Hirudinea: Glossiphoniidae,

Date: May 17, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Coleoptera: Elmidae, 1 larva

Dytiscidae, 1 adult

Diptera: Chironomidae, 2

Ephemeroptera: Baetidae; *Baetis* sp., 8

Hemiptera: Corixidae (adult), 2

Trichoptera: Hydropsychidae; *Hydropsyche* sp., 1Gastropoda: Physidae; *Physa* sp., 14

Turbellaria: 11

Date: June 21, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Diptera: Chironomidae, 2

Coleoptera: Elmidae, 2

Dytiscidae, 3

Hemiptera: Naucoridae, 1

Lepidoptera: Pyralidae; *Elophila* sp., 2Trichoptera: Hydropsychidae; *Hydropsyche* sp., 138

Glossomatidae cases, 12

Gastropoda: Physidae; *Physa* sp.

Turbellaria, 5

Date: July 21, 1971

Method of sampling: Surber (3 square feet)

Organisms (classification, number)

Coleoptera: Elmidae, 27

Diptera: Chironomidae, 44

Ephemeroptera: Baetidae; Leptophlebiinae, 24

Siphonurinae, 12

Hemiptera: Corixidae (adult), 1

Naucoridae, 1

Lepidoptera: Pyralidae; *Elophila* sp.Trichoptera: Hydropsychidae; *Hydropsyche* sp., 17*Cheumatopsyche* sp., 9

Hydroptilidae, 2

Limnephilidae, 10

Rhyacophilidae and Helicopsychidae cases, 100+

GILA RIVER BASIN

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09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, N. MEX.--Continued

BIOLOGICAL ANALYSES, OCTOBER 1970 TO DECEMBER 1971

Date: September 21, 1971
 Method of sampling: Surber (3 square feet)
 Organisms (classification, number)
 Coleoptera: Psphenidae, 1
 Elmidae (adult), 2
 Dytiscidae (adult), 3
 Gyrinidae, 2
 Ephemeroptera: Baetidae, Tricorythodes sp., 1
 Trichoptera: Hydropsychidae; Hydropsyche sp., 27
 Helicopsychidae; Helicopsyche sp., 2
 Hydracarina, 3

WATER QUALITY DATA SUPPLIED BY THE ENVIRONMENTAL PROTECTION AGENCY,
OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- ORTHO + HYDRO. PHOS- PHORUS (P) (MG/L) (00677)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)
OCT., 1970							
13...	1605	.17	.05	0	23	<10	--
JAN., 1971							
19...	2035	--	--	50	20	<10	14
APR.							
21...	1805	.11	.06	10	25	<10	<10

DATE	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
OCT., 1970						
13...	--	5	--	--	<1000	32
JAN., 1971						
19...	18	<5	<30	30	<1000	20
APR.						
21...	26	5	<30	35	<1000	13

INSTANTANEOUS SUSPENDED-SEDIMENT AND PARTICLE SIZE,
OCTOBER 1970 TO DECEMBER 1971

[illegible]

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	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 NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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PART 7. LOWER MISSISSIPPI RIVER BASIN

ARKANSAS RIVER BASIN

07227000 CANADIAN RIVER AT LOGAN, N. MEX. (LAT 35°21'25", LONG 103°25'03"10)

JUNE, 1971																		
23...	1630	173	4.6	53	16	100	4.5	231	150	52	0.6	0.04	495	200	9	836	8.1	22.5
AUG.																		
31...	1645	149	3.7	36	16	120	4.4	226	160	67	.7	.00	519	160	0	860	8.1	25.0

OTHER VALUES

DATE	TIME	DIS- SOLVED IRON (FE)	TOTAL PHOS- PHORUS (P)	DIS- SOLVED ORTHO. PHOS- PHORUS (P)	DIS- SOLVED SOLIDS (RESI- DUE AT 180° C)	AIR TEMP- ERATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS	TUR- BID- ITY (JTU)	DIS- SOLVED OXYGEN (MG/L)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	IMME- DIATE COLI- FORM (COL. PER 100 ML)	FECAL COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)
		(01046)	(00665)	(00671)	(70300)	(00020)	(00080)	(00070)	(00300)	(00335)	(00310)	(31501)	(31616)	(31679)	(01020)	(01049)	(71900)
JUNE, 1971																	
23...	1630	--	0.02	0.01	504	37.5	20	20	7.2	6	1.4	< 10	< 10	40	--	0	0.1
AUG.																	
31...	1645	20	--	--	--	--	--	--	--	--	--	--	--	--	180	--	--

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMPER- ATURE (DEC C) (00020)	COLOR (PLAT- INUM- COBALT UNITS (00080)	DIS- SOLVED OXYGEN (MG/L) (00300)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML (31501)	FECAL COLI- FORM (COL. PER 100 ML (31616)	STREP- TOCOCCHI (COL- ONIES PER 100 ML (31679)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	HEXA- VALENT CHRO- MIUM (CRg) (UG/L) (01032)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
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PART 8. WESTERN GULF OF MEXICO BASINS

RIO GRANDE BASIN
08405200 PECOS RIVER BELOW DARK CANYON, AT CARLSBAD, N. MEX. (LAT 32°24'37", LONG 104°12'58"10)

OCT., 1970																			
05... 1430	40	4000	7.9	24.5	25.5	7	6.1	5.8	A17,000	A760	A <10	< 10	1	0	0	0	< 0.5	20	
MAY, 1971																			
04... --	--								A15,000	A100	A 100								

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	2,4-D (UG/L) (39730)	2,4-DP (UG/L)	2,4,5-T (UG/L) (39740)	SILVEX (UG/L) (39760)	DICAMBA (UG/L)
PECOS RIVER AT TATUM BRIDGE, NEAR ROSWELL, N. MEX. (LAT 33°23'50", LONG 104°23'40")								
MAY, 1971								
07...	1130	579	17.0	0.00	0.00	0.00	0.00	< 0.1
JUNE								
02...	1150	--	23.0	.00	.10	.00	.00	< .2
09...	1040	3.0	23.5	.00	.00	.00	.00	< .2
16...	1230	--	--	.00	.36	.00	.00	< .2
23...	0730	--	--	.00	.28	.00	.00	< .2
23...	1000	7.0	22.0	.00	.21	.00	.00	< .2
30...	0900	--	--	.00	.05	.00	.00	< .2
JULY								
07...	0700	--	--	.00	.00	.00	.01	< .2
21...	1100	--	--	.00	5.3	.00	.00	< .2
29...	0935	3.0	--	.00	.34	.00	.00	< .2
AUG.								
05...	1230	--	--	.00	.26	.00	.00	< .2
12...	1300	--	--	.00	.00	.00	.00	< .2
18...	1130	720	--	.00	.00	.00	.00	< .2

A Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- SOLVED SILICA (SiO_2) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L) (MG/L) (00933)	BICAR- BONATE (HCO_3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO_4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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RIO GRANDE BASIN--Continued
MEXICAN DUCK MARSH, N. MEX. (LAT 33°25'14", LONG 107°10'11"10)

SEP., 1971	25	42	20	156	212	210	96	678	653	188	14	1070	7.4	--
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MEXICAN DUCK SPRING, N. MEX. (LAT 33°25'46", LONG 107°10'21"10)

SEP., 1971	25	540	91	439	240	1880	370	3670	3460	1720	1520	4170	7.4	--
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RIO GRANDE CV CHANNEL AT MEXICAN DUCK, N. MEX. (LAT 33°26'04", LONG 107°08'59" 10)

SEP., 1971	25	85	18		217	248	48	654	632	284	106	955	7.4	--
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DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	2,4-D (UG/L) (39730)	2,4-DP (UG/L)	2,4,5-T (UG/L) (39740)	SILVEX (UG/L) (39760)	DICAMBA (UG/L)
PECOS RIVER AT BOB CROSBY BRIDGE, NEAR ACME, N. MEX. (LAT 33°34'10", LONG 104°22'20"10)								
MAY, 1971								
07...	1110	579	18.0	0.00	0.00	0.00	0.00	< 0.1
JUNE								
02...	1110	3.0	21.0	.00	.00	.00	.00	< .2
16...	1130	--	--	.00	.00	.00	.00	< .2
JULY								
29...	1030	15	--	.00	.00	.00	.00	< .2
AUG.								
12...	1400	--	--	.00	.00	.00	.00	< .2

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMPER- ATURE (DEG C) (00020)	DIS- SOLVED OXYGEN (MG/L) (00300)	DIS- SOLVED ARSENIC (AS) (MG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (MG/L) (01025)	HEXA- VALENT CHRO- MIUM (CR ₆) (MG/L) (01032)	DIS- SOLVED COBALT (CO) (MG/L) (01035)	DIS- SOLVED LEAD (PB) (MG/L) (01049)	DIS- SOLVED MERCURY (HG) (MG/L) (71890)	DIS- SOLVED ZINC (ZN) (MG/L) (01090)
RIO GRANDE BASIN--Continued														
08316000 SANTA FE RIVER NEAR SANTA FE, N. MEX. (LAT 35°41'12", LONG 105°50'35"10)														
OCT., 1970	14... 1015	1.8	54	7.2	4.5	11.5	--	< 10	1	0	1	0	< 0.5	0
08317400 RIO GRANDE BELOW COCHITI DAM, N. MEX. (LAT 35°35'47", LONG 106°20'48"10)														
OCT., 1970	13... 1100	810	412	8.0	11.5	15.0	--	< 10	2	0	1	0	< 0.5	0
08330800 RIO GRANDE BELOW ALB RIO BRAVO BRIDGE, N. MEX. (LAT 34°59'05", LONG 106°41'11"10)														
OCT., 1970	16... 1430	458	480	8.0	10.5	12.5	9.2	< 10	0	0	0	0	< 0.5	0

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM PLUS SODIUM (NA) (MG/L) (00930)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L) (00933)	DIS- SOLVED PO- TAS- SIUM (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	DIS- SOLVED SULFATE (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)
RIO GRANDE BASIN--Continued												
08382700 PECOS RIVER NEAR COLONIAS, N. MEX. (LAT 35°03'26", LONG 104°45'20"10)												
AUG., 1970												
12...	0915	65	13	80	10	--	5.1	--	164	110	2.0	--
OCT.												
08...	1530	20	12	168	18	--	12	--	155	372	1.6	--
27...	1330	16	12	170	20	--	8.7	--	142	390	1.3	--
NOV.												
17...	0820	17	11	181	20	--	7.8	--	158	400	1.4	--
DEC.												
17...	1100	17	12	140	21	9.8	--	1.2	124	400	3.5	--
JAN., 1971												
19...	1015	16	12	180	21	8.3	--	1.2	151	390	3.9	--
FEB.												
19...	0930	15	12	200	20	8.8	--	1.4	153	480	3.4	0.6
MAR.												
16...	0855	14	13	210	22	10	--	1.9	156	490	4.1	.1

DATE	TIME	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	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 COPPER (CU) (UG/L) (01040)
AUG., 1970												
12...	0915	0.27	--	--	302	242	108	480	7.5	20.0	80	--
OCT.												
08...	1530	.16	--	--	660	492	365	903	7.9	18.0	90	0
27...	1330	.18	--	--	673	506	390	924	7.7	13.0	70	0
NOV.												
17...	0820	.23	--	--	700	532	402	962	7.8	7.0	50	0
DEC.												
17...	1100	--	0.28	0.02	650	440	330	909	7.8	11.0	--	--
JAN., 1971												
19...	1015	--	.00	.03	700	550	426	906	7.7	9.0	--	--
FEB.												
19...	0930	--	.20	--	802	580	460	1020	7.8	6.0	--	--
MAR.												
16...	0855	--	.10	--	828	610	490	1090	7.8	10.0	--	--

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO DECEMBER 1971

DATE	TIME	DIS- CHARGE (CFS) (00060)	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-
			SOLVED SILICA (SiO ₂) (MG/L) (00955)	SOLVED CAL- CIUM (CA) (MG/L) (00915)	SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	SOLVED SODIUM PLUS POTAS- SIUM (MG/L) (00933)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	SOLVED SULFATE (SO ₄) (MG/L) (00945)	SOLVED CHLO- RIDE (CL) (MG/L) (00940)	SOLVED NITRATE (N) (MG/L) (00618)	SOLVED (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	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 COPPER (CU) (UG/L) (01040)		
RIO GRANDE BASIN--Continued																				
08382800 PECOS RIVER ABOVE LOS ESTEROS DAMSITE, N. MEX. (RIVER MILE 267.1) (LAT 35°02'26", LONG 104°40'52"10)																				
OCT., 1970																				
08...	1140	25	9.8	167	20	11	135	390	4.3	0.05	668	498	388	912	8.0	10.0	100	0		

DATE	TIME	DIS- CHARGE (MG/L) (00060)	CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	AIR TEMPER- ATURE (DEG C) (00020)	DIS- SOLVED OXYGEN (MG/L) (00300)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	HEXA- VALENT CHROMIUM (CR6) (UG/L) (01032)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)
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PART 9. COLORADO RIVER BASIN

SAN JUAN RIVER BASIN

09364000 ANIMAS RIVER AT AZTEC, N. MEX. (LAT 36°49'35", LONG 108°00'10"10)

OCT., 1970																	
13...	1630	500	500	8.4	12.5	21.0	9.6	A1040	A230	A20	10	0	0	0	0	< 0.5	0

A Bacteria analyzed by the New Mexico Environmental Improvement Agency on samples collected by the U.S. Geological Survey.

CHEMICAL ANALYSES OF WELLS IN NEW MEXICO

LOCAL IDENTIFIER	STATION NUMBER LATITUDE-LONGITUDE SEQUENCE NO.	GEOLOGIC UNIT *	TOTAL DEPTH OF HOLE (FT. BELOW LSD) (72001)	WATER LEVEL (FT. BELOW LSD) (72019)	INSTANTANEOUS FLOW RATE (GPM) (00059)	DATE OF SAMPLE	TIME OF COLLECTION	DIS-SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNESIUM (MG) (MG/L) (00925)
BERNALILLO COUNTY										
11N.03E.09.214 (Projected)	351208106374101	--	--	--	--	70-10-14	--	--	--	--
CHAVEZ COUNTY										
07S.23E.23.24342	334139104341201	313LMSN	438	--	--	71-04-19	1725	--	--	--
07S.24E.19.41142	333403104421301	313LMSN	400	--	--	71-04-19	--	--	--	--
07S.26E.05.22134	334434104184901	110AVMB	80	--	--	71-04-21	--	--	--	--
07S.26E.06.24234	334419104194401	313LMSN	260	--	--	71-04-08	--	--	--	--
08S.24E.09.33113	333752104310701	313LMSN	--	--	--	71-04-27	--	--	--	--
08S.24E.26.11311	333317104290201	313LMSN	--	--	--	71-04-15	1215	--	--	--
09S.24E.02.42321	333338104281301	110AVMB	130	--	--	71-04-14	1530	--	--	--
A 09S.29E.	333318104191401	--	--	--	--	71-06-03	1730	0.2	990	170
10S.23E.24.24331	332302104334601	313LMSN	187	--	--	71-04-01	--	--	--	--
10S.24E.16.31333	332400104312001	313LMSN	237	--	--	71-03-22	--	--	--	--
10S.24E.20.43111	332536104315101	313LMSN	209	--	--	71-04-01	--	--	--	--
10S.24E.27.34111	332443104300201	313LMSN	281.5	--	--	71-03-29	--	--	--	--
10S.24E.28.44133	332439104303401	313LMSN	304	--	--	71-04-06	--	--	--	--
10S.25E.30.31234	332453104265601	313LMSN	365	--	--	71-04-06	--	--	--	--
11S.24E.01.33333	332248104280901	313LMSN	397	--	--	71-04-06	--	--	--	--
B 11S.25E.	332113104202501	--	--	--	--	71-06-03	1430	1.6	1400	1100
C 11S.25E.	332257104222301	--	--	--	--	71-06-03	1730	2.9	910	160
11S.25E.08.12314	332244104254301	110AVMB	167	--	--	71-04-06	--	--	--	--
11S.25E.18.44424	332106104260101	313LMSN	672	--	--	71-03-24	--	--	--	--
11S.25E.29.44411	331920104223201	313LMSN	925	--	--	71-03-24	--	--	--	--
11S.25E.33.23134	331856104241901	313LMSN	980	--	--	71-03-09	--	--	--	--
11S.26E.	331952104194401	--	--	--	--	71-06-03	1535	.9	940	110
D 11S.26E.	332007104195401	--	--	--	--	71-06-03	1515	5.8	760	170
E 11S.26E.	332012104195701	--	--	--	--	71-06-03	1525	1.1	920	320
F 11S.26E.	332020104195901	--	--	--	--	71-06-03	1445	4.1	1000	370
G										
11S.26E.02.44224	332322104180901	313SVRV	Spring	--	1.0	71-06-07	--	10	780	300
11S.26E.14.44114	332139104182201	313YTES	Spring	--	--	71-06-07	--	21	570	110
11S.26E.15.23222	332200104193301	313SVRV	50	--	2.0	71-06-07	--	25	530	200
11S.26E.25.33411	331949104175801	313SVRV	129	75	2.0	71-06-06	--	19	570	180
11S.26E.26.22243	332034104174701	313YTES	75	--	1.0	71-06-06	--	16	560	220
11S.26E.34.34344	331851104194801	313QUEN	365	--	2.0	--	--	21	740	130
11S.27E.18.33334	332128104170201	313YTES	28	--	2.0	71-06-07	--	27	560	110
11S.27E.20.33112	332047104160001	313YTES	37	--	.5	71-06-07	--	29	600	35
11S.27E.32.24132	331927104151401	313YTES	50	--	--	71-06-07	--	35	530	310
H 11S.29E.	331902104194801	--	--	--	--	71-06-03	1710	.6	1000	390
J 11S.29E.	332001104195301	--	--	--	--	71-06-03	1530	.3	250	1900
12S.25E.35.41132	331358104241701	313LMSN	937	--	--	71-04-06	1000	--	--	--
12S.26E.19.43113	331532104224401	313LMSN	1014	--	--	71-03-24	--	--	--	--
12S.26E.25.34221	331441104173601	313SVRV	55	50	2.0	71-06-06	--	23	600	150
12S.27E.05.33331	331801104155901	313YTES	100	50	1.0	71-06-06	--	34	560	180
12S.27E.17.44334	331615104151201	313SVRV	100	--	2.0	71-06-07	--	28	540	230
12S.27E.32.12222	331426104153101	313SVRV	154	91	1.0	71-06-06	--	22	560	130
14S.26E.20.32231	330513104214801	313LMSN	1020	--	--	71-04-28	--	--	--	--
15S.18E.17.14334	330047105113801	313LMSN	306	--	--	71-04-09	--	--	--	--
COLFAX COUNTY										
24N.23E.25.311	361833104270101	--	--	--	--	71-10-20	1200	5.2	5.7	8.4

- A Dimmit Lake near Bottomless Lakes State Park, N. Mex.
 B N Lazy Lagoon Lake, Bottomless Lakes State Park, N. Mex.
 C Britt Lake near Bottomless Lakes State Park, N. Mex.
 D Pasture Lake, Bottomless Lakes State Park, N. Mex.
 E Devil's Inkwell Lake, Bottomless Lakes State Park, N. Mex.
 F S Mirror Lake, Bottomless Lakes State Park, N. Mex.
 G Cottonwood Lake, Bottomless Lakes State Park, N. Mex.
 H Lea Lake, Bottomless Lakes State Park, N. Mex.
 J S Figure 8 Lake, Bottomless Lakes State Park, N. Mex.

* EXPLANATION OF GEOLOGIC UNIT(AQUIFER) CODES(LISTED FROM YOUNGEST TO OLDEST AGE): 000IRSV-Unknown age, undifferentiated, intrusive rock; 110AVMB-Cenozoic age, quaternary, alluvium; 110BLSN-Cenozoic age, quaternary, Bolson fill; 1210GLL-Cenozoic age, tertiary, pliocene, Ogallala formation; 121TOTV-Cenozoic age, tertiary, pliocene, Totavi Lenti; 121TSUQ-Cenozoic age, tertiary, pliocene, Tesuque formation, undifferentiated unit; 211DKOT-Mesozoic age, upper Cretaceous, Dakota sandstone; 211MVRD-Mesozoic age, upper Cretaceous, Mesaverde group; 217PRGR-Mesozoic age, lower Cretaceous, Purgatoire formation; 221MRSN-Mesozoic age, upper Jurassic, Morrison formation; 221WSRC-Mesozoic age, upper Jurassic, Westwater Canyon sandstone member of Morrison formation; 231CHNL-Mesozoic age, upper Triassic, Chinle formation; 231SRMP-Mesozoic age, upper Triassic, Shinarump member; 310GLRT-Paleozoic age, Permian, Glorieta sandstone member of San Andres formation of Manzano group; 310MGNT-Paleozoic age, Permian, Magenta member; 312CLBR-Paleozoic age, Ochoa, Culebra dolomite member of Rustler formation; 312RSLRL-Paleozoic age, Ochoa, Rustler formation, unnamed lower member; 313CPTN-Paleozoic age, Guadalupe, Capitan limestone; 313DLRM-Paleozoic age, Guadalupe, Delaware mountain group; 313LMSN-Paleozoic age, Guadalupe, limestone aquifer; 313QUEN-Paleozoic age, Guadalupe, Queen formation; 313SVRV-Paleozoic age, Guadalupe, Seven Rivers formation; 313YTES-Paleozoic age, Guadalupe, Yates formation, Guadalupe group.

CHEMICAL ANALYSES OF WELLS IN NEW MEXICO

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DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	CAR- BONATE (CO ₃) (MG/L) (00445)	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 NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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BERNALILLO COUNTY--Continued

--	--	155	2	--	10	--	--	--	166	36	466	8.3	--
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CHAVEZ COUNTY--Continued

--	--	--	--	--	1000	--	--	--	--	--	4940	--	20.0
--	--	--	--	--	1380	--	--	--	--	--	6250	--	19.5
--	--	--	--	--	390	--	--	--	--	--	3650	--	17.0
--	--	--	--	--	440	--	--	--	--	--	4500	--	18.5
--	--	--	--	--	1370	--	--	--	--	--	6860	--	17.0
--	--	--	--	--	1990	--	--	--	--	--	8640	--	18.5
--	--	--	--	--	1500	--	--	--	--	--	6770	--	18.0
570	18	63	--	2900	1000	0.5	0.04	5680	3200	3100	6470	7.5	21.5
--	--	--	--	--	480	--	--	--	--	--	2900	--	--
--	--	--	--	--	1100	--	--	--	--	--	5050	--	--
--	--	--	--	--	890	--	--	--	--	--	4010	--	--
--	--	--	--	--	720	--	--	--	--	--	3640	--	--
--	--	--	--	--	770	--	--	--	--	--	3750	--	--
--	--	--	--	--	2170	--	--	--	--	--	7660	--	--
--	--	--	--	--	1180	--	--	--	--	--	4890	--	--
7300	56	123	--	5400	12000	1.9	.03	27300	8000	7900	39700	7.2	23.0
920	6.7	72	--	2500	1800	.9	.01	6340	2900	2900	8420	7.6	21.5
--	--	--	--	--	1780	--	--	--	--	--	6650	--	--
--	--	--	--	--	300	--	--	--	--	--	2070	--	--
--	--	--	--	--	105	--	--	--	--	--	1320	--	--
--	--	--	--	--	990	--	--	--	--	--	4600	--	--
480	12	60	--	2500	950	.7	2.0	5030	2800	2700	5860	7.3	23.0
530	4.7	95	--	2200	1100	1.1	.03	4820	2600	2500	6300	7.9	20.0
2700	14	142	--	3300	4100	1.6	.03	11400	3600	3500	16600	7.7	21.5
1800	12	128	--	3000	3800	1.4	.09	10100	4000	3900	16600	7.6	20.0
250	6.1	222	--	2900	430	1.1	.11	4790	3200	3000	5200	7.7	16.5
51	5.5	140	--	1800	74	.9	1.9	2710	1900	1800	3030	7.6	25.0
110	5.6	142	--	2100	140	.8	3.6	3200	2100	2000	3510	7.9	18.5
150	7.3	149	--	2100	200	1.0	1.8	3310	2200	2000	3650	7.5	19.5
200	5.8	172	--	2300	200	1.2	1.3	3590	2300	2200	3960	7.6	19.5
590	3.7	185	--	1800	1100	1.1	.05	4480	2400	2200	6260	7.5	22.0
69	6.8	127	--	1600	97	4.5	11	2590	1900	1700	3060	7.7	18.0
24	4.0	161	--	1500	47	1.7	9.0	2360	1600	1500	2440	7.3	22.0
41	2.6	147	--	2400	51	2.8	6.5	3470	2600	2500	3660	7.7	18.5
2600	16	132	--	3200	4900	1.4	.39	12200	4100	4000	19600	7.6	20.0
5600	78	267	--	9600	8000	5.5	.02	25600	8400	8200	31900	7.3	24.5
--	--	--	--	--	24	--	--	--	--	--	1110	--	22.0
--	--	--	--	--	830	--	--	--	--	--	4470	--	--
120	5.4	185	--	1800	260	.7	14	3110	2100	2000	3520	7.8	19.5
51	13	226	--	2000	44	1.3	6.7	3020	2100	2000	3130	7.7	19.5
31	3.6	159	--	2200	37	1.3	3.8	3170	2300	2200	3290	7.8	19.0
100	6.0	124	--	1800	170	1.2	4.0	2870	1900	1800	3260	7.6	18.5
--	--	--	--	--	16	--	--	--	--	--	1150	--	25.0
--	--	--	--	--	16	--	--	--	--	--	682	--	--

COLFAX COUNTY--Continued 1/

800	11	1580	138	150	60	2.4	0.35	1960	49	0	3050	8.4	--
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1/ OTHER VALUES:

DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOLVED ORTHO- PHO- PHORUS (P) (MG/L) (00671)
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0	10	0.00
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CHEMICAL ANALYSES OF WELLS IN NEW MEXICO

LOCAL IDENTIFIER	STATION NUMBER LATITUDE-LONGITUDE SEQUENCE NO.	GEOLOGIC UNIT	TOTAL DEPTH OF HOLE (FT. BELOW LSD) (72001)	INSTAN- TANEOUS FLOW RATE (GPM) (00059)	DATE OF SAMPLE	TIME OF COLLEC- TION	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)
DONA ANA COUNTY									
20S.05E.23.213	323302106240501	110BLSN	225	--	71-12-28	1535	16	10	950
20S.06E.14.122	323400106175901	110BLSN	225	--	71-12-28	1300	21	10	1700
20S.06E.29.141	323233106211101	110BLSN	240	--	71-12-28	1415	20	20	1900
21S.05E.02.341	323020106242201	110BLSN	225	--	71-12-28	1445	27	20	0
21S.05E.23.142	322805106241601	110BLSN	260	--	71-12-28	0950	49	20	80
21S.05E.32.222	322635106264401	110BLSN	521	--	70-12-15	1410	36	--	--
21S.05E.32.222	322635106264401	110BLSN	521	--	71-06-17	1330	39	30	--
21S.05E.33.242	322629106254101	110BLSN	284	--	71-12-27	1400	28	30	10
21S.05E.35.213	322633106241201	110BLSN	320	--	71-12-27	1445	34	10	80
21S.06E.02.142	323040106175301	110BLSN	230	--	71-12-28	1230	21	10	390
21S.06E.17.332	322324106211801	110BLSN	200	--	71-12-28	1115	26	10	630
21S.06E.32.114	322117106263501	110BLSN	210	--	71-12-28	1030	26	10	30
22S.04E.12.214	322446106290801	110BLSN	838	1150	71-06-16	1100	45	10	--
22S.04E.12.414	322424106290301	110BLSN	800	1125	71-06-16	1035	42	10	--
22S.04E.13.241	322347106285801	110BLSN	900	750	71-06-16	--	33	10	--
22S.04E.13.311	322331106293801	110BLSN	820	290	71-06-16	0915	43	10	--
22S.04E.13.424	322333106284901	110BLSN	820	475	71-06-16	0950	43	20	--
22S.04E.13.432	322325106290401	110BLSN	890	725	71-06-16	1255	44	10	--
22S.04E.14.141	322352106300201	110BLSN	447	--	71-12-29	1300	40	10	20
22S.04E.24.112	322310106293401	110BLSN	500	525	71-06-17	0840	50	10	--
22S.04E.24.212A	322309106290201	110BLSN	805	825	71-06-16	1315	45	10	--
22S.05E.03.241	322023106245001	110BLSN	265	--	71-12-27	1545	57	10	10
22S.05E.04.113	322032106264101	110BLSN	255	--	71-12-27	1200	37	20	10
22S.05E.05.313	321510106274101	110BLSN	544	--	70-12-15	1440	34	--	--
22S.05E.05.313	321510106274101	110BLSN	544	--	71-06-17	1435	38	120	--
22S.05E.07.342	322415106281801	110BLSN	968	--	70-12-15	1340	30	--	--
22S.05E.07.342	322415106281801	110BLSN	968	--	71-06-17	1250	30	20	--
22S.05E.08.142	321930106271901	110BLSN	315	--	71-12-27	1100	34	20	10
22S.05E.15.221	321401106245201	110BLSN	316	--	70-12-15	1115	2.3	--	--
22S.05E.15.221	321401106245201	110BLSN	316	--	71-06-17	1440	2.3	30	--
22S.05E.16.111	322403106263901	110BLSN	336	--	70-12-15	1315	21	--	--
22S.05E.16.111	322403106263901	110BLSN	336	--	71-06-17	1150	23	100	--
22S.05E.19.414	321718106275001	110BLSN	420	--	71-12-27	0950	18	20	40
22S.05E.20.111	322311106274101	110BLSN	352	--	70-12-15	1240	35	--	--
22S.05E.20.111	322311106274101	110BLSN	352	--	71-06-17	1130	38	10	--
22S.05E.29.412	322155106270201	110BLSN	557	--	70-12-15	1045	29	--	--
22S.05E.29.412	322155106270201	110BLSN	557	--	71-06-17	1050	40	20	--
22S.05E.33.244	322108106254701	110BLSN	445	--	70-12-15	1000	5.1	--	--
22S.05E.33.244	322108106254701	110BLSN	445	--	71-06-17	0930	5.0	10	--
23S.06E.20.313	322230106183001	110BLSN	260	--	71-12-29	1135	30	20	10
EDDY COUNTY									
16S.24E.11.34442	325551104333301	313LMSN	850	--	71-04-08	1440	--	--	--
16S.26E.20.33331	325404104241301	313LMSN	850	--	71-04-07	1615	--	--	--
17S.25E.24.422	324913104255001	313LMSN	1148	--	71-04-26	--	--	--	--
17S.26E.10.43331	325307104220701	313LMSN	1095	--	71-04-05	1530	--	--	--
18S.25E.32.1111	324243104305501	313LMSN	745	--	71-04-12	1615	--	--	--
18S.26E.27.43333	324243104220801	313LMSN	745	--	71-04-28	--	--	--	--
18S.26E.34.31324	324210104223301	313LMSN	871	--	71-04-05	1645	--	--	--
18S.30E.22.34421	324315103573701	310MGNT	--	1.0	71-12-21	1030	29	20	10
18S.30E.22.34421	324315103573702	312CLBR	--	1.0	71-12-21	1031	29	10	10
20S.30E.32.	323121103593001	313CPTN	--	--	71-12-29	1452	1.8	0	--
22S.25E.18.	322325104260501	313DLRM	3636	--	70-11-05	1500	--	--	--
22S.25E.18.	322325104260502	313DLRM	3636	--	71-11-05	1500	--	--	--
24S.29E.16.133	321410103591501	312RSLRL	223	--	71-05-21	1430	8.2	80	--
HARDING COUNTY									
15N.31E.06.421	353322103411601	231CHNL	250 A	--	71-08-25	1625	12	10	10
19N.33E.17.441	355220103265001	221MRSN	--	--	70-01-14	--	40	580	--
19N.33E.33.332	354956103262001	221MRSN	-- B	--	71-08-23	1540	41	20	--

A Other value: Water level (below LSD) = 67 ft.

B Other value: Water level (below LSD) = 121 ft.

CHEMICAL ANALYSES OF WELLS IN NEW MEXICO

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DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L) (00933)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	CAR- BONATE (CO ₃) (MG/L) (00445)	HY- DROXIDE ION (71830)	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 NITRATE (N) (MG/L) (00620)	DIS- SOLVED NITRITE PLUS NITRATE (MG/L) (00631)
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DONA ANA COUNTY--Continued

480	610	4700	--	76	336	--	--	9700	3100	1.6	--	1.3
560	300	2000	--	11	260	--	--	3900	1700	1.6	--	2.8
610	5000	25000	--	460	781	--	--	30000	29000	1.7	--	.02
65	58	51	--	3.7	221	--	--	250	61	.6	--	2.4
430	200	650	--	28	218	--	--	3200	62	1.2	--	1.7
50	5.6	--	50	--	148	--	--	80	29	.9	2.0	--
53	12	30	--	3.1	154	--	--	82	28	.5	--	2.4
40	22	46	--	4.6	168	--	--	110	30	.8	--	2.0
63	41	65	--	8.7	166	--	--	270	36	1.1	--	2.4
1100	630	2600	--	11	348	--	--	2400	5800	.5	--	5.7
270	150	1200	--	42	278	--	--	3300	87	1.1	--	1.4
210	120	940	--	37	259	--	--	2800	86	1.3	--	.68
52	11	29	--	2.0	166	--	--	86	19	.1	--	1.9
39	7.9	26	--	1.9	161	--	--	49	11	.1	--	1.2
33	5.0	41	--	1.8	133	--	--	64	18	.6	--	1.9
63	15	27	--	2.6	148	--	--	100	19	.6	--	12
40	7.7	26	--	2.0	141	--	--	46	9.9	.5	--	1.5
35	7.7	24	--	1.8	137	--	--	44	9.2	.5	--	1.4
44	9.8	25	--	1.8	161	--	--	56	14	.9	--	1.9
40	10	23	--	2.2	125	--	--	61	14	.5	--	4.7
32	6.9	24	--	1.7	133	--	--	48	8.0	.5	--	1.1
47	23	39	--	9.7	172	--	--	120	31	.9	--	2.4
41	9.2	33	--	4.0	117	--	--	70	25	.6	--	1.4
33	8.6	--	24	--	126	--	--	43	12	.3	1.0	--
31	7.4	23	--	1.9	135	--	--	44	11	.0	--	1.1
27	5.5	--	34	--	112	--	--	44	14	.5	1.5	--
42	4.2	78	--	2.9	129	--	--	130	38	.1	--	2.4
43	6.1	26	--	2.4	149	--	--	52	12	.3	--	1.8
8.0	2.4	--	583	--	50	20	--	380	585	.6	.09	--
7.9	1.3	610	--	6.3	54	34	--	420	600	.3	--	.01
20	4.4	--	26	--	70	--	--	42	15	.4	.50	--
21	3.9	35	--	2.5	83	--	--	43	32	.0	--	.74
46	9.8	23	--	4.0	190	--	--	53	9.0	.2	--	.04
36	9.2	--	27	--	110	--	--	59	20	.4	1.6	--
35	6.7	30	--	1.9	122	--	--	60	20	.0	--	3.0
28	6.3	--	27	--	110	--	--	44	12	.3	.23	--
32	5.9	23	--	1.8	125	--	--	55	10	.0	--	1.1
51	2.2	--	133	--	0	16	0.6	137	179	1.0	.00	--
50	.5	120	--	5.6	0	22	6	150	180	.5	--	.01
67	19	140	--	7.2	436	--	--	130	53	.9	--	.46

EDDY COUNTY--Continued

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--	--	--	--	--	--	--	--	--	17	--	--	--
--	--	--	--	--	--	--	--	--	14	--	--	--
--	--	--	--	--	--	--	--	--	28	--	--	--
--	--	--	--	--	--	--	--	--	16	--	--	--
--	--	--	--	--	--	--	--	--	18	--	--	--
--	--	--	--	--	--	--	--	--	16	--	--	--
1000	410	2200	--	7.8	129	--	--	2300	4800	2.2	--	3.9
1200	430	2900	--	110	107	--	--	2400	6300	1.5	--	3.4
1400	560	13000	--	350	392	--	--	4400	22000	4.3	--	.08
1380	731	6620	--	79	1530	--	--	3360	10400	--	--	--
--	--	--	--	--	--	--	--	--	9150	--	--	--
530	2300	100000	--	4500	156	--	--	12000	160000	2.8	--	1.0

HARDING COUNTY--Continued

8.6	8.6	1300	--	4.9	835	--	--	1300	370	0.8	--	0.24
50	21	23	--	--	228	--	--	38	14	2.9	2.0	--
35	30	46	--	4.8	232	--	--	69	33	3.1	--	3.0

CHEMICAL ANALYSES OF WELLS IN NEW MEXICO

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LOCAL IDENTIFIER	DATE OF SAMPLE	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DENSITY (GM/ML) AT 20 C (71820)	DIS- SOLVED BORON (B) (UG/L) (01020)
DONA ANA COUNTY--Continued										
20S.05E.23.213	71-12-28	0.02	18900	3700	3400	21600	7.9	21.5	1.011	1700
20S.06E.14.122	71-12-28	.07	8640	2600	2400	10800	7.7	21.0	1.004	1100
20S.06E.29.141	71-12-28	.46	90500	22000	21000	86000	7.6	20.5	1.065	4800
21S.05E.02.341	71-12-28	.00	636	400	220	962	8.0	21.0	--	60
21S.05E.23.142	71-12-28	.02	4740	1900	1700	5220	7.9	19.0	--	280
21S.05E.32.222	70-12-15	--	334	148	26	485	8.1	24.5	--	--
21S.05E.32.222	71-06-17	.03	334	180	55	490	7.8	26.0	--	30
21S.05E.33.242	71-12-27	.00	373	190	53	589	8.1	--	--	50
21S.05E.35.213	71-12-27	.21	612	330	190	889	7.9	--	--	60
21S.06E.12.142	71-12-38	.04	12800	5300	5100	19100	7.5	22.0	1.006	1700
21S.06E.17.332	71-12-28	.01	5220	1300	1100	6280	8.0	20.5	--	1800
21S.06E.32.114	71-12-28	.02	4350	1000	810	290	7.9	21.0	--	720
22S.04E.12.214	71-06-16	.04	334	180	39	478	7.7	25.5	--	20
22S.04E.12.414	71-06-16	.03	262	130	0	358	7.8	26.0	--	20
22S.04E.13.241	71-06-16	.02	270	100	0	378	7.9	28.0	--	40
22S.04E.13.311	71-06-16	.03	396	220	98	540	7.7	23.5	--	60
22S.04E.13.424	71-06-16	.03	251	130	16	334	7.8	26.5	--	10
22S.04E.13.432	71-06-16	.03	240	120	7	329	7.8	25.5	--	30
22S.04E.14.141	71-12-29	.11	279	150	18	410	7.7	20.0	--	30
22S.04E.24.112	71-06-17	.03	283	140	39	373	7.7	24.5	--	20
22S.04E.24.212A	71-06-16	.02	236	110	0	317	7.8	26.5	--	20
22S.05E.03.241	71-12-27	.01	423	210	71	617	8.0	--	--	60
22S.05E.04.113	71-12-27	.00	284	140	44	416	7.9	--	--	30
22S.05E.05.313	70-12-15	--	221	118	14	331	8.2	25.0	--	--
22S.05E.05.313	71-06-17	.03	228	110	0	326	8.0	27.0	--	20
22S.05E.07.342	70-12-15	--	217	90	0	324	8.1	26.0	--	--
22S.05E.07.342	71-06-17	.03	399	120	16	602	7.8	29.0	--	50
22S.05E.08.142	71-12-27	.00	257	130	10	362	7.8	--	--	20
22S.05E.15.221	70-12-15	--	1610	30	0	2780	9.4	23.0	--	--
22S.05E.15.221	71-06-17	.01	1710	25	0	2880	9.6	25.0	--	140
22S.05E.16.111	70-12-15	--	165	68	10	262	8.1	23.0	--	--
22S.05E.16.111	71-06-17	.03	205	68	0	260	7.7	26.0	--	40
22S.05E.19.414	71-12-27	.00	257	160	0	425	7.5	--	--	40
22S.05E.20.111	70-12-15	--	248	128	38	373	8.1	24.0	--	--
22S.05E.20.111	71-06-17	.03	265	110	15	398	7.9	26.0	--	20
22S.05E.29.412	70-12-15	--	202	96	6	292	8.0	23.0	--	--
22S.05E.29.412	71-06-17	.03	234	100	2	316	7.7	26.0	--	20
22S.05E.33.244	70-12-15	--	525	136	108	921	10.0	23.0	--	--
22S.05E.33.244	71-06-17	.01	526	130	100	908	9.5	25.0	--	80
23S.06E.20.313	71-12-29	.01	664	250	0	1000	7.9	20.0	--	170

EDDY COUNTY--Continued

16S.24E.11.34442	71-04-08	--	--	--	--	1080	--	20.5	--	--
16S.26E.20.33331	71-04-07	--	--	--	--	1110	--	21.0	--	--
17S.25E.24.422	71-04-26	--	--	--	--	1030	--	21.0	--	--
17S.26E.10.43331	71-04-05	--	--	--	--	1310	--	--	--	--
18S.25E.32.1111	71-04-12	--	--	--	--	1160	--	21.0	--	--
18S.26E.27.43333	71-04-28	--	--	--	--	2280	--	21.0	--	--
18S.26E.34.31324	71-04-05	--	--	--	--	1310	--	22.0	--	--
18S.30E.22.34421	71-12-21	.03	10900	4200	4100	15900	7.5	--	--	--
18S.30E.22.34421	71-12-21	.03	13400	4800	4700	19700	7.5	--	--	--
20S.30E.32.	71-12-29	.12	41900	5800	5500	58100	7.2	25.0	1.027	3700 A
22S.25E.18.	70-11-05	--	24800	6450	5200	34100	8.2	18.0	1.015	-- B
22S.25E.18.	71-11-05	--	--	--	--	35400	--	--	1.016	--
24S.29E.16.133	71-05-21	.22	279000	11000	11000	247000	6.9	28.0	1.176	38000

A Other value: Dissolved solids (residue at 180°C) = 43000 mg/l.

B Other value: Sulfide as S⁻² = 1440 mg/l.

HARDING COUNTY--Continued

15N.31E.06.421	71-08-25	0.01	3490	57	0	5040	8.5	21.5	--	--
19N.33E.17.441	70-01-14	--	310	212	25	499	7.9	--	--	A
19N.33E.33.332	71-08-23	--	390	210	21	612	7.8	18.0	--	250

A Other values: Color (Platinum cobalt scale) = 1; Dissolved solids (residue at 180°C) = 284 mg/l.

CHEMICAL ANALYSES OF WELLS IN NEW MEXICO

LOCAL IDENTIFIER	STATION NUMBER LATITUDE-LONGITUDE SEQUENCE NO.	GEOLOGIC UNIT	TOTAL DEPTH OF HOLE (FT. BELOW LSD) (72001)	INSTANTANEOUS FLOW RATE (GPM) (00059)	DATE OF SAMPLE	TIME OF COLLECTION	DIS-SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)
LOS ALAMOS COUNTY									
18N.07E.09.424	354804106114201	121TOTV	--	--	71-10-21	1205	54	180	--
18N.07E.10.1334	354815106113601	121TOTV	--	--	71-10-21	1205	54	250	--
LUNA COUNTY									
21S.09W.24.14242	322807107433101	110BLSN	--	0.25	71-12-18	1105	36	10	--
23S.07W.33.21111	321608107334701	110BLSN	--	--	71-09-15	1215	62	20	0
23S.08W.21.222	321749107395701	110BLSN	96	--	71-10-18	1545	27	10	--
24S.07W.09.11113A	321432107341701	110BLSN	285	--	71-09-15	0840	62	10	20
24S.11W.14.11132	321328107572001	110BLSN	394	--	71-09-15	1250	54	10	10
25S.06W.05.111	321005107291001	110BLSN	231	--	71-09-15	0930	62	10	10
25S.06W.20.111	320730107290501	110BLSN	234	315	71-09-15	1045	26	10	10
25S.09W.11.11144	320904107445701	110BLSN	300	--	71-09-15	1410	62	20	40
25S.11W.13.41212	320751107493001	110BLSN	325	--	71-09-15	1340	48	0	0
26S.08W.19.14123	320212107420001	110BLSN	160	--	71-09-15	1440	31	0	10
26S.09W.02.21424	320448107441001	110BLSN	225	--	71-09-15	1425	62	10	20
26S.10W.25.32122	320058107490601	110BLSN	185	--	71-09-16	0915	62	10	10
27S.08W.35.12213	315517107375001	110BLSN	550	--	71-09-16	1055	48	10	10
29S.10W.15.11111	314731107513101	110BLSN	440	--	71-09-16	1215	33	10	20
MCKINLEY COUNTY									
10N.19W.24.200	350448108481201	231SRMP, 310GLRT	932	--	70-10-29	1500	9.7	10	--
17N.16W.35.4142	353926108302801	221WSRC	1650	20	71-03-23	1430	--	--	--
17N.16W.35.4142	353926108302801	221WSRC	1650	--	71-03-23	1545	--	--	--
17N.16W.35.4142	353926108302801	221WSRC	1650	20	71-03-23	--	15	500	22
OTERO COUNTY									
14S.10E.23.324	325925105570001	000IRSV	3046	--	70-11-	--	--	--	--
17S.10E.20.	--	--	SPRING	--	70-11-23	1415	13	0	--
17S.10E.20.	--	--	SPRING	--	70-11-23	1430	13	0	--
QUAY COUNTY									
14N.35E.36.433	352326103014601	--	--	--	71-08-22	1100	25	10	--
17N.36E.34.240	354003103052001	121OGLL	140	--	71-08-23	1100	34	10	--
SANDOVAL COUNTY									
16N.04W.36.240	353414107020801	211MVRD	650	100	70-11-10	1300	14	40	--
SAN JUAN COUNTY									
21N.10W.	360200107560001	--	--	--	71-10-03	1000	17	20	40
21N.10W.28.410	360200107540001	110AVMB	--	--	71-08-24	--	10	480000	20000
21N.10W.29.200	360200107550001	110AVMB	80	--	71-08-24	--	.9	20	20
SANTA FE COUNTY									
19N.07E.24.332	355133106092501	121TSUQ	SPRING	--	--	--	32	150	--
19N.07E.25.111	355121106093201	121TSUQ	SPRING	--	--	--	32	70	--
TORRANCE COUNTY									
07N.09E.30.1111	344852106023401	110AVMB	146	--	71-04-08	--	--	--	--
07N.09E.30.1112	344850106023001	110AVMB	119	--	71-04-08	--	--	--	--
07N.09E.30.3322	344805106021801	110AVMB	226	--	71-04-08	--	--	--	--
07N.09E.30.3322	344805106021801	110AVMB	226	--	71-04-08	--	--	--	--

CHEMICAL ANALYSES OF WELLS IN NEW MEXICO

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DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L) (00933)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	CAR- BONATE (CO ₃) (MG/L) (00445)	HY- DROXIDE ION (71830)	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 NITRATE (N) (MG/L) (00620)	DIS- SOLVED NITRITE PLUS NITRATE (MG/L) (00631)
LOS ALAMOS COUNTY--Continued												
26	4.4	14	--	2.6	118	--	--	8.4	4.2	0.6	0.20	--
25	5.0	14	--	2.8	120	--	--	8.6	3.6	.6	.18	--
LUNA COUNTY--Continued												
55	20	81	--	0.4	306	--	--	100	14	1.1	--	4.1
15	7.4	120	--	1.2	343	--	--	45	11	.4	--	.36
11	5.5	73	--	1.2	212	--	--	22	9.2	1.9	--	.19
15	2.9	120	--	2.0	245	--	--	69	24	3.7	--	4.6
20	4.5	55	--	2.8	195	--	--	33	7.1	.8	--	.76
16	5.8	200	--	.8	355	--	--	150	35	1.3	--	4.6
3.2	.5	230	--	2.9	382	19	--	120	31	4.9	--	.17
2.6	8.2	30	--	2.5	175	--	--	15	7.4	.8	--	.62
19	6.1	45	--	2.6	160	--	--	38	7.1	1.8	--	.62
120	83	110	--	3.9	212	--	--	380	250	1.1	--	3.2
30	11	45	--	2.4	189	--	--	51	16	.7	--	1.3
26	20	95	--	2.5	298	--	--	80	26	3.7	--	1.2
9.1	4.1	220	--	6.3	361	--	--	150	45	5.7	--	.58
16	6.3	120	--	3.1	220	--	--	66	56	1.1	--	5.8
MCKINLEY COUNTY--Continued												
26	2.2	363	--	1.6	308	--	--	412	158	1.3	0.0	--
--	--	--	--	--	218	24	--	35	3.6	--	--	--
--	--	--	--	--	--	--	--	38	--	--	--	--
2.0	2.6	110	--	.7	216	37	--	32	3.5	.6	--	.10
OTERO COUNTY--Continued												
275	118	--	8660	--	250	--	--	2340	12300	--	--	--
290	65	34	--	1.2	270	--	--	750	32	.2	.02	--
310	72	36	--	2.0	307	--	--	802	37	.2	.23	--
QUAY COUNTY--Continued												
61	14	24	--	2.7	226	--	--	36	16	.8	--	5.0
44	16	12	--	3.4	195	--	--	25	11	.7	--	2.7
SANDOVAL COUNTY--Continued												
2.0	0.0	118	--	0.6	244	26	--	30	3.3	.7	0.00	--
SAN JUAN COUNTY--Continued												
7.7	1.2	670	--	2.3	258	9	--	1100	76	.6	--	0.08
480	110	3300	--	6.8	A 0	--	--	8800	260	1.4	--	.01
8.2	6.4	730	--	3.3	499	--	--	1100	59	4.6	--	.00
SANTA FE COUNTY--Continued												
18	0.7	32	--	2.6	125	--	--	7.6	1.8	0.6	0.29	--
24	1.5	42	--	1.9	171	--	--	10	2.7	.8	.02	--
TORRANCE COUNTY--Continued												
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

A Acidity (H⁺) (mg/l) = 0.1.

CHEMICAL ANALYSES OF WELLS IN NEW MEXICO

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LOCAL IDENTIFIER	DATE OF SAMPLE	DIS-SOLVED ORTHO-PHOS-PHURUS (P) (MG/L) (00671)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	HARD-NESS (CA, MG) (MG/L) (00900)	NON-CARBONATE HARD-NESS (MG/L) (00902)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	DENSITY (GM/ML) AT 20 C) (71820)	DIS-SOLVED BORON (B) (UG/L) (01020)
LOS ALAMOS COUNTY--Continued											
18N.07E.09.424	71-01-21	--	A 173	83	0	223	7.9	--	12	--	40
18N.07E.10.1334	71-01-21	--	B 174	83	0	222	7.7	--	34	--	50
LUNA COUNTY--Continued											
21S.09W.24.14242	71-12-18	--	476	220	0	734	7.2	19.8	--	--	170
23S.07W.33.21111	71-09-15	0.06	433	68	0	610	7.9	22.0	--	--	180
23S.08W.21.222	71-10-18	--	256	50	0	407	8.2	20.2	--	--	140
24S.07W.09.11113A	71-09-15	.04	440	49	0	623	7.9	24.5	--	--	160
24S.11W.14.11132	71-09-15	.04	277	68	0	365	7.9	22.0	--	--	100
25S.06W.05.111	71-09-15	.05	666	64	0	982	8.0	21.2	--	--	250
25S.06W.20.111	71-09-15	.07	627	10	0	1000	8.5	22.0	--	--	230
25S.09W.11.11144	71-09-15	.03	241	99	0	319	7.8	20.5	--	--	40
25S.11W.13.41212	71-09-15	.03	249	73	0	339	7.9	21.0	--	--	60
26S.08W.19.14123	71-09-15	.01	1100	640	470	1710	7.7	21.0	--	--	120
26S.09W.02.21424	71-09-15	.03	317	120	0	427	7.9	20.0	--	--	160
26S.10W.25.32122	71-09-16	.05	467	150	0	675	7.9	19.5	--	--	130
27S.08W.35.12213	71-09-16	.03	669	40	0	1030	8.0	23.5	--	--	420
29S.10W.15.11111	71-09-16	.03	436	66	0	689	7.9	24.0	--	--	250
MCKINLEY COUNTY--Continued											
10N.19W.24.200	71-10-29	--	C 1130	74	0	1830	8.3	17.0	1	--	580
17N.16W.35.4142	71-03-23	--	--	--	--	513	9.0	--	--	--	--
17N.16W.35.4142	71-03-23	--	--	--	--	503	--	--	--	--	--
17N.16W.35.4142	71-03-23	.02	D 310	16	0	499	8.8	--	--	--	--
OTERO COUNTY--Continued											
14S.10E.23.324	70-11-	--	23800	1170	965	33800	7.8	21.4	--	1.017	--
17S.10E.20.	70-11-23	--	1320	990	768	1670	7.5	--	--	--	120
17S.10E.20.	71-11-23	--	1420	1070	818	1770	7.6	--	--	--	110
QUAY COUNTY--Continued											
14N.35E.36.433	71-08-22	--	313	210	25	494	7.8	22.5	--	--	80
17N.36E.34.240	71-08-23	--	254	180	16	385	7.9	17.5	--	--	50
SANDOVAL COUNTY--Continued											
16N.04W.36.240	70-11-10	--	E 315	5	0	530	9.0	17.0	1	--	150
SAN JUAN COUNTY--Continued											
21N.10W.	71-10-03	0.04	F 2010	24	0	2960	8.5	20.0	--	--	--
21N.10W.28.410	71-08-24	.06	G13600	1700	170	14200	3.9	--	--	1.004	--
21N.10W.29.200	71-08-24	.01	H 2110	47	0	3220	8.4	--	--	--	--
SANTA FE COUNTY--Continued											
19N.07E.24.332	--	--	J 158	48	0	229	7.8	--	16	--	70
19N.07E.25.111	--	--	K 199	66	0	294	7.9	--	10	--	80
TORRANCE COUNTY--Continued											
07N.09E.30.1111	71-04-08	--	--	--	--	490	--	--	--	--	--
07N.09E.30.1112	71-04-08	--	--	--	--	1340	--	--	--	--	--
07N.09E.30.3322	71-04-08	--	--	--	--	831	--	--	--	--	--
07N.09E.30.3322	71-04-08	--	--	--	--	851	--	--	--	--	--

Dissolved solids, residue at 180°C, mg/l:

A	194	F	2200
B	184	G	13600
C	1160	H	2110
D	326	J	184
E	322	K	214

CHEMICAL ANALYSES OF WELLS IN NEW MEXICO

LOCAL IDENTIFIER	STATION NUMBER LATITUDE-LONGITUDE SEQUENCE NO.	GEOLOGIC UNIT	TOTAL DEPTH OF HOLE (FT. BELOW LSD) (72001)	INSTAN- TANEOUS FLOW RATE (GPM) (00059)	DATE OF SAMPLE	TIME OF COLLEC- TION	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)
UNION COUNTY									
18N.36E.11.11111	354841103042601	121OGLL, 221MRSN	277	--	71-07-28	1330	26	10	--
21N.36E.12.233	360336103033401	121OGLL, 211DKOT, 217PRGR	320	--	71-08-13	1805	28	10	--
21N.36E.21.232	36021703064801	211DKOT, 217PRGR	210	--	71-08-03	1900	25	10	--
21N.36E.22.4322	360157103043201	121OGLL, 211DKOT, 217PRGR	290	--	71-08-03	1840	24	20	--
22N.35E.13.2111	360837103090701	211DKOT, 217PRGR	390	--	71-07-30	1050	20	0	--
22N.36E.04.121	371021103060701	211DKOT, 217PRGR	455	--	71-07-02	1730	26	0	--
22N.36E.11.44414	360923103035801	121OGLL, 211DKOT, 217PRGR	308	--	71-07-30	1000	30	10	--
23N.35E.07.114	361415105143101	211DKOT, 217PRGR	500	--	71-07-21	1830	30	10	--
23N.35E.14.133	361311103103001	211DKOT, 217PRGR	358	--	71-07-22	1050	26	0	--
23N.35E.15.211	361350103112401	211DKOT, 217PRGR	--	290	71-07-22	1030	26	10	--
23N.35E.16.12122	361351103125401	211DKOT, 217PRGR	--	--	71-07-28	1700	33	0	--
23N.36E.13.414	361319103023901	121OGLL, 221MRSN	386	--	71-07-30	0900	31	0	--
25N.35E.25.4422	362245103091701	211DKOT, 217PRGR	411	--	71-07-29	1700	19	10	--
25N.36E.05.111	362618103064401	211DKOT, 217PRGR	--	--	71-07-29	1100	22	10	--
26N.35E.14.313	362909103104201	211DKOT, 217PRGR	--	--	71-07-29	1130	30	0	--
26N.36E.06.423	363055103083001	211DKOT, 217PRGR	540	--	71-07-30	0925	26	160	--
26N.36E.10.313	363005103050701	211DKOT, 217PRGR	510	--	71-07-21	0915	25	0	--
26N.36E.10.431	363018103044201	211DKOT, 217PRGR	507	--	71-08-05	0840	26	0	--
26N.36E.13.142	362940103025701	211DKOT, 121OGLL	300	--	71-08-04	0800	25	0	--
26N.37E.05.411	363123103001101	211DKOT, 217PRGR	405	--	71-08-04	1730	26	0	--
27N.36E.25.233	363235103031401	211DKOT, 217PRGR	410	--	71-08-04	0900	20	10	--
27N.37E.13.3112	363344103030401	--	--	--	71-07-28	1800	25	10	--
27N.37E.18.2222	363502103021101	121OGLL, 211DKOT, 217PRGR	435	--	71-07-28	1800	33	10	--
VALENCIA COUNTY									
07N.02E.13.441	344945106403801	110AVMB	--	3	71-06-07	1200	45	20	--
10N.05W.22.232	350536107211201	221WSRC	--	36	71-05-14	1706	13	--	--

CHEMICAL ANALYSES OF WELLS IN NEW MEXICO

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DIS- SOLVED CAL- CIUM (CA) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L) (00933)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (CO ₃) (MG/L) (00440)	CAR- BONATE (CO ₃) (MG/L) (00445)	HY- DROXIDE ION (71830)	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 NITRATE (N) (MG/L) (00620)	DIS- SOLVED NITRITE PLUS NITRATE (MG/L) (00631)
UNION COUNTY--Continued												
27	21	27	--	4.6	212	--	--	18	12	1.4	--	2.0
49	22	20	--	3.7	232	--	--	36	13	1.3	--	1.6
51	22	45	--	3.7	206	--	--	91	22	1.0	--	2.2
50	22	43	--	3.9	239	--	--	82	20	.9	--	1.6
49	20	18	--	3.1	202	--	--	32	11	1.0	--	2.3
46	14	10	--	2.2	195	--	--	17	5.3	.8	--	2.6
44	16	13	--	3.5	179	--	--	19	8.1	.9	--	2.8
55	26	20	--	3.1	217	--	--	51	40	1.1	--	3.4
52	14	18	--	2.9	209	--	--	28	6.8	.7	--	2.0
51	14	18	--	2.4	207	--	--	28	6.3	.7	--	2.1
41	27	24	--	5.2	222	--	--	56	18	1.7	--	2.7
54	18	15	--	2.7	220	--	--	26	13	.8	--	2.3
48	23	31	--	3.9	263	--	--	51	18	1.2	--	.48
42	22	27	--	3.3	235	--	--	29	6.9	.9	--	.87
100	65	65	--	2.1	167	--	--	350	82	.7	--	3.5
46	12	8.8	--	2.6	186	--	--	1.8	4.7	.6	--	4.4
39	22	17	--	3.2	215	--	--	25	6.8	.8	--	.51
39	22	17	--	3.0	231	--	--	28	10	.8	--	.92
40	22	20	--	3.0	245	--	--	32	6.9	.9	--	1.1
42	20	19	--	2.2	234	--	--	29	8.2	1.0	--	1.4
46	21	20	--	3.6	233	--	--	31	7.9	1.0	--	1.1
49	14	13	--	3.2	206	--	--	18	5.0	.5	--	4.2
56	17	28	--	3.4	250	--	--	43	15	1.0	--	1.8
VALENCIA COUNTY--Continued												
250	41	190	--	9.3	486	--	--	710	61	0.1	--	0.75
21	12	370	--	3.0	476	--	--	470	16	1.3	--	.00

CHEMICAL ANALYSES OF WELLS IN NEW MEXICO

LOCAL IDENTIFIER	DATE OF SAMPLE	DIS- SOLVED ORTHO- PHOS- PHORUS (P) (MG/L) (00671)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS (UNITS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	DENSITY (GM/ML) AT 20 C (71820)	DIS- SOLVED BORON (B) (UG/L) (01021)
UNION COUNTY--Continued											
18N.36E.11.11111	71-07-28	--	250	150	0	409	8.0	17.5	--	--	110
21N.36E.12.233	71-08-13	--	294	210	23	469	7.9	17.0	--	--	100
21N.36E.21.232	71-08-03	--	372	220	49	584	8.0	17.0	--	--	100
21N.36E.22.4322	71-08-03	--	371	220	19	594	7.8	18.0	--	--	100
22N.35E.13.2111	71-07-30	--	264	200	39	431	7.8	18.0	--	--	90
22N.36E.04.121	71-07-02	--	229	170	13	361	7.9	18.5	--	--	60
22N.36E.11.44414	71-07-30	--	235	180	29	359	7.8	17.5	--	--	70
23N.35E.17.114	71-07-21	--	348	240	65	569	7.8	19.0	--	--	100
23N.35E.14.133	71-07-22	--	260	190	16	410	7.8	17.5	--	--	60
23N.35E.15.211	71-07-22	--	258	180	15	398	7.8	17.5	--	--	60
23N.35E.16.12122	71-07-28	--	327	210	31	517	8.0	17.0	--	--	130
23N.36E.13.414	71-07-30	--	279	210	28	424	7.8	16.5	--	--	70
25N.35E.25.4422	71-07-29	--	327	210	0	535	7.7	16.5	--	--	100
25N.36E.05.111	71-07-29	--	273	200	3	438	7.9	18.0	--	--	80
26N.35E.14.313	71-07-29	--	793	520	380	1170	8.1	17.0	--	--	90
26N.36E.06.423	71-07-30	--	214	160	12	341	8.0	18.0	--	--	50
26N.36E.10.313	71-07-21	--	247	190	12	390	8.0	16.5	--	--	60
26N.36E.10.431	71-08-05	--	264	190	0	415	7.6	17.0	--	--	60
26N.36E.13.142	71-08-04	--	275	190	0	433	7.9	16.5	--	--	90
26N.37E.05.411	71-08-04	--	269	190	0	423	7.9	17.5	--	--	80
27N.36E.25.233	71-08-04	--	270	200	10	440	7.9	17.0	--	--	80
27N.37E.13.3112	71-07-28	--	248	180	11	384	8.0	16.0	--	--	40
27N.37E.18.2222	71-07-28	--	327	210	5	509	7.8	18.0	--	--	80
VALENCIA COUNTY--Continued											
07N.02E.13.441	71-06-07	0.06	1550	790	390	2170	7.8	19.0	--	--	300
10N.05W.22.232	71-05-14	--	1140	100	0	1750	7.5	18.0	--	--	--


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