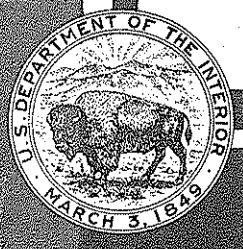
1973

# Water Resources Data for New Mexico

## Part 1. Surface Water Records




UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

# CALENDAR FOR 1973

## JANUARY 1973

| S | M | T | W | T | F | S |
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## MAY 1973

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## JUNE 1973

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## JULY 1973

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## AUGUST 1973

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## SEPTEMBER 197

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## OCTOBER 1973

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## NOVEMBER 1973

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## DECEMBER 197

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| 30 | 31 | | | |

# 1973

# Water Resources Data for New Mexico

## Part 1. Surface Water 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

Office of the State Engineer
Interstate Stream Commission
Pecos River Commission
State Highway Department
Costilla Creek Compact Commission
Albuquerque Metropolitan Arroyo Flood Control Authority
Bureau of Reclamation, U.S. Department of the Interior
Corps of Engineers, U. S. Army
White Sands Missile Range, Department of the Army
Federal Highways Administration, U.S. Department of Transportatio
Bureau of Indian Affairs, U.S. Department of the Interior
Soil Conservation Service, U.S. Department of Agriculture

Water resources records, 1973, for New Mexico are in the following reports of the U.S. Geological Survey:

1. Water Resources Data for New Mexico
   Part 1: Surface Water Records

2. Water Resources Data for New Mexico
   Part 2: Water Quality Records

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

1975

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# WATER RESOURCES DATA FOR NEW MEXICO, 1973

## PART 1. SURFACE-WATER RECORDS

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## INTRODUCTION

Surface-water records for the 1973 calendar year for New Mexico, including records of streamflow or reservoir storage at gaging stations, partial-record stations, and miscellaneous sites, are given in this report and their locations shown in figures 1, 2. Records for a few pertinent gaging stations in bordering States also are included. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey under the direction of W. E. Hale, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in New Mexico.

Through September 30, 1960, the records of discharge and stage of streams and canals and contents and stage of lakes or reservoirs were published in an annual series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States."

Beginning with the 1961 water year, surface-water records have been released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these reports is limited; they are designed primarily for rapid release of data shortly after the end of the water year to meet local needs. The discharge and reservoir storage records for 1961-65 also are published in a Geological Survey water-supply paper series entitled "Surface Water Supply of the United States 1961-65." There will be a similar series of water-supply papers for the water years 1966-70.

## COOPERATION

The first gaging station established by the Geological Survey in the United States was on the Rio Grande at Embudo on Jan. 1, 1889. Cooperation with the Territory of New Mexico began about 1907, and Territory or State cooperation in varying amounts continued until 1915, the work being directed from the Denver office. From 1916 to 1930 the State conducted its own stream-gaging program. In 1931 a new State cooperative program was begun and a Geological Survey district office established in Santa Fe. Agreements have also existed with county, municipal, and private organizations, and with other Federal agencies. Organizations that supplied data are acknowledged in station descriptions.

Organizations that assisted in collecting data through cooperative agreements with the Survey in 1972 are:

Office of the State Engineer, S. E. Reynolds.

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

Pecos River Commission, H. M. Babcock, federal representative and chairman, J. B. Walker, commissioner for New Mexico, R. B. McGowen, Jr., commissioner for Texas.

State Highway Department, L. G. Boles, State Highway engineer.

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

Albuquerque Metropolitan Arroyo Flood Control Authority, J. B. Robert, executive engineer.

Assistance in the form of funds or services was furnished by following Federal Agencies:

Corps of Engineers, U.S. Army in the operation of 29 gaging stations.

White Sands Missile Range, Department of the Army in the operation of 2 gaging stations.

Bureau of Reclamation, U.S. Department of the Interior in the operation of 7 gaging stations.

Federal Highway Administration, U.S. Department of Transportation for research study on small drainage areas.

Bureau of Indian Affairs, U.S. Department of the Interior in the operation of 6 gaging stations.

Soil Conservation Service, U.S. Department of Agriculture in the operation of 2 gaging stations.

Assistance in the form of funds or services was also given by the following organizations:

Forest Service, U.S. Department of Agriculture; National Oceanic and Atmospheric Administration, U.S. Department of Commerce; the city of Ruidoso; Carlsbad Irrigation District; Public Service Company of New Mexico; State Department of Game and Fish.

## DEFINITION OF TERMS

Terms related to streamflow and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System of units (SI) on page 11.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons.

$Ft^3/s$-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, 1.9835 acre-feet, or 646,000 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic foot per second ($ft^3/s$) 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.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

Partial-record station is a particular site where limited streamflow data are collected systematically over a period of years for use in hydrologic analyses.

Stage-discharge relation is the relation between gage height and the volume of water per unit of time flowing in a channel.

WRD is used as an abbreviation for "Water-Resources Data" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

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

## SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

## DOWNSTREAM ORDER AND STATION NUMBERS

Records are listed in a 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 gaging stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each 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 stations and continuous-record gaging stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Gaps are left in the 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 08314500, which appears just to the left of the station name includes the part number "08" and a 6-digit station number. In this report, the records are listed in downstream order by parts. 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.

## EXPLANATION OF SURFACE-WATER DATA

### Collection and Computation of Data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that gives a continuous graph of the fluctuations (for digital recorders, a tape punched at 15-, 30-, or 60-minute intervals) or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard text-books on the measurement of stream discharge. (See also SELECTED REFERENCES.) Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is determined by sounding at many points.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and the yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

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

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accululation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figure . For gaging stations on streams or canals a table showing the daily dischare and/or monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily gage heights or elevations at, 0800 hours, are included for some reservoir stations. A calendar for the current year is shown on the reverse side of the front cover to facilitate finding the day of the week for any date.

The description of the gaging station gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, general remarks and notations of revisions of previously published records. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD." The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey, unless otherwise qualified. The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. The maximum discharge (or contents) and the maximum gage height, the minimum discharge if there is little or no regulation (or the minimum contents), and the minimum gage height if it is significant are given under "EXTREMES." The minimum daily discharge is given if there is extensive regulation. In the first paragraph headed "Current year": the data given are for the complete current calendar year unless otherwise specified. In the second paragraph usually headed "Period of record": the data given are for the period of record given in the PERIOD OF RECORD paragraph. Otherwise the data given are for a shorter period and the heading shows the period for which extremes are available. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES." Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge or contents, it is given separately. Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of Water Quality records, is given under "REMARKS"; for reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir, is also given under "REMARKS."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISIONS (WATER YEARS)" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932 to September 30, 1933. If no daily, monthly, or annual figures of discharge were revised, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given.

Skeleton capacity tables are published for all reservoirs for which records of contents are published on a daily basis, except those reservoirs for which a table of daily elevations (or gage heights) is published.

The daily tables for stream-gaging stations give the discharge corresponding to the daily mean gage height unless there are large or rapid changes in the discharge during a day. For days having large or rapid changes, discharge for the day is computed by averaging the mean discharge for several parts of a day. For digital recorders, the daily mean discharge is always the average of the discharges at each punched reading.

The daily tables for reservoir stations give the contents corresponding to the water-surface elevation at a given time, usually at 2400 each day. For some reservoirs the elevation at a given time is given in the daily table.

The monthly summary is given below the daily table. For stream-gaging stations the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month is expressed in acre-feet (line headed "AC-FT").

For reservoir stations the monthly summary gives the elevation (or gage height) at the end of the month and the change in contents during the month, except for those stations for which a table of daily elevations (or gage heights) is published.

In the yearly summary below the monthly summary, the figures following MAX are the maximum daily discharges for the calendar and water years; likewise, those following MIN are the minimum daily discharges.

For reservoir stations the yearly summary gives the change in contents for the calendar year and for the water year.

Peak discharges and their times of occurrence and corresponding gage heights for many stations are listed below the yearly summary. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330.

In a general footnote, introduced by the word "NOTE" certain periods are indicated for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, or indefinite stage-discharge relation, or of any other unusual condition at the gage are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs. Footnotes to reservoir tables may be used to explain the use of new capacity tables or for other special conditions.

## Accuracy of Data

The accuracy of discharge data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

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

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 $ft^3/s$; to tenths between 1.0 and 10 $ft^3/s$; to whole numbers between 10 and 1,000 $ft^3/s$; and to 3 significant figures above 1,000 $ft^3/s$. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

Discharge of some stations, as indicated by the monthly mean, may vary widely from natural runoff, due to the effects of diversions, consumptive use, regulation by storage, increases or decreases in evaporation due to artificial causes or other factors. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents.

## Publications

In each water-supply paper entitled, "Surface Water Supply of the United States" there is a list of numbers of preceding water-supply papers containing streamflow information for the area covered by that report. In addition, there is a list of numbers of water-supply papers containing detailed information on major floods in the area. Records for stations in New Mexico for the period October 1960 to September 1965 are in Water-Supply Papers 1920, 1923, 1925, and 1926; those for period October 1965 to September 1970 are in Water-Supply Papers 2121, 2123, 2125, and 2126.

Two series of summary reports entitled, "Compilation of Records of Surface Waters of the United States" have been published; the first series covers the entire period of record through September 1950 and the second series covers the period October 1950 to September 1960. These reports contain summaries of monthly and annual discharge and monthend storage for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station. Records for stations in New Mexico are compiled in Water-Supply Papers 1311, 1312, and 1313 through September 1950, and in 1731, 1732, and 1733 for October 1950 to September 1960.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district office.

## Other Data Available

Data collected at partial-record stations and at miscellaneous sites are given in three tables at the end of the surface-water records in this report. The first is a table of discharge measurements at low-flow partial-record stations, the second is a table of annual maximum stage and discharge at crest-stage stations, and the third is a table of discharge measurements at miscellaneous sites.

Seepage investigations are presented following measurements at miscellaneous sites. These consist of text and tabulations summarizing data derived primarily from associated series of discharge measurements and observations made within a short time period along a given reach of channel, preferably during a period of relatively stable conditions.

Information of a more detailed nature than that published for most of the gaging stations, such as discharge measurements, gage-height records, and rating tables, is on file in the district office. Many gaging-station records in New Mexico through 1968 have been analyzed to give several statistical summaries: (1) the number of days in each year that the daily discharge was between selected limits (duration tables); (2) the lowest mean discharge for selected numbers of consecutive days in each year; and (3) the highest mean discharge for selected numbers of consecutive days in each year.

At or near some gaging stations, water-quality records also are collected. Data are obtained on the chemical quality of the stream water, on water temperature, on suspended-sediment concentration, and on the particle-size distribution of suspended sediment and bed material. These data are given in Part 2 of this report. Under the "REMARKS" paragraph of the gaging-station description reference is made to water-quality records collected on a regular basis.

## HYDROLOGIC CONDITIONS

As is common in New Mexico, streamflow varied greatly in the 1973 calendar year. This holds true with respect to both time and geographic location. The variations are related to differences in precipitation, temperature, topography and geology. The yearly mean discharge for the calendar year at four key gaging stations was excessive and ranged from 181 to 326 percent of the medians for the base period, 1931-60.

During the first quarter of the year streamflow was deficient in the Canadian River basin, near median in the Rio Grande basin and excessive in the Gila River basin. During the snow-melt period, April to July, streamflow was excessive in all streams that receive flow from the melting of snow in the mountains. Streamflow for most stations in Gila River basin was highest of record for that period. During the remainder of the year streamflow was excessive in the Rio Grande valley, near median in Canadian River basin, below median in the Pecos River valley and deficient in the Gila River basin.

## RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

Records of discharge not published by the Geological Survey were collected at 78 sites in New Mexico during the current year by the following agencies: Records at 76 sites (in Pecos River basin) were collected by the office of the State Engineer; at 1 site by the International Boundary and Water Commission, U.S. Department of State and at 1 site by the Bureau of Reclamation, U.S. Department of Interior. The Office of Water Data Coordination, Water Resources Division, U.S. Geological Survey, Reston, Va., 22092, maintains an index of these sites. Information on records at specific sites can be obtained from that office upon request.

## SELECTED REFERENCES

Carter, R. W., and Davidian, Jacob, 1968, General procedure for gaging streams: U.S. Geol. Survey Techniques Water-Resources Inv., book 3, chap. A6, 13 p.

Corbett, D.M., and others, 1943, Stream-gaging procedure, a manual describing methods and practices of the Geological Survey: U.S. Geol. Survey Water-Supply Paper 888, 245 p.

Langbein, W.B., and Iseri, K.T., 1960, General introduction and hydrologic definitions: U.S. Geol. Survey Water-Supply Paper 1541-A, 29 p.

Table 1.--Factors for conversion of English units to International System (SI) Units

[The following factors may be used to convert the English units published herein to the International System of Units (SI)]

| Multiply English units | By | To obtain SI units |
|---|---|---|
| feet (ft) | 0.3048 | metres (m) |
| miles (mi) | 1.609 | kilometres (km) |
| acres | 4047 | square metres ($m^2$) |
| | .4047 | square hectometre ($hm^2$) |
| | .004047 | square kilometre ($km^2$) |
| square miles ($mi^2$) | 2.590 | square kilometres ($km^2$) |
| gallons (gal) | $3.785 \times 10^{-3}$ | cubic metres ($m^3$) |
| million gallons ($10^6$ gal) | 3785 | cubic metres ($m^3$) |
| | $3.785 \times 10^{-3}$ | cubic hectometres ($hm^3$) |
| cubic feet ($ft^3$) | .02832 | cubic metres ($m^3$) |
| cfs-day ($ft^3/s$-day) | 2447 | cubic metres ($m^3$) |
| | $2.447 \times 10^{-3}$ | cubic hectometres ($hm^3$) |
| acre-feet (acre-ft) | 1233 | cubic metres ($m^3$) |
| | $1.233 \times 10^{-3}$ | cubic hectometres ($hm^3$) |
| | $1.233 \times 10^{-6}$ | cubic kilometres ($km^3$) |
| cubic feet per second ($ft^3/s$) | .02832 | cubic metres per second ($m^3/s$) |

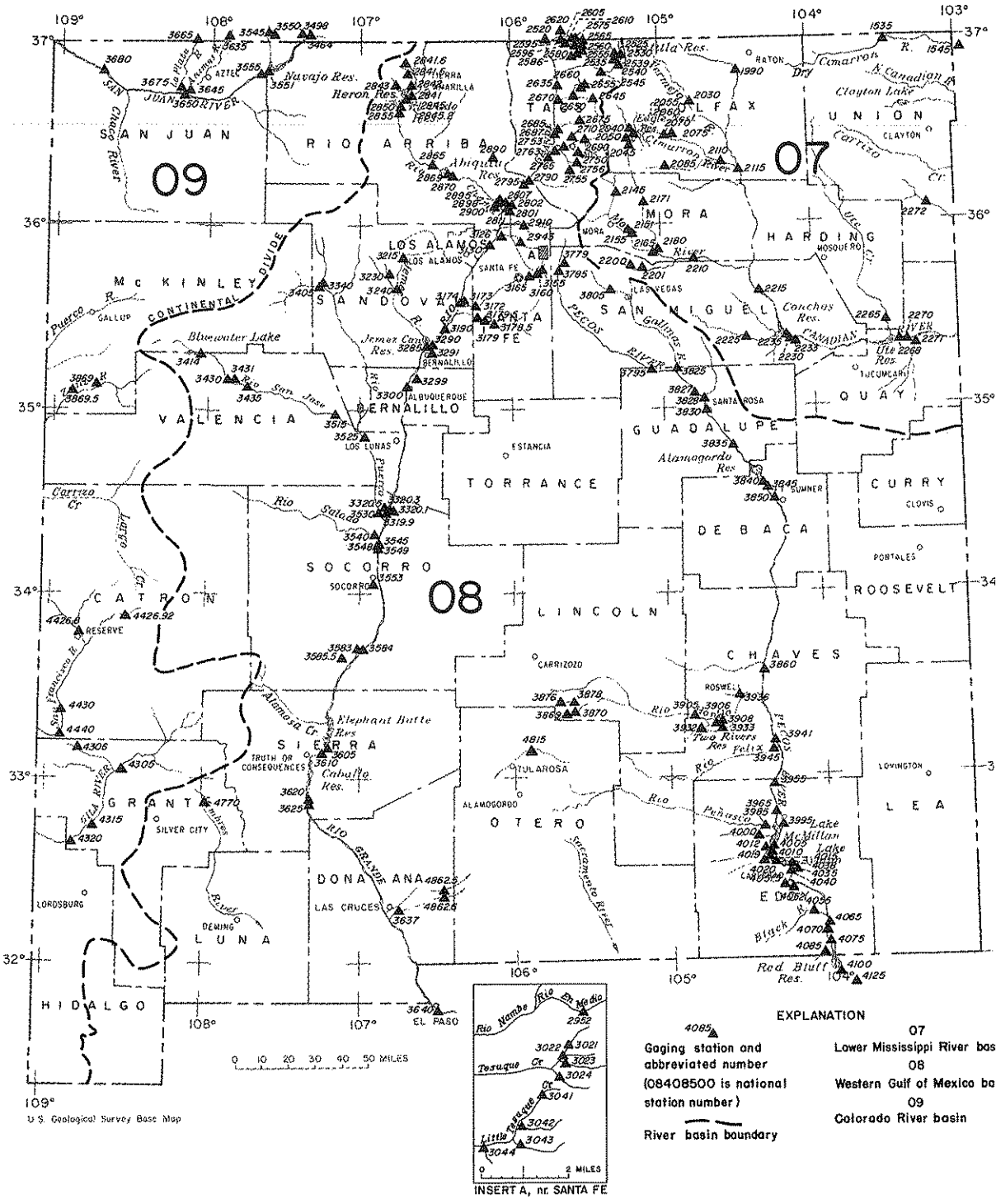


Figure 1.—Map of New Mexico showing location of active gaging stations.

LOWER MISSISSIPPI RIVER BASIN

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, on right bank 1.5 mi (2.4 km) upstream from Baker damsite, 1.7 mi (2.7 km) northwest of Valley, 3.0 mi (4.8 km) upstream from Travesser Creek, 12 mi (19 km) north of Guy, 26 mi (42 km) northwest of Kenton, Okla., and at mile 634.5 (1,020.9 km).

DRAINAGE AREA.--545 $mi^2$ (1,412 $km^2$).

PERIOD OF RECORD.--April 1942 to December 1973 (discontinued). Prior to October 1965, published as Cimarron River near Guy.

GAGE.--Water-stage recorder. Altitude of gage is 4,900 ft (1,494 m) from topographic map. Prior to Oct. 1, 1943, at datum 0.44 ft (0.134 m) higher.

EXTREMES.--Current year: Maximum discharge, 510 $ft^3/s$ (14.4 $m^3/s$) July 25 (gage height, 3.70 ft or 1.128 m); minimum, 0.03 $ft^3/s$ (0.001 $m^3/s$) June 26, 27.
Period of record: Maximum discharge, 46,100 $ft^3/s$ (1,310 $m^3/s$) Aug. 21, 1965 (gage height, 22.00 ft or 6.706 m), from rating curve extended above 3,000 $ft^3/s$ (85.0 $m^3/s$) on basis of slope-area measurements at gage heights 15.7 ft (4.79 m) and 22.00 ft (6.706 m); no flow at times.

REMARKS.--Records poor. Diversions for irrigation of about 6,500 acres (26.3 $km^2$) above station. Water quality records for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1177: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.8 | 3.3 | 1.8 | 3.0 | 6.0 | 1.5 | .07 | 1.8 | .38 | .94 | 1.0 | 1.4 |
| 2 | 2.8 | 3.0 | 1.8 | 2.7 | 5.0 | 1.3 | .09 | 1.6 | .34 | .79 | 1.0 | 1.3 |
| 3 | 2.5 | 2.9 | 1.7 | 2.3 | 5.0 | 1.2 | .09 | 1.4 | .24 | .72 | 1.0 | 2.0 |
| 4 | 2.5 | 2.8 | 1.8 | 2.1 | 4.5 | 1.2 | .11 | 1.7 | .24 | .72 | 1.0 | 1.9 |
| 5 | 2.5 | 2.7 | 1.8 | 2.0 | 4.0 | 1.2 | .52 | 1.5 | .30 | .72 | 1.1 | 2.1 |
| 6 | 2.5 | 2.5 | 1.8 | 1.9 | 5.0 | 1.2 | .52 | 1.3 | .43 | .79 | 1.2 | 3.2 |
| 7 | 2.3 | 2.4 | 1.8 | 1.7 | 4.0 | 1.1 | .24 | 1.2 | .72 | .79 | 1.2 | 3.2 |
| 8 | 2.1 | 2.1 | 1.8 | 2.1 | 3.9 | .86 | .13 | 1.1 | .86 | .64 | 1.3 | 3.4 |
| 9 | 1.9 | 1.6 | 1.9 | 1.9 | 12 | .72 | .43 | 1.0 | .86 | .52 | 1.2 | 2.5 |
| 10 | 2.0 | 1.7 | 2.0 | 1.8 | 6.3 | .57 | .79 | .90 | .72 | .57 | 1.2 | 2.4 |
| 11 | 2.1 | 1.9 | 2.1 | 1.8 | 3.2 | .52 | 1.0 | .90 | .79 | .72 | 1.1 | 2.1 |
| 12 | 2.2 | 2.1 | 2.0 | 1.7 | 3.2 | .64 | .79 | 1.2 | .72 | .86 | 1.1 | 2.1 |
| 13 | 2.2 | 2.3 | 1.9 | 1.5 | 3.4 | .86 | .64 | 1.0 | .57 | .79 | 1.0 | 2.1 |
| 14 | 2.2 | 2.8 | 1.9 | 1.3 | 3.4 | .86 | .72 | .90 | .57 | .72 | .94 | 2.3 |
| 15 | 2.3 | 2.4 | 1.8 | 56 | 3.0 | .64 | 1.2 | .85 | .57 | .64 | 1.0 | 2.1 |
| 16 | 2.4 | 2.0 | 1.7 | 71 | 2.7 | .43 | 1.3 | .80 | .52 | .57 | 1.0 | 2.7 |
| 17 | 2.5 | 2.1 | 1.4 | 22 | 2.3 | .30 | 1.2 | .72 | .52 | .52 | 1.0 | 2.8 |
| 18 | 2.1 | 2.1 | 1.4 | 6.0 | 1.8 | .24 | 1.1 | .47 | .47 | .47 | 1.1 | 2.0 |
| 19 | 2.3 | 2.0 | 1.5 | 73 | 1.9 | .18 | 1.2 | .43 | .47 | .43 | 1.1 | 1.7 |
| 20 | 2.1 | 2.1 | 1.5 | 49 | 2.0 | .15 | 1.2 | .38 | .43 | .43 | 1.5 | 2.7 |
| 21 | 2.3 | 1.9 | 1.5 | 15 | 1.9 | .18 | 1.2 | .34 | .34 | .43 | 1.8 | 2.8 |
| 22 | 2.8 | 1.9 | 1.4 | 10 | 2.0 | .15 | 1.2 | .34 | .27 | .52 | 1.5 | 2.9 |
| 23 | 2.8 | 1.9 | 1.5 | 9.0 | 2.3 | .15 | 1.4 | .30 | 1.1 | .52 | 1.5 | 3.0 |
| 24 | 3.5 | 1.9 | 3.5 | 8.0 | 1.9 | .11 | 1.6 | .30 | 2.5 | .52 | 1.4 | 3.2 |
| 25 | 3.4 | 1.9 | 3.2 | 7.0 | 1.4 | .11 | 97 | .24 | 1.7 | .57 | 1.4 | 3.5 |
| 26 | 2.5 | 1.9 | 2.1 | 71 | 1.3 | .06 | 8.9 | .21 | 1.2 | .57 | 1.4 | 3.4 |
| 27 | 2.8 | 1.9 | 2.0 | 47 | 1.3 | .04 | 4.9 | .18 | 1.2 | .72 | 1.5 | 3.6 |
| 28 | 3.0 | 1.8 | 1.9 | 11 | 1.2 | .06 | 3.9 | .15 | 1.3 | .79 | 1.7 | 3.8 |
| 29 | 3.3 | ------ | 1.9 | 8.0 | 1.3 | .11 | 3.2 | .18 | 1.2 | .79 | 1.5 | 3.9 |
| 30 | 3.5 | ------ | 3.6 | 7.0 | 1.5 | .09 | 2.6 | .30 | 1.2 | .79 | 1.4 | 3.7 |
| 31 | 3.7 | ------ | 9.0 | ------ | 1.8 | ------ | 2.0 | .64 | ------ | .86 | ------ | 3.5 |
| TOTAL | 79.9 | 61.9 | 67.0 | 497.8 | 100.5 | 16.73 | 141.24 | 24.33 | 22.73 | 20.43 | 37.14 | 83.3 |
| MEAN | 2.58 | 2.21 | 2.16 | 16.6 | 3.24 | .56 | 4.56 | .78 | .76 | .66 | 1.24 | 2.69 |
| MAX | 3.7 | 3.3 | 9.0 | 73 | 12 | 1.5 | 97 | 1.8 | 2.5 | .94 | 1.8 | 3.9 |
| MIN | 1.9 | 1.6 | 1.4 | 1.3 | 1.2 | .04 | .07 | .15 | .24 | .43 | .94 | 1.3 |
| AC-FT | 158 | 123 | 133 | 987 | 199 | 33 | 280 | 48 | 45 | 41 | 74 | 165 |

CAL YR 1973 TOTAL 1,153.00 MEAN 3.16 MAX 97 MIN .04 AC-FT 2,290
WTR YR 1973 TOTAL 1,184.73 MEAN 3.25 MAX 97 MIN .04 AC-FT 2,350

PEAK DISCHARGE (BASE, 1,000 $FT^3/S$).--No peak above base.

## 07154500 CIMARRON RIVER NEAR KENTON, OKLA.

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

DRAINAGE AREA.--1,106 $mi^2$ (2,865 $km^2$), of which 68 $mi^2$ (176 $km^2$) is probably noncontributing.

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

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

AVERAGE DISCHARGE.--23 calendar years (1951-73), 23.7 $ft^3/s$ (0.671 $m^3/s$), 17,170 acre-ft/yr (21.2 $hm^3/yr$); 20 calendar years (1954-73), 24.6 $ft^3/s$ (0.697 $m^3/s$), 17,820 acre-ft/yr (22.0 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge 15,000 $ft^3/s$ (425 $m^3/s$) Sept. 24 (gage height 17.81 ft or 5.428 m); no flow at times.
Period of record: Maximum discharge 43,400 $ft^3/s$ (1,230 $m^3/s$) Oct. 17, 1965 (gage height, 22.32 ft or 6.803 m, present datum), from rating curve extended above 7,000 $ft^3/s$ (198 $m^3/s$) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

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

REVISIONS (WATER YEARS).--WSP 1711: 1956(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.5 | 1.1 | .60 | 5.6 | 1.9 | | 0 | .54 | 0 | 1.5 | .06 | 1.2 |
| 2 | 1.4 | .90 | .36 | 4.6 | 2.1 | | 0 | .25 | 0 | 1.3 | .07 | 1.2 |
| 3 | 1.2 | .80 | .64 | 4.0 | 1.1 | | 0 | .10 | 0 | 1.2 | .05 | 1.8 |
| 4 | 1.1 | 1.0 | .51 | 2.9 | .71 | | 0 | .05 | 0 | 1.0 | .04 | 2.8 |
| 5 | 1.1 | 1.0 | .55 | 1.8 | .65 | | 0 | .01 | 0 | .77 | .03 | 1.9 |
| 6 | 1.2 | .85 | .51 | 1.4 | .76 | | 0 | 51 | 0 | .75 | .06 | 1.8 |
| 7 | 1.0 | .64 | .90 | 1.8 | 1.1 | | 0 | 105 | 0 | .60 | .37 | 1.3 |
| 8 | .90 | .54 | 1.0 | 4.3 | .75 | | 0 | 14 | 0 | .52 | .53 | 1.2 |
| 9 | .80 | .52 | .99 | 1.9 | .75 | | 0 | 4.2 | 0 | .38 | .45 | 1.0 |
| 10 | .84 | .58 | 1.2 | 1.4 | .43 | | 0 | 2.3 | 0 | .44 | .52 | 1.1 |
| 11 | .84 | 1.0 | .73 | 1.3 | .50 | | 0 | 1.3 | 0 | 1.1 | .45 | 1.0 |
| 12 | .74 | 1.0 | .47 | 1.4 | .39 | | 0 | .92 | 0 | 1.3 | .56 | .61 |
| 13 | .86 | .86 | .48 | 1.1 | .52 | | 0 | .83 | 0 | .73 | .39 | .24 |
| 14 | 1.0 | .96 | .79 | 1.1 | .70 | | 0 | .78 | 0 | .57 | .44 | .22 |
| 15 | 1.2 | .87 | .64 | 1.4 | .49 | | 0 | .65 | 0 | .57 | .31 | .25 |
| 16 | 1.0 | .75 | .62 | 2.1 | .46 | | 0 | .53 | 0 | .45 | .34 | .27 |
| 17 | .70 | .80 | .61 | 2.1 | .44 | | 0 | .41 | 0 | .45 | .35 | .32 |
| 18 | .70 | .73 | .73 | .70 | .39 | | 0 | .31 | 0 | .38 | .29 | .30 |
| 19 | .55 | .73 | .98 | .28 | .31 | | 0 | .18 | 0 | .42 | .43 | .29 |
| 20 | .55 | .47 | .85 | .32 | .33 | | 0 | 0 | 0 | .36 | 1.3 | .40 |
| 21 | .58 | .45 | .53 | .46 | .28 | | 0 | 0 | 0 | .32 | 1.5 | .77 |
| 22 | .62 | .48 | .60 | 2.4 | .22 | | 0 | 0 | 0 | .25 | 1.5 | .98 |
| 23 | .52 | .46 | 1.1 | 2.4 | .23 | | 1.1 | 0 | .11 | .24 | 1.4 | 1.1 |
| 24 | .56 | .49 | 3.3 | 2.8 | .29 | | .96 | 0 | 3,300 | .17 | 1.6 | 1.4 |
| 25 | .58 | .51 | 2.1 | 4.2 | .06 | | 825 | 0 | 45 | .17 | 1.5 | .95 |
| 26 | .85 | .41 | 1.1 | 3.3 | .02 | | 88 | 0 | 6.0 | .13 | 1.7 | 1.2 |
| 27 | .54 | .34 | .84 | 1.7 | .01 | | 2.6 | 0 | 4.8 | .13 | 1.4 | .84 |
| 28 | .45 | .42 | 1.3 | 1.1 | 0 | | .05 | 0 | 2.6 | .10 | 1.5 | 1.0 |
| 29 | .44 | ------ | 1.6 | .82 | 0 | | 10 | 0 | 2.0 | .10 | 1.5 | .99 |
| 30 | .80 | ------ | 5.0 | .44 | 0 | | 7.1 | 0 | 1.6 | .07 | 1.3 | .87 |
| 31 | 1.4 | ------ | 7.9 | ------ | 0 | ------ | 1.4 | 0 | ------ | .07 | ------ | .54 |
| TOTAL | 26.52 | 19.66 | 39.53 | 61.12 | 15.89 | 0 | 936.21 | 183.36 | 3,362.11 | 16.54 | 21.94 | 29.84 |
| MEAN | .86 | .70 | 1.28 | 2.04 | .51 | 0 | 30.2 | 5.91 | 112 | .53 | .73 | .96 |
| MAX | 1.5 | 1.1 | 7.9 | 5.6 | 2.1 | 0 | 825 | 105 | 3,300 | 1.5 | 1.7 | 2.8 |
| MIN | .44 | .34 | .36 | .28 | 0 | 0 | 0 | 0 | 0 | .07 | .03 | .22 |
| AC-FT | 53 | 39 | 78 | 121 | 32 | 0 | 1,860 | 364 | 6,670 | 33 | 44 | 59 |

CAL YR 1973 TOTAL 4,712.72 MEAN 12.9 MAX 3,300 MIN 0 AC-FT 9,350
WTR YR 1973 TOTAL 4,714.93 MEAN 12.9 MAX 3,300 MIN 0 AC-FT 9,350

PEAK DISCHARGE (BASE, 2,000 $FT^3/S$).--Sept. 24 (0415) 15,000 $FT^3/S$ (17.81 FT).

07199000 CANADIAN RIVER NEAR HEBRON, N. MEX.

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

DRAINAGE AREA.--229 $mi^2$ (593 $km^2$).

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

GAGE.--Water-stage recorder. Altitude of gage is 6,248 ft (1,904 m) from topographic map. See WSP 1921 for history of changes prior to Aug. 18, 1965.

AVERAGE DISCHARGE.--27 calendar years, 8.16 $ft^3/s$ (0.231 $m^3/s$), 5,910 acre-ft/yr (7.29 $hm^3/yr$); 20 calendar years (1954-73), 9.97 $ft^3/s$ (0.282 $m^3/s$), 7,220 acre-ft/yr (8.90 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 4,190 $ft^3/s$ (119 $m^3/s$) Sept. 9 (gage height, 6.06 ft or 1.847 m), from rating curve extended above 83 $ft^3/s$ (2.35 $m^3/s$) as explained below; no flow at times.
Period of record: Maximum discharge, 62,400 $ft^3/s$ (1,770 $m^3/s$) June 17, 1965 (gage height, 28.2 ft or 8.60 m, from floodmarks, present datum), from rating curve extended above 1,300 $ft^3/s$ (36.8 $m^3/s$) on basis of slope-area measurement of peak flow; no flow for many days most years.
Flood in 1942 reached a stage of about 28 ft (8.5 m), present datum, at site 150 ft (46 m) upstream, from information by local residents.

REMARKS.--Records poor. Diversions above station for irrigation of a few hundred acres. Part or all of low flow can be diverted to left bank 1.6 mi (2.6 km), revised, above station for stock water, off-channel storage and irrigation. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1281: 1946, 1947-48(P), 1949, WSP 1921: 1960(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .05 | .12 | .12 | .60 | 96 | .45 | .04 | 3.0 | .02 | 3.6 | 2.7 | .50 |
| 2 | .05 | .12 | .12 | .33 | 68 | .41 | .10 | 1.9 | .01 | 3.6 | 2.7 | .32 |
| 3 | .05 | .13 | .10 | .41 | 56 | .41 | .08 | 1.8 | .01 | 3.6 | 2.7 | .30 |
| 4 | .05 | .13 | .14 | .41 | 59 | .37 | .10 | 1.8 | .01 | 3.6 | 2.7 | .10 |
| 5 | .05 | .13 | .14 | .33 | 68 | .37 | .08 | 1.8 | .03 | 3.2 | 2.7 | .06 |
| 6 | .05 | .14 | .14 | 13 | 74 | .33 | .05 | .80 | .03 | .23 | 2.7 | .04 |
| 7 | .05 | .14 | .14 | 15 | 77 | 1.3 | .04 | .20 | .04 | .16 | 2.7 | .02 |
| 8 | .05 | .14 | .14 | 10 | 80 | .45 | .06 | .15 | .03 | .07 | 2.7 | .05 |
| 9 | .05 | .15 | .16 | 12 | 77 | .37 | .06 | .14 | 146 | .07 | 2.7 | .08 |
| 10 | .05 | .15 | .12 | 31 | 74 | .37 | .06 | .08 | 3.0 | .11 | 2.7 | .10 |
| 11 | .05 | .15 | .14 | 91 | 56 | .37 | .04 | .06 | 6.4 | .11 | 2.7 | .12 |
| 12 | .05 | .15 | .14 | 246 | 74 | .41 | .03 | .08 | 6.4 | .11 | 3.1 | .14 |
| 13 | .05 | .15 | .12 | 381 | 77 | 4.2 | .06 | 4.3 | 6.4 | .11 | 3.1 | .20 |
| 14 | .05 | .15 | .16 | 580 | 65 | .33 | 1.3 | .18 | 5.9 | 1.3 | 3.1 | .50 |
| 15 | .05 | .15 | .16 | 424 | 65 | .19 | .08 | .04 | 5.4 | 2.4 | 3.6 | .90 |
| 16 | .05 | .15 | .14 | 125 | 62 | .16 | .08 | .03 | 5.0 | 2.7 | 3.6 | .80 |
| 17 | .05 | .15 | .12 | 155 | 59 | .14 | .08 | .02 | 4.5 | 2.7 | 3.6 | .80 |
| 18 | .05 | .15 | .12 | 250 | 53 | .12 | .06 | .02 | 4.0 | 2.0 | 3.1 | .90 |
| 19 | .05 | .15 | .14 | 225 | 39 | .12 | .06 | .02 | 3.6 | 1.8 | 3.1 | .80 |
| 20 | .05 | .15 | .12 | 92 | 31 | .16 | .05 | .02 | 3.1 | 2.0 | 3.0 | .70 |
| 21 | .05 | .15 | .19 | 53 | 35 | .19 | .08 | .02 | 2.7 | 2.7 | 2.5 | .60 |
| 22 | .05 | .15 | .16 | 62 | 37 | .16 | .08 | .02 | 3.1 | 2.7 | 2.0 | .70 |
| 23 | .06 | .14 | .19 | 92 | 37 | .14 | .06 | .02 | 3.1 | 1.2 | 1.5 | .80 |
| 24 | .07 | .14 | .30 | 116 | 25 | .14 | .05 | .02 | 3.1 | .32 | 1.5 | .80 |
| 25 | .08 | .14 | .40 | 286 | 26 | .12 | .06 | .02 | 1.7 | .32 | 1.4 | .80 |
| 26 | .09 | .13 | .40 | 224 | 29 | .08 | 7.1 | .02 | 2.5 | .23 | 1.3 | .80 |
| 27 | .10 | .13 | .29 | 130 | 26 | .08 | .21 | .01 | 7.5 | .23 | 1.2 | .80 |
| 28 | .10 | .12 | .37 | 135 | 16 | .10 | .05 | .02 | 6.2 | .67 | 1.1 | .80 |
| 29 | .11 | ------ | .29 | 135 | 1.0 | .08 | 1.3 | .02 | 4.5 | 1.5 | 1.0 | .80 |
| 30 | .11 | ------ | 1.0 | 120 | .60 | .05 | 9.3 | .06 | 3.6 | .61 | .80 | .80 |
| 31 | .11 | ------ | 1.3 | ------ | .50 | ------ | 30 | .04 | ------ | 2.7 | ------ | .70 |
| TOTAL | 1.93 | 3.95 | 7.57 | 4,005.08 | 1,543.10 | 12.17 | 50.80 | 16.71 | 237.88 | 46.65 | 73.30 | 15.83 |
| MEAN | .062 | .14 | .24 | 134 | 49.8 | .41 | 1.64 | .54 | 7.93 | 1.50 | 2.44 | .51 |
| MAX | .11 | .15 | 1.3 | 580 | 96 | 4.2 | 30 | 4.3 | 146 | 3.6 | 3.6 | .90 |
| MIN | .05 | .12 | .10 | .33 | .50 | .05 | .03 | .01 | .01 | .07 | .80 | .02 |
| AC-FT | 3.8 | 7.8 | 15 | 7,940 | 3,060 | 24 | 101 | 33 | 472. | 93 | 145 | 31 |

CAL YR 1973 TOTAL 6,014.97 MEAN 16.5 MAX 580 MIN .01 AC-FT 11,930
WTR YR 1973 TOTAL 5,890.61 MEAN 16.1 MAX 580 MIN .01 AC-FT 11,680

PEAK DISCHARGE (BASE, 1,000 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-14 | 2230 | 5.39 | 1,510 | 9- 9 | 1700 | 6.06 | 4,190 |

## 07203000 VERMEJO RIVER NEAR DAWSON, N. MEX.

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

DRAINAGE AREA.--301 $mi^2$ (780 $km^2$).

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

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

AVERAGE DISCHARGE.--50 calendar years (1916-17, 1920, 1927-73), 18.7 $ft^3/s$ (0.530 $m^3/s$), 13,550 acre-ft/yr (16.7 $hm^3/yr$); 20 calendar years (1954-73), 16.1 $ft^3/s$ (0.456 $m^3/s$), 11,660 acre-ft/yr (14.4 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 600 $ft^3/s$ (17.0 $m^3/s$) Sept. 9 (gage height, 5.03 ft or 1.533 m), from rating curve extended above 95 $ft^3/s$ (2.69 $m^3/s$) as explained below; minimum, 0.30 $ft^3/s$ (0.008 $m^3/s$) Nov. 22.
1927-73: Maximum discharge, 12,600 $ft^3/s$ (357 $m^3/s$) June 17, 1965 (gage height, 15.25 ft or 4.648 m), from rating curve extended above 400 $ft^3/s$ (11.3 $m^3/s$) on basis of slope-area measurement of peak flow; no flow at times.
A major flood occurred Aug. 2, 1921, when discharge probably exceeded 10,000 $ft^3/s$ (283 $m^3/s$).

REMARKS.--Records poor. Diversions for irrigation of small acreage and mountain meadows above station. Water quality records for the current year are published in Part 2 of this report.

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

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.6 | 3.6 | 3.1 | 11 | 40 | 55 | 38 | 26 | 10 | 5.4 | 4.0 | 5.0 |
| 2 | 1.4 | 3.1 | 3.3 | 11 | 35 | 67 | 34 | 20 | 10 | 4.5 | 3.7 | 5.0 |
| 3 | 1.6 | 3.1 | 3.3 | 9.6 | 35 | 67 | 32 | 20 | 8.9 | 3.7 | 4.5 | 4.5 |
| 4 | 1.7 | 4.1 | 3.3 | 7.8 | 40 | 65 | 40 | 40 | 8.2 | 3.3 | 5.4 | 3.0 |
| 5 | 1.6 | 5.0 | 3.6 | 7.0 | 40 | 55 | 35 | 24 | 7.6 | 3.7 | 5.8 | 2.5 |
| 6 | 1.7 | 4.4 | 3.3 | 7.0 | 32 | 55 | 31 | 18 | 6.9 | 4.0 | 5.4 | 2.0 |
| 7 | 1.6 | 4.1 | 3.1 | 8.0 | 28 | 55 | 23 | 14 | 6.9 | 4.0 | 4.9 | 2.0 |
| 8 | 1.5 | 3.3 | 3.1 | 9.0 | 30 | 51 | 28 | 13 | 5.8 | 3.7 | 4.9 | 2.0 |
| 9 | 1.4 | 3.1 | 4.1 | 10 | 34 | 53 | 28 | 15 | 48 | 2.9 | 4.9 | 2.6 |
| 10 | 1.3 | 3.6 | 4.1 | 9.6 | 42 | 63 | 30 | 15 | 33 | 3.7 | 4.9 | 3.0 |
| 11 | 1.6 | 3.8 | 3.8 | 12 | 51 | 65 | 26 | 9.6 | 19 | 6.9 | 6.4 | 3.3 |
| 12 | 1.7 | 4.7 | 4.1 | 13 | 67 | 84 | 22 | 10 | 14 | 6.9 | 6.4 | 3.0 |
| 13 | 1.9 | 3.8 | 4.4 | 14 | 72 | 90 | 23 | 23 | 9.6 | 6.9 | 4.9 | 3.0 |
| 14 | 1.9 | 3.3 | 4.3 | 39 | 67 | 83 | 23 | 19 | 7.6 | 6.9 | 2.9 | 2.8 |
| 15 | 2.1 | 3.8 | 4.2 | 88 | 51 | 65 | 28 | 10 | 6.4 | 6.9 | 2.6 | 2.3 |
| 16 | 2.7 | 3.1 | 4.0 | 53 | 49 | 61 | 26 | 8.2 | 6.4 | 6.4 | 2.6 | 2.6 |
| 17 | 3.8 | 3.8 | 4.0 | 40 | 51 | 61 | 22 | 8.2 | 5.8 | 6.4 | 3.7 | 3.0 |
| 18 | 3.8 | 3.3 | 5.0 | 55 | 61 | 55 | 23 | 8.9 | 5.4 | 5.8 | 3.7 | 4.0 |
| 19 | 3.3 | 3.3 | 5.4 | 46 | 75 | 44 | 23 | 9.6 | 4.5 | 5.8 | 3.5 | 4.0 |
| 20 | 3.1 | 3.1 | 5.4 | 38 | 99 | 42 | 22 | 10 | 3.3 | 5.8 | 3.3 | 3.0 |
| 21 | 2.7 | 3.3 | 5.0 | 34 | 99 | 38 | 19 | 9.6 | 2.6 | 5.8 | 3.0 | 2.6 |
| 22 | 2.5 | 3.6 | 5.0 | 37 | 93 | 35 | 20 | 10 | 2.0 | 5.8 | 2.6 | 2.3 |
| 23 | 2.9 | 3.0 | 5.4 | 40 | 85 | 35 | 21 | 9.6 | 2.3 | 5.8 | 2.9 | 2.2 |
| 24 | 3.3 | 3.0 | 5.8 | 45 | 77 | 38 | 18 | 8.9 | 2.6 | 4.5 | 3.7 | 2.0 |
| 25 | 3.3 | 3.0 | 7.8 | 50 | 77 | 36 | 18 | 8.9 | 2.3 | 4.0 | 3.3 | 1.8 |
| 26 | 3.2 | 3.0 | 8.4 | 55 | 72 | 31 | 21 | 10 | 4.5 | 2.9 | 2.6 | 1.6 |
| 27 | 2.9 | 3.0 | 7.8 | 60 | 83 | 34 | 23 | 10 | 7.6 | 3.3 | 3.3 | 1.4 |
| 28 | 3.1 | 3.0 | 7.2 | 63 | 70 | 36 | 18 | 11 | 6.4 | 5.4 | 4.0 | 1.3 |
| 29 | 3.3 | ------ | 6.6 | 62 | 61 | 34 | 20 | 15 | 5.8 | 5.4 | 4.5 | 1.7 |
| 30 | 3.6 | ------ | 6.0 | 50 | 55 | 34 | 43 | 12 | 5.8 | 4.5 | 4.5 | 3.3 |
| 31 | 3.6 | ------ | 7.0 | ------ | 57 | ------ | 48 | 9.6 | ------ | 4.5 | ------ | 4.5 |
| TOTAL | 75.7 | 98.3 | 150.9 | 984.0 | 1,828 | 1,587 | 826 | 436.1 | 269.2 | 155.5 | 122.8 | 87.3 |
| MEAN | 2.44 | 3.51 | 4.87 | 32.8 | 59.0 | 52.9 | 26.6 | 14.1 | 8.97 | 5.02 | 4.09 | 2.82 |
| MAX | 3.8 | 5.0 | 8.4 | 88 | 99 | 90 | 48 | 40 | 48 | 6.9 | 6.4 | 5.0 |
| MIN | 1.3 | 3.0 | 3.1 | 7.0 | 28 | 31 | 18 | 8.2 | 2.0 | 2.9 | 2.6 | 1.3 |
| AC-FT | 150 | 195 | 299 | 1,950 | 3,630 | 3,150 | 1,640 | 865 | 534 | 308 | 244 | 173 |

CAL YR 1973 TOTAL 6,620.8 MEAN 18.1 MAX 99 MIN 1.3 AC-FT 13,130
WTR YR 1973 TOTAL 6,514.7 MEAN 17.8 MAX 99 MIN 1.1 AC-FT 12,920

PEAK DISCHARGE (BASE, 800 $FT^3/S$).--No peak above base.

## 07204000 MORENO CREEK AT EAGLE NEST, N. MEX.

LOCATION.--Lat 36°33'12", long 105°16'03", Colfax County, in Maxwell Grant, on left upstream wingwall of a milti-barrel culvert under U.S. Highway 64, 200 ft (61 m) west of intersection of U.S. Highway 64 and State Highway 38, about 800 ft (240 m) upstream from high-water line of Eagle Nest Lake and 1,000 ft (300 m) west of Eagle Nest.

DRAINAGE AREA.--73.8 $mi^2$ (191.1 $km^2$).

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

GAGE.--Water-stage recorder. Concrete control since Oct. 3, 1952. Datum of gage is 8,195.98 ft (2,498.135 m) above mean sea level. See WSP 1921 for history of changes prior to Oct. 26, 1955.

EXTREMES.--Current year: Maximum discharge, 102 $ft^3/s$ (2.89 $m^3/s$) May 12 (gage height, 3.55 ft or 1.082 m); minimum determined, 0.40 $ft^3/s$ (0.011 $m^3/s$) Sept. 4.
Period of record: Maximum discharge, 240 $ft^3/s$ (6.80 $m^3/s$) Sept. 1, 1946 (gage height, 3.10 ft or 0.945 m, site and datum then in use); maximum gage height, 3.55 ft (1.082 m) May 12, 1973; no flow at times.

REMARKS.--Records fair. Diversions for irrigation of about 1,200 acres (4.86 $km^2$) above station.

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

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | 4.0 | 44 | 34 | 2.8 | 2.6 | .67 | .85 | | |
| 2 | | | | 3.5 | 37 | 33 | 2.5 | 2.2 | .62 | .80 | | |
| 3 | | | | 3.0 | 32 | 30 | 2.5 | 1.9 | .58 | .85 | | |
| 4 | | | | 3.5 | 37 | 25 | 2.4 | 2.8 | .54 | .80 | | |
| 5 | | | | 5.0 | 48 | 20 | 2.3 | 4.7 | .49 | .98 | | |
| 6 | | | | 6.5 | 47 | 19 | 2.1 | 2.3 | .67 | 1.0 | | |
| 7 | | | | 5.2 | 38 | 19 | 2.0 | 1.8 | .62 | .98 | | |
| 8 | | | | 4.5 | 38 | 18 | 1.9 | 1.7 | .58 | .85 | | |
| 9 | | | | 7.0 | 47 | 14 | 2.9 | 1.5 | .84 | .92 | | |
| 10 | | | | 9.0 | 70 | 11 | 3.3 | 1.4 | 2.8 | 1.2 | | |
| 11 | | | | 11 | 91 | 10 | 2.8 | 1.4 | 2.8 | 1.8 | | |
| 12 | | | | 12 | 96 | 9.2 | 2.3 | 1.6 | 1.8 | 2.3 | | |
| 13 | | | | 18 | 95 | 18 | 2.5 | 1.6 | 1.3 | 2.8 | | |
| 14 | | | | 36 | 90 | 22 | 3.3 | 1.4 | 1.0 | 2.5 | | |
| 15 | | | | 37 | 73 | 14 | 2.8 | 1.2 | .92 | 2.1 | | |
| 16 | | | | 15 | 67 | 10 | 2.1 | 1.1 | .85 | 1.8 | | |
| 17 | | | | 18 | 64 | 8.4 | 2.0 | .92 | .76 | 1.8 | | |
| 18 | | | | 28 | 71 | 7.2 | 2.0 | .85 | .76 | 1.6 | | |
| 19 | | | | 16 | 79 | 6.4 | 2.0 | .76 | .72 | 1.5 | | |
| 20 | | | | 12 | 81 | 6.2 | 1.6 | .80 | .67 | 1.4 | | |
| 21 | | | | 11 | 79 | 5.8 | 1.6 | .76 | .62 | 1.4 | | |
| 22 | | | | 12 | 77 | 5.4 | 1.5 | .72 | .62 | 1.3 | | |
| 23 | | | | 30 | 67 | 5.6 | 1.4 | .62 | .62 | 1.3 | | |
| 24 | | | | 26 | 57 | 5.4 | 1.2 | .58 | .76 | 1.2 | | |
| 25 | | | | 30 | 52 | 4.9 | 2.1 | .58 | .72 | 1.2 | | |
| 26 | | | | 29 | 60 | 4.4 | 2.5 | .58 | 1.0 | 1.2 | | |
| 27 | | | | 30 | 60 | 4.1 | 1.6 | .58 | 1.2 | 1.1 | | |
| 28 | | | | 37 | 43 | 4.1 | 1.4 | .54 | 1.0 | 1.1 | | |
| 29 | | ------ | | 41 | 35 | 3.8 | 1.4 | .58 | .98 | 1.2 | | |
| 30 | | ------ | | 48 | 32 | 3.4 | 1.5 | .72 | .92 | 1.2 | | |
| 31 | | ------ | | ------ | 32 | ------ | 2.2 | .76 | ------ | 1.2 | ------ | |
| TOTAL | - | - | - | 548.2 | 1,639 | 381.3 | 66.5 | 41.55 | 28.43 | 42.23 | - | - |
| MEAN | - | - | - | 18.3 | 59.3 | 12.7 | 2.15 | 1.34 | .95 | 1.36 | - | - |
| MAX | - | - | - | 48 | 96 | 34 | 3.3 | 4.7 | 2.8 | 2.8 | - | - |
| MIN | - | - | - | 3.0 | 32 | 3.4 | 1.2 | .54 | .49 | .80 | - | - |
| AC-FT | - | - | - | 1,090 | 3,650 | 756 | 132 | 82 | 56 | 84 | - | - |

PEAK DISCHARGE (BASE, 35 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-14 | 2230 | 3.32 | 85 | 5-12 | 0700 | 3.55 | 102 |
| 4-18 | 0030 | 2.87 | 47 | | | | |

## 07204500 CIENEGUILLA CREEK NEAR EAGLE NEST, N. MEX.

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

DRAINAGE AREA.--56 $mi^2$ (145 $km^2$).

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

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

EXTREMES.--Current year: Maximum discharge, 279 $ft^3/s$ (7.90 $m^3/s$) May 10 (gage height, 5.19 ft or 1.582 m); minimum determined, 0.60 $ft^3/s$ (0.017 $m^3/s$) Sept. 5.
Period of record: Maximum discharge, 505 $ft^3/s$ (14.3 $m^3/s$) June 16, 1965 (gage height, 5.61 ft or 1.710 m), from rating curve extended above 110 $ft^3/s$ (3.12 $m^3/s$); no flow at times.

REMARKS.--Records good except those for April, which are poor. Diversions for irrigation of about 1,000 acres (4.05 $km^2$) above station.

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

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | 6.0 | 106 | 30 | 3.8 | 5.2 | 1.8 | 2.0 | | |
| 2 | | | | 6.0 | 79 | 32 | 3.2 | 4.9 | 1.4 | 1.9 | | |
| 3 | | | | 6.0 | 67 | 32 | 3.0 | 4.4 | 1.0 | 2.3 | | |
| 4 | | | | 6.0 | 76 | 27 | 3.1 | 4.4 | .99 | 4.2 | | |
| 5 | | | | 7.0 | 123 | 23 | 3.3 | 8.5 | .85 | 4.7 | | |
| 6 | | | | 8.0 | 134 | 20 | 2.8 | 4.7 | .85 | 4.7 | | |
| 7 | | | | 7.0 | 110 | 18 | 2.8 | 3.6 | .85 | 4.5 | | |
| 8 | | | | 9.0 | 117 | 17 | 6.9 | 3.1 | .90 | 4.4 | | |
| 9 | | | | 9.0 | 166 | 15 | 3.7 | 2.7 | 1.1 | 4.2 | | |
| 10 | | | | 9.0 | 213 | 14 | 3.9 | 2.5 | 7.6 | 5.2 | | |
| 11 | | | | 9.5 | 229 | 15 | 3.3 | 3.2 | 11 | 6.4 | | |
| 12 | | | | 9.0 | 216 | 14 | 2.8 | 3.7 | 8.1 | 7.4 | | |
| 13 | | | | 17 | 201 | 20 | 2.9 | 3.8 | 4.5 | 10 | | |
| 14 | | | | 43 | 185 | 30 | 3.9 | 4.2 | 3.2 | 10 | | |
| 15 | | | | 75 | 155 | 22 | 5.7 | 3.6 | 2.8 | 4.2 | | |
| 16 | | | | 55 | 137 | 15 | 5.0 | 2.9 | 2.4 | 3.5 | | |
| 17 | | | | 54 | 124 | 12 | 4.2 | 2.2 | 2.3 | 3.2 | | |
| 18 | | | | 60 | 120 | 9.7 | 4.2 | 1.8 | 2.0 | 3.1 | | |
| 19 | | | | 50 | 122 | 8.8 | 4.7 | 1.6 | 1.8 | 2.9 | | |
| 20 | | | | 40 | 120 | 9.0 | 3.7 | 1.9 | 1.8 | 2.8 | | |
| 21 | | | | 40 | 110 | 6.4 | 3.0 | 1.6 | 1.6 | 2.7 | | |
| 22 | | | | 50 | 96 | 5.2 | 3.4 | 1.6 | 1.6 | 2.6 | | |
| 23 | | | | 61 | 79 | 6.8 | 3.1 | 1.4 | 1.6 | 2.5 | | |
| 24 | | | | 90 | 66 | 6.8 | 2.3 | 1.2 | 1.8 | 2.4 | | |
| 25 | | | | 106 | 57 | 6.3 | 3.5 | 1.2 | 1.7 | 2.4 | | |
| 26 | | | | 84 | 74 | 5.5 | 6.1 | 1.3 | 2.5 | 2.5 | | |
| 27 | | | | 89 | 74 | 5.7 | 4.2 | 1.2 | 2.8 | 2.5 | | |
| 28 | | | | 107 | 50 | 5.7 | 5.0 | 1.2 | 2.6 | 2.4 | | |
| 29 | | ------ | | 110 | 42 | 5.9 | 4.7 | 1.6 | 2.4 | 2.4 | | |
| 30 | | ------ | | 117 | 36 | 4.5 | 6.1 | 2.3 | 2.3 | 2.4 | | |
| 31 | | ------ | | ------ | 32 | ------ | 7.3 | 2.1 | ------ | 2.4 | ------ | |
| TOTAL | - | - | - | 1,339.5 | 3,516 | 442.3 | 125.6 | 89.6 | 78.14 | 118.8 | - | - |
| MEAN | - | - | - | 44.7 | 113 | 14.7 | 4.05 | 2.89 | 2.60 | 3.83 | - | - |
| MAX | - | - | - | 117 | 229 | 32 | 7.3 | 8.5 | 11 | 10 | - | - |
| MIN | - | - | - | 6.0 | 32 | 4.5 | 2.3 | 1.2 | .85 | 1.9 | - | - |
| AC-FT | - | - | - | 2,660 | 6,970 | 877 | 249 | 178 | 155 | 236 | - | - |

PEAK DISCHARGE (BASE, 70 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-15 | 1800 | 4.26 | 111 | 5-26 | 2330 | 4.18 | 99 |
| 4-25 | 0100 | 4.46 | 142 | 7- 8 | 1500 | 3.96 | 74 |
| 5-10 | 2200 | 5.19 | 279 | | | | |

07205000 Sixmile Creek near Eagle Nest, N. Mex.

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

DRAINAGE AREA.--10.5 $mi^2$ (27.2 $km^2$).

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

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

AVERAGE DISCHARGE.--15 calendar years (1959-73), 2.49 $ft^3/s$ (0.0705 $m^3/s$), 1,800 acre-ft/yr (2.22 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 48 $ft^3/s$ (1.36 $m^3/s$) May 12 (gage height, 1.86 ft or 0.567 m); minimum, 0.09 $ft^3/s$ (0.003 $m^3/s$) Apr. 7, result of freezeup.
1930-55, 1958-73: Maximum discharge, 128 $ft^3/s$ (3.62 $m^3/s$) Aug. 5, 1969 (gage height, 2.86 ft or 0.871 m), from rating curve extended above 32 $ft^3/s$ (0.906 $m^3/s$); maximum gage height recorded, 3.38 ft (1.030 m) Apr. 2, 1937 (ice jam), site and datum then in use; no flow at times.

REMARKS.--Records fair. Diversions for irrigation of about 300 acres (1.21 $km^2$) above station.

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

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.4 | 1.3 | 2.2 | 1.2 | 18 | 8.5 | 1.4 | 1.3 | .39 | 1.5 | 1.1 | 1.2 |
| 2 | 1.4 | 1.2 | 2.7 | 1.3 | 14 | 8.5 | 1.3 | 1.3 | .35 | 1.5 | 1.0 | 1.2 |
| 3 | 1.4 | 1.2 | 2.7 | 1.2 | 11 | 8.0 | 1.3 | 1.8 | .34 | 1.5 | 1.1 | 1.2 |
| 4 | 1.4 | 1.2 | 2.4 | 1.0 | 15 | 7.3 | 1.3 | 2.0 | .35 | 1.5 | 1.3 | 1.2 |
| 5 | 1.4 | 1.3 | 2.5 | 1.0 | 20 | 6.6 | 1.2 | 1.4 | .36 | 1.6 | 1.2 | 1.1 |
| 6 | 1.4 | 1.3 | 1.9 | 1.5 | 19 | 6.0 | 1.1 | 1.1 | .36 | 1.6 | 1.2 | 1.1 |
| 7 | 1.4 | 1.3 | 1.9 | .96 | 14 | 5.6 | 1.2 | .98 | .36 | 1.5 | 1.3 | 1.3 |
| 8 | 1.4 | 1.3 | 1.9 | 2.0 | 16 | 5.3 | 1.3 | .94 | .35 | 1.4 | 1.3 | 1.3 |
| 9 | 1.4 | 1.3 | 1.8 | 2.2 | 23 | 5.1 | 1.3 | .93 | .45 | 1.5 | 1.3 | 1.3 |
| 10 | 1.3 | 1.3 | 1.7 | 2.0 | 31 | 5.3 | 1.2 | .91 | 1.0 | 1.8 | 1.3 | 1.3 |
| 11 | 1.2 | 1.3 | 1.6 | 2.1 | 41 | 5.3 | 1.1 | .91 | 1.2 | 2.1 | 1.3 | 1.3 |
| 12 | 1.2 | 1.3 | 2.1 | 3.1 | 47 | 5.4 | 1.6 | .94 | .74 | 2.4 | 1.3 | 1.4 |
| 13 | 1.2 | 1.3 | 1.9 | 6.6 | 43 | 6.4 | 2.1 | .92 | .59 | 2.3 | 1.3 | 1.3 |
| 14 | 1.2 | 1.4 | 1.9 | 9.9 | 34 | 7.2 | 2.5 | .88 | .52 | 2.1 | 1.3 | 1.2 |
| 15 | 1.2 | 1.4 | 1.6 | 6.9 | 27 | 6.0 | 2.3 | .90 | .48 | 1.9 | 1.2 | 1.1 |
| 16 | 1.2 | 1.3 | 1.5 | 3.9 | 24 | 5.4 | 2.2 | .98 | .46 | 1.8 | 1.3 | 1.2 |
| 17 | 1.2 | 1.4 | 1.6 | 5.5 | 25 | 5.0 | 1.9 | .93 | .45 | 1.7 | 1.4 | 1.4 |
| 18 | 1.2 | 1.3 | 2.1 | 5.8 | 27 | 4.3 | 1.7 | .89 | .41 | 1.6 | 1.3 | 1.3 |
| 19 | 1.3 | 1.3 | 2.4 | 4.7 | 31 | 3.7 | 1.8 | .82 | .39 | 1.5 | 1.2 | 1.3 |
| 20 | 1.3 | 1.3 | 2.6 | 4.2 | 31 | 3.5 | 1.6 | .90 | .38 | 1.5 | 1.1 | 1.1 |
| 21 | 1.3 | 1.4 | 2.3 | 3.9 | 29 | 3.2 | 1.7 | .80 | .38 | 1.5 | 1.2 | 1.2 |
| 22 | 1.3 | 1.4 | 1.9 | 4.8 | 26 | 3.0 | 1.8 | .71 | .37 | 1.4 | 1.5 | 1.5 |
| 23 | 1.4 | 1.4 | 1.2 | 8.8 | 22 | 2.9 | 1.7 | .64 | .37 | 1.3 | 1.3 | 1.5 |
| 24 | 1.4 | 1.4 | 1.1 | 12 | 19 | 2.7 | 1.7 | .42 | .49 | 1.3 | 1.2 | 1.3 |
| 25 | 1.3 | 1.5 | 1.0 | 13 | 17 | 2.7 | 1.9 | .41 | .44 | 1.2 | 1.3 | 1.0 |
| 26 | 1.3 | 1.6 | 1.3 | 12 | 18 | 2.9 | 2.3 | .42 | .97 | 1.2 | 1.3 | 1.1 |
| 27 | 1.3 | 1.8 | 1.6 | 12 | 15 | 2.6 | 1.8 | .38 | 1.7 | 1.2 | 1.2 | 1.2 |
| 28 | 1.4 | 2.0 | 1.5 | 15 | 13 | 2.0 | 1.7 | .38 | 1.6 | 1.1 | 1.2 | 1.3 |
| 29 | 1.4 | ------ | 1.5 | 19 | 11 | 1.7 | 1.8 | .40 | 1.6 | 1.1 | 1.3 | 1.5 |
| 30 | 1.3 | ------ | 1.4 | 20 | 10 | 1.5 | 1.8 | .43 | 1.6 | 1.2 | 1.2 | 1.4 |
| 31 | 1.3 | ------ | 1.3 | ------ | 8.5 | ------ | 1.6 | .41 | ------ | 1.2 | ------ | 1.2 |
| TOTAL | 40.8 | 38.5 | 57.1 | 187.56 | 699.5 | 143.6 | 51.2 | 27.13 | 19.45 | 48.0 | 37.5 | 39.0 |
| MEAN | 1.32 | 1.38 | 1.84 | 6.25 | 22.6 | 4.79 | 1.65 | .88 | .65 | 1.55 | 1.25 | 1.26 |
| MAX | 1.4 | 2.0 | 2.7 | 20 | 47 | 8.5 | 2.5 | 2.0 | 1.7 | 2.4 | 1.5 | 1.5 |
| MIN | 1.2 | 1.2 | 1.0 | .96 | 8.5 | 1.5 | 1.1 | .38 | .34 | 1.1 | 1.0 | 1.0 |
| AC-FT | 81 | 76 | 113 | 372 | 1,390 | 285 | 102 | 54 | 39 | 95 | 74 | 77 |

CAL YR 1973 TOTAL 1,389.34 MEAN 3.81 MAX 47 MIN .34 AC-FT 2,760
WTR YR 1973 TOTAL 1,344.49 MEAN 3.68 MAX 47 MIN .09 AC-FT 2,670

PEAK DISCHARGE (BASE, 15 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-14 | 1730 | 1.35 | 18 | 5- 5 | 2000 | 1.41 | 22 |
| 4-29 | 1945 | 1.41 | 22 | 5-12 | 0230 | 1.86 | 48 |

## 07205500 Eagle Nest Lake near Eagle Nest, N. Mex.

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

DRAINAGE AREA.--167 $mi^2$ (433 $km^2$).

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

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

EXTREMES.--Current year: Maximum contents observed, 34,520 acre-ft (42.6 $hm^3$) June 18 (gage height, 114.05 ft or 34.762 m); minimum observed, 17,540 acre-ft (21.6 $hm^3$) Jan. 2 (gage height, 99.65 ft or 30.373 m).
Period of record: Maximum contents observed, 78,800 acre-ft (97.2 $hm^3$) May 31, 1942 (gage height, 136.9 ft or 41.73 m); minimum observed, 635 acre-ft (783,000 $m^3$) Dec. 14, 1954 (gage height, 61.33 ft or 18.693 m).

REMARKS.--Lake is formed by concrete dam with spillway cut in natural rock, completed June 30, 1918; storage began in June 1917. Capacity, 79,120 acre-ft (97.6 $hm^3$) between gage heights 35.0 ft (10.67 m) sill of outlet gate, and 137.0 ft (41.76 m), crest of ungated spillway. Dead storage negligible. Records given herein represent usable contents. Water released is used for irrigation. Lake is recreational area. Diversions for irrigation of about 2,500 acres (10.1 $km^2$) above reservoir.

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

REVISIONS.--WSP 1281: Drainage area.

Capacity table (gage height, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 99.0 | 16,970 | 108.0 | 26,350 |
| 100.0 | 17,850 | 112.0 | 31,600 |
| 104.0 | 21,770 | 116.0 | 37,430 |

CONTENTS, IN ACRE-FEET, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | - | - | - | - | - | - | - | - | - | 28,640 | - | - |
| 2 | 17,540 | - | - | - | - | - | 33,510 | - | - | - | - | - |
| 3 | - | - | - | 19,450 | - | - | - | - | 29,760 | - | - | - |
| 4 | - | - | - | - | 24,260 | 34,230 | - | - | - | - | - | 27,600 |
| 5 | - | - | 18,410 | - | - | - | - | - | - | - | 27,730 | - |
| 6 | - | 17,950 | 18,410 | - | - | - | - | 31,600 | - | - | - | - |
| 7 | - | 17,950 | - | - | 25,200 | - | - | 31,540 | - | - | - | - |
| 8 | - | - | - | - | - | - | - | - | - | 28,250 | - | - |
| 9 | - | - | - | - | - | - | 32,940 | - | - | - | - | - |
| 10 | - | - | - | - | - | - | - | - | 28,770 | - | - | - |
| 11 | - | - | - | - | - | 34,450 | 32,730 | - | - | - | - | - |
| 12 | - | - | - | - | - | - | - | - | - | - | - | - |
| 13 | - | 17,950 | 18,500 | - | - | - | - | 31,190 | - | - | - | - |
| 14 | - | - | - | - | - | - | - | - | - | - | - | - |
| 15 | - | - | - | - | 29,300 | - | - | - | - | 28,580 | - | - |
| 16 | 17,680 | - | - | - | - | - | 32,450 | - | - | - | - | - |
| 17 | - | - | - | 19,990 | - | - | - | - | 28,640 | - | - | - |
| 18 | - | - | - | - | - | 34,520 | - | - | - | - | - | - |
| 19 | - | - | - | - | - | - | - | - | 28,640 | - | - | - |
| 20 | - | 18,040 | 18,640 | - | - | - | - | 30,850 | - | - | 27,600 | - |
| 21 | - | - | - | - | - | - | - | - | - | - | 27,480 | - |
| 22 | - | - | - | - | 32,310 | - | - | - | - | 28,060 | - | - |
| 23 | 17,680 | - | - | - | - | - | 31,960 | - | - | - | - | - |
| 24 | - | - | - | 21,360 | - | - | - | - | - | - | - | - |
| 25 | - | - | - | - | - | 34,090 | - | - | 28,640 | - | - | - |
| 26 | - | - | - | - | - | - | - | - | - | - | - | - |
| 27 | - | 18,180 | 19,160 | - | - | - | - | 30,300 | - | - | - | - |
| 28 | - | 18,200 | - | - | 33,870 | - | - | - | - | - | - | - |
| 29 | - | ------ | - | - | - | - | - | - | - | 27,920 | - | - |
| 30 | 17,680 | ------ | - | 23,190 | - | 33,700 | 31,810 | - | 28,640 | - | 27,600 | - |
| 31 | 17,700 | ------ | 19,350 | ------ | 34,000 | ------ | 31,800 | 30,000 | ------ | 27,920 | ------ | 27,990 |
| (†) | - | - | - | 105.30 | - | - | - | - | - | 109.25 | - | - |
| (‡) | +160 | +500 | +1,150 | +3,840 | +10,810 | -300 | -1,900 | -1,800 | -1,360 | -720 | -320 | +390 |

CAL YR 1973..... ‡ +10,450
WTR YR 1973..... ‡ + 9,940

† Gage height, in feet, at end of month.
‡ Change in contents, in acre-feet.
NOTE.--Month-end contents interpolated or estimated on basis of inflow and releases from Lake except Apr. 30 and Oct. 31.

## 07206000 CIMARRON RIVER BELOW EAGLE NEST DAM, N. MEX.

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

DRAINAGE AREA.--167 $mi^2$ (433 $km^2$).

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

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

AVERAGE DISCHARGE.--23 calendar years, 13.1 $ft^3/s$ (0.371 $m^3/s$), 9,490 acre-ft/yr (11.7 $hm^3/yr$); 20 calendar years (1954-73), 12.5 $ft^3/s$ (0.354 $m^3/s$), 9,060 acre-ft/yr (11.2 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 178 $ft^3/s$ (5.04 $m^3/s$) Sept. 3 (gage height, 2.60 ft or 0.792 m); no flow at times.
Period of record: Maximum discharge, 205 $ft^3/s$ (5.81 $m^3/s$) June 14, 1955 (gage height, 2.79 ft or 0.850 m); no flow at times most years.

REMARKS.--Records good except those below 2 $ft^3/s$ (0.057 $m^3/s$), which are poor. Flow regulated by Eagle Nest Lake (see sta 07205500). Diversions for irrigation of about 2,500 acres (10.1 $km^2$) above station.

REVISIONS.--WSP 1281: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .04 | .01 | .01 | 0 | 2.8 | 19 | 46 | 27 | 27 | 0 | 8.4 | .84 |
| 2 | .04 | .01 | .01 | 0 | 4.1 | 18 | 46 | 27 | 25 | 0 | 8.4 | .84 |
| 3 | .03 | .01 | .01 | 0 | 4.1 | 18 | 28 | 27 | 104 | 0 | 8.4 | .84 |
| 4 | .03 | .01 | .01 | 0 | 3.5 | 18 | 39 | 27 | 172 | 0 | 8.4 | .84 |
| 5 | .03 | .01 | .01 | 0 | 3.2 | 18 | 47 | 32 | 172 | 0 | 8.4 | .84 |
| 6 | .02 | .01 | .01 | 0 | 5.8 | 18 | 61 | 32 | 133 | 5.6 | 5.8 | .84 |
| 7 | .02 | .01 | .01 | 0 | 7.7 | 17 | 57 | 31 | 14 | 13 | 2.9 | .84 |
| 8 | .02 | .01 | .01 | 0 | 8.1 | 17 | 57 | 31 | 14 | 13 | 3.5 | .50 |
| 9 | .02 | .01 | .01 | 0 | 8.1 | 18 | 55 | 31 | 19 | 13 | 3.5 | .37 |
| 10 | .01 | .01 | .01 | 0 | 8.4 | 30 | 45 | 30 | .17 | 14 | 3.5 | .37 |
| 11 | .01 | .01 | .01 | 0 | 8.4 | 35 | 41 | 25 | .10 | 14 | 3.5 | .37 |
| 12 | .01 | .01 | .01 | 0 | 9.6 | 35 | 41 | 25 | .05 | 14 | 3.5 | .26 |
| 13 | .01 | .01 | 0 | 0 | 18 | 35 | 41 | 25 | .05 | 23 | 3.5 | .26 |
| 14 | .01 | .01 | 0 | 0 | 14 | 34 | 41 | 20 | .05 | 35 | 3.5 | .26 |
| 15 | .01 | .01 | 0 | 0 | .50 | 34 | 43 | 18 | .05 | 35 | 3.5 | .26 |
| 16 | .01 | .01 | 0 | 0 | .37 | 34 | 44 | 22 | 0 | 35 | 3.5 | .37 |
| 17 | .01 | .01 | 0 | .12 | .37 | 30 | 44 | 24 | 0 | 35 | 3.5 | .17 |
| 18 | .01 | .01 | 0 | .37 | .10 | 27 | 42 | 23 | 0 | 35 | 3.5 | .20 |
| 19 | .01 | .01 | 0 | .50 | .10 | 21 | 38 | 26 | 0 | 35 | 3.5 | .20 |
| 20 | .01 | .01 | 0 | .50 | 16 | 21 | 38 | 33 | 0 | 35 | 1.5 | .20 |
| 21 | .01 | .01 | 0 | .50 | 20 | 22 | 38 | 38 | 0 | 35 | .84 | .20 |
| 22 | .01 | .01 | 0 | .50 | 20 | 22 | 33 | 39 | 0 | 35 | .84 | .20 |
| 23 | .01 | .01 | 0 | .50 | 20 | 22 | 29 | 39 | 0 | 20 | .84 | .20 |
| 24 | .01 | .01 | 0 | .17 | 20 | 30 | 26 | 39 | 0 | 8.4 | .84 | .20 |
| 25 | .01 | .01 | 0 | .17 | 20 | 33 | 25 | 39 | 0 | 8.4 | .84 | .20 |
| 26 | .01 | .01 | 0 | .17 | 20 | 38 | 25 | 39 | 0 | 8.4 | .84 | .20 |
| 27 | .01 | .01 | 0 | .84 | 20 | 42 | 25 | 39 | 0 | 8.4 | .84 | .20 |
| 28 | .01 | .01 | 0 | 1.5 | 20 | 42 | 25 | 39 | 0 | 8.4 | .84 | .20 |
| 29 | .01 | ------ | 0 | 1.0 | 23 | 44 | 25 | 39 | 0 | 8.4 | .84 | .20 |
| 30 | .01 | ------ | 0 | .84 | 24 | 46 | 25 | 36 | 0 | 8.4 | .84 | .20 |
| 31 | .01 | ------ | 0 | ------ | 22 | ------ | 26 | 29 | ------ | 8.4 | ------ | .20 |
| TOTAL | .47 | .28 | .12 | 7.68 | 352.24 | 838 | 1,196 | 951 | 680.47 | 511.8 | 102.60 | 11.87 |
| MEAN | .015 | .010 | .004 | .26 | 11.4 | 27.9 | 38.6 | 30.7 | 22.7 | 16.5 | 3.42 | .38 |
| MAX | .04 | .01 | .01 | 1.5 | 24 | 46 | 61 | 39 | 172 | 35 | 8.4 | .84 |
| MIN | .01 | .01 | 0 | 0 | .10 | 17 | 25 | 18 | 0 | 0 | .84 | .17 |
| AC-FT | .9 | .6 | .2 | 15 | 699 | 1,660 | 2,370 | 1,890 | 1,350 | 1,020 | 204 | 24 |

CAL YR 1973 TOTAL 4,652.53 MEAN 12.7 MAX 172 MIN 0 AC-FT 9,230
WTR YR 1973 TOTAL 4,885.29 MEAN 13.4 MAX 172 MIN 0 AC-FT 9,690

NOTE.--No gage-height record Jan. 1 to Apr. 15.

## 07207000 CIMARRON RIVER NEAR CIMARRON, N. MEX.

LOCATION.--Lat 36°31'11", long 104°58'42", Colfax County, in Maxwell Grant, on right bank 1,200 ft (370 m) downstream from Turkey Creek Canyon, 3.6 mi (5.8 km) west of Cimarron, and at mile 31.6 (50.8 km).

DRAINAGE AREA.--294 $mi^2$ (761 $km^2$).

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

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

AVERAGE DISCHARGE.--23 calendar years, 20.0 $ft^3/s$ (0.566 $m^3/s$), 14,490 acre-ft/yr (17.9 $hm^3/yr$); 20 calendar years (1954-73), 19.5 $ft^3/s$ (0.552 $m^3/s$), 14,130 acre-ft/yr (17.4 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 563 $ft^3/s$ (15.9 $m^3/s$) Sept. 9 (gage height, 3.63 ft or 1.106 m); minimum, 1.1 $ft^3/s$ (0.031 $m^3/s$) Mar. 14, result of freezeup.
Period of record: Maximum discharge, 15,500 $ft^3/s$ (439 $m^3/s$) June 17, 1965 (gage height, 12.42 ft or 3.786 m, from floodmark), from rating curve extended above 800 $ft^3/s$ (22.7 $m^3/s$) on basis of slope-area measurements at gage heights 4.88 ft (1.487 m) and 12.42 ft (3.786 m); no flow at times.

REMARKS.--Records good except those for winter periods, which are poor. Flow regulated by Eagle Nest Lake (see sta 07205500). Diversions above station for irrigation of about 3,500 acres (14.2 $km^2$), part of which is below station. Philmont ditch (formerly known as Cimarroncito ditch) diverts from left bank 1.5 mi (2.4 km) above station, flumes under river 0.9 mi (1.4 km) above and bypasses station for off-channel storage and irrigation below; see tabulation below for monthly diversions.

REVISIONS.--WSP 1281: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.0 | 2.4 | 2.0 | 3.5 | 55 | 68 | 54 | 32 | 26 | 3.3 | 13 | 5.0 |
| 2 | 2.9 | 2.3 | 2.0 | 4.0 | 52 | 70 | 54 | 31 | 26 | 3.0 | 13 | 4.9 |
| 3 | 2.8 | 2.4 | 2.0 | 4.0 | 48 | 70 | 51 | 31 | 42 | 2.8 | 13 | 4.9 |
| 4 | 2.9 | 2.5 | 2.0 | 3.8 | 54 | 68 | 37 | 32 | 123 | 2.8 | 12 | 4.0 |
| 5 | 3.0 | 2.5 | 2.0 | 4.0 | 68 | 64 | 53 | 32 | 134 | 3.0 | 12 | 3.0 |
| 6 | 2.9 | 2.5 | 1.8 | 5.0 | 64 | 61 | 62 | 34 | 141 | 3.0 | 12 | 2.5 |
| 7 | 3.0 | 2.5 | 1.9 | 10 | 57 | 59 | 64 | 31 | 49 | 6.1 | 8.8 | 2.8 |
| 8 | 2.5 | 2.5 | 2.1 | 8.0 | 56 | 57 | 59 | 30 | 27 | 11 | 7.6 | 3.0 |
| 9 | 2.0 | 2.3 | 2.4 | 7.0 | 67 | 54 | 67 | 31 | 55 | 12 | 7.4 | 2.9 |
| 10 | 1.5 | 2.3 | 2.1 | 6.0 | 78 | 58 | 60 | 31 | 39 | 15 | 7.3 | 2.8 |
| 11 | 2.0 | 2.3 | 2.1 | 8.4 | 106 | 71 | 48 | 27 | 16 | 16 | 7.2 | 2.9 |
| 12 | 2.5 | 2.2 | 2.0 | 13 | 117 | 73 | 43 | 26 | 13 | 16 | 7.0 | 3.0 |
| 13 | 2.8 | 2.2 | 1.9 | 21 | 114 | 78 | 47 | 26 | 10 | 16 | 6.8 | 2.8 |
| 14 | 2.5 | 2.2 | 2.0 | 36 | 112 | 80 | 47 | 25 | 8.7 | 31 | 6.6 | 2.8 |
| 15 | 2.5 | 2.2 | 2.1 | 41 | 87 | 75 | 47 | 18 | 7.4 | 34 | 6.7 | 2.5 |
| 16 | 2.5 | 2.1 | 1.9 | 32 | 76 | 74 | 49 | 18 | 6.6 | 35 | 7.3 | 2.5 |
| 17 | 2.5 | 2.3 | 2.1 | 28 | 74 | 70 | 50 | 20 | 6.1 | 36 | 7.3 | 2.6 |
| 18 | 2.5 | 2.2 | 2.1 | 33 | 78 | 65 | 52 | 20 | 5.6 | 36 | 7.2 | 2.6 |
| 19 | 2.5 | 2.3 | 2.1 | 29 | 90 | 56 | 48 | 20 | 5.1 | 36 | 7.2 | 2.3 |
| 20 | 2.3 | 2.3 | 2.1 | 22 | 103 | 50 | 41 | 26 | 4.8 | 37 | 7.0 | 2.0 |
| 21 | 2.2 | 2.3 | 2.2 | 21 | 122 | 45 | 40 | 30 | 4.4 | 37 | 6.0 | 2.1 |
| 22 | 2.0 | 2.4 | 2.3 | 21 | 125 | 42 | 39 | 32 | 4.2 | 37 | 6.0 | 2.5 |
| 23 | 2.2 | 2.5 | 2.8 | 26 | 115 | 41 | 37 | 32 | 4.1 | 37 | 6.0 | 2.5 |
| 24 | 2.2 | 2.4 | 2.8 | 30 | 106 | 40 | 36 | 32 | 3.1 | 19 | 5.5 | 2.8 |
| 25 | 2.2 | 2.2 | 2.5 | 35 | 97 | 46 | 33 | 33 | 2.8 | 15 | 5.0 | 2.5 |
| 26 | 2.2 | 2.1 | 2.8 | 38 | 99 | 46 | 36 | 32 | 3.3 | 14 | 5.5 | 2.9 |
| 27 | 1.5 | 2.0 | 3.3 | 37 | 95 | 53 | 37 | 32 | 3.5 | 14 | 5.0 | 2.5 |
| 28 | 2.0 | 2.0 | 3.3 | 43 | 86 | 55 | 34 | 33 | 3.9 | 14 | 4.5 | 2.5 |
| 29 | 2.5 | ------ | 3.5 | 48 | 78 | 53 | 34 | 35 | 3.8 | 13 | 4.8 | 2.5 |
| 30 | 2.5 | ------ | 3.5 | 55 | 73 | 55 | 36 | 36 | 3.6 | 13 | 5.0 | 2.8 |
| 31 | 2.5 | ------ | 3.5 | ------ | 72 | ------ | 33 | 29 | ------ | 13 | ------ | 2.3 |
| TOTAL | 75.1 | 64.4 | 73.2 | 672.7 | 2,624 | 1,797 | 1,428 | 897 | 782.0 | 581.0 | 229.7 | 89.3 |
| MEAN | 2.42 | 2.30 | 2.36 | 22.4 | 84.6 | 59.9 | 46.1 | 28.9 | 26.1 | 18.7 | 7.66 | 2.88 |
| MAX | 3.0 | 2.5 | 3.5 | 55 | 125 | 80 | 67 | 36 | 141 | 37 | 13 | 5.0 |
| MIN | 1.5 | 2.0 | 1.8 | 3.5 | 48 | 40 | 33 | 18 | 2.8 | 2.8 | 4.5 | 2.0 |
| AC-FT | 149 | 128 | 145 | 1,330 | 5,200 | 3,560 | 2,830 | 1,780 | 1,550 | 1,150 | 456 | 177 |
| (†) | 0 | 0 | 0 | 0 | 0 | 0 | 172 | 334 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 9,313.4 MEAN 25.5 MAX 141 MIN 1.5 AC-FT 18,470 † 506
WTR YR 1973 TOTAL 9,288.2 MEAN 25.4 MAX 141 MIN 1.5 AC-FT 18,420 † 506

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

## 07207500 PONIL CREEK NEAR CIMARRON, N. MEX.

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

DRAINAGE AREA.--171 $mi^2$ (443 $km^2$).

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

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

AVERAGE DISCHARGE.--33 calendar years (1916-24, 1928, 1951-73), 11.9 $ft^3/s$ (0.337 $m^3/s$), 8,620 acre-ft/yr (10.6 $hm^3/yr$); 20 calendar years (1954-73), 9.57 $ft^3/s$ (0.271 $m^3/s$), 6,930 acre-ft/yr (8.54 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 136 $ft^3/s$ (3.85 $m^3/s$) May 12 (gage height, 2.36 ft or 0.719 m); minimum, 0.03 $ft^3/s$ (0.001 $m^3/s$) Dec. 4, but may have been less during periods of ice effect.
Period of record: Maximum discharge, 5,630 $ft^3/s$ (159 $m^3/s$) June 17, 1965 (gage height, 11.13 ft or 3.392 m), from rating curve extended above 110 $ft^3/s$ (3.12 $m^3/s$) on basis of slope-area measurements at gage heights 4.55 ft (1.387 m), 5.80 ft (1.768 m), 7.15 ft (2.179 m), and 11.13 ft (3.392 m); no flow many days most years.
Discharge for flood of Aug. 8, 1929, which destroyed gage, was estimated as 5,200 $ft^3/s$ (150 $m^3/s$) by State Engineer.

REMARKS.--Records good except those for winter periods, which are poor. Diversions for irrigation of about 250 acres (1.0 $km^2$) above station. Diversions 1,000 ft (300 m) below station for irrigation of about 300 acres (1.2 $km^2$).

REVISIONS.--WSP 1281: Drainage area. WSP 1731: 1920.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .90 | .80 | 1.0 | 3.5 | 76 | 44 | 5.2 | 5.2 | .51 | .39 | 1.0 | .50 |
| 2 | .90 | .70 | 1.0 | 3.0 | 69 | 44 | 4.5 | 4.8 | .34 | .30 | .90 | .60 |
| 3 | .90 | .80 | 1.0 | 2.5 | 63 | 42 | 4.5 | 3.6 | .30 | .26 | 1.0 | .60 |
| 4 | .90 | .90 | 1.2 | 2.5 | 73 | 39 | 4.5 | 5.2 | .30 | .30 | 1.1 | .51 |
| 5 | .90 | .90 | 1.2 | 3.0 | 87 | 36 | 4.0 | 4.8 | .26 | .34 | 1.1 | .34 |
| 6 | .80 | .80 | 1.1 | 3.8 | 83 | 32 | 3.8 | 3.6 | .26 | .45 | 1.1 | .39 |
| 7 | .80 | .80 | 1.2 | 6.0 | 69 | 31 | 3.8 | 2.3 | .30 | .39 | 1.0 | .45 |
| 8 | .80 | .70 | 1.5 | 7.0 | 67 | 29 | 3.6 | 1.9 | .22 | .30 | 1.0 | .45 |
| 9 | .80 | .60 | 1.8 | 8.0 | 84 | 26 | 6.2 | 2.9 | 2.3 | .30 | 1.0 | .39 |
| 10 | .80 | .60 | 1.7 | 7.0 | 104 | 25 | 5.9 | 2.7 | 4.8 | .58 | 1.0 | .45 |
| 11 | .80 | .70 | 1.5 | 6.6 | 125 | 26 | 4.5 | 2.3 | 2.9 | 1.4 | 1.0 | .50 |
| 12 | .90 | .70 | 1.6 | 8.4 | 132 | 26 | 3.3 | 4.8 | 1.9 | 1.1 | .90 | .40 |
| 13 | 1.0 | .70 | 1.8 | 13 | 132 | 30 | 4.2 | 9.8 | 1.1 | 1.0 | .90 | .35 |
| 14 | 1.1 | .70 | 1.9 | 23 | 136 | 32 | 5.2 | 4.2 | .90 | 1.1 | .81 | .30 |
| 15 | 1.2 | .70 | 1.6 | 37 | 122 | 26 | 5.6 | 2.9 | .73 | 1.1 | .81 | .26 |
| 16 | 1.3 | .70 | 1.5 | 32 | 111 | 23 | 4.8 | 1.9 | .65 | 1.0 | .73 | .30 |
| 17 | 1.3 | .70 | 1.5 | 26 | 107 | 20 | 4.0 | 1.4 | .73 | 1.0 | .73 | .35 |
| 18 | 1.2 | .73 | 1.5 | 34 | 111 | 18 | 4.0 | 1.0 | .65 | 1.0 | .73 | .40 |
| 19 | 1.1 | .81 | 1.6 | 31 | 119 | 16 | 3.8 | .90 | .45 | 1.0 | .73 | .40 |
| 20 | 1.0 | .81 | 1.8 | 25 | 132 | 16 | 2.7 | 1.0 | .34 | 1.0 | .80 | .35 |
| 21 | .90 | .76 | 2.3 | 22 | 130 | 14 | 2.5 | 1.1 | .30 | .90 | .58 | .35 |
| 22 | .80 | .70 | 2.7 | 22 | 124 | 13 | 2.7 | 1.0 | .22 | .81 | .65 | .40 |
| 23 | .70 | .70 | 2.9 | 28 | 107 | 12 | 2.3 | .65 | .22 | .81 | .58 | .40 |
| 24 | .80 | .80 | 2.6 | 37 | 93 | 12 | 1.8 | .51 | .22 | .73 | .60 | .40 |
| 25 | .80 | .90 | 2.1 | 50 | 82 | 10 | 1.2 | .65 | .26 | .73 | .60 | .40 |
| 26 | .80 | .90 | 2.5 | 56 | 79 | 9.4 | 5.3 | .65 | .39 | .81 | .65 | .40 |
| 27 | .70 | .90 | 2.7 | 50 | 75 | 8.4 | 7.0 | .39 | .58 | .90 | .58 | .40 |
| 28 | .70 | .90 | 2.9 | 62 | 65 | 9.4 | 3.1 | .39 | .51 | .90 | .50 | .40 |
| 29 | .80 | ------ | 2.7 | 73 | 54 | 7.6 | 2.9 | .58 | .51 | 1.0 | .50 | .40 |
| 30 | .90 | ------ | 2.5 | 80 | 50 | 6.2 | 3.3 | .65 | .45 | 1.0 | .50 | .40 |
| 31 | .90 | ------ | 3.0 | ------ | 48 | ------ | 4.2 | .65 | ------ | 1.0 | ------ | .40 |
| TOTAL | 28.20 | 21.41 | 57.9 | 762.3 | 2,909 | 683.0 | 124.4 | 74.42 | 23.60 | 23.90 | 24.08 | 12.64 |
| MEAN | .91 | .76 | 1.87 | 25.4 | 93.8 | 22.8 | 4.01 | 2.40 | .79 | .77 | .80 | .41 |
| MAX | 1.3 | .90 | 3.0 | 80 | 136 | 44 | 7.0 | 9.8 | 4.8 | 1.4 | 1.1 | .60 |
| MIN | .70 | .60 | 1.0 | 2.5 | 48 | 6.2 | 1.2 | .39 | .22 | .26 | .50 | .26 |
| AC-FT | 56 | 42 | 115 | 1,510 | 5,770 | 1,350 | 247 | 148 | 47 | 47 | 48 | 25 |

CAL YR 1973 TOTAL 4,744.85 MEAN 13.0 MAX 136 MIN .22 AC-FT 9,410
WTR YR 1973 TOTAL 4,740.84 MEAN 13.0 MAX 136 MIN .03 AC-FT 9,400

PEAK DISCHARGE (BASE, 200 $FT^3/S$).--No peak above base.

07208500 RAYADO CREEK AT SAUBLE RANCH, NEAR CIMARRON, N. MEX.

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

DRAINAGE AREA.--65 $mi^2$ (168 $km^2$).

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

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

AVERAGE DISCHARGE.--54 calendar years (1909, 1912, 1914, 1916-20, 1928-73), 14.0 $ft^3/s$ (0.396 $m^3/s$), 10,140 acre-ft/yr (12.5 $hm^3/yr$); 20 calendar years (1954-73), 13.2 $ft^3/s$ (0.374 $m^3/s$), 9,560 acre-ft/yr (11.8 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 281 $ft^3/s$ (7.96 $m^3/s$) Apr. 29 (gage height, 3.13 ft or 0.954 m); maximum gage height, 3.24 ft or 0.988 m Apr. 29 (backwater from debris); minimum discharge, 0.63 $ft^3/s$ (0.018 $m^3/s$) Dec. 23, result of freezeup.

1909-12, 1913-73: Maximum discharge, 9,000 $ft^3/s$ (250 $m^3/s$) June 17, 1965 (gage height, 11.5 ft or 3.505 m, from floodmarks), from rating curve extended above 70 $ft^3/s$ (1.98 $m^3/s$) on basis of field estimate of peak flow; minimum, 0.03 $ft^3/s$ (0.001 $m^3/s$) Dec. 3, 1950, but may have been less during periods of ice effect.

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

REMARKS.--Records good except those for winter periods, which are fair. No diversion above station.

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

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | 2.7 | 3.5 | 7.5 | 96 | 55 | 12 | 15 | 4.3 | 4.3 | 3.7 | 5.9 |
| 2 | 2.5 | 2.5 | 3.7 | 4.7 | 80 | 55 | 12 | 11 | 4.1 | 4.1 | 3.9 | 5.9 |
| 3 | 2.4 | 2.5 | 3.7 | 3.3 | 91 | 55 | 12 | 10 | 3.6 | 3.9 | 3.9 | 5.0 |
| 4 | 2.3 | 2.6 | 3.9 | 8.8 | 135 | 50 | 11 | 10 | 3.4 | 3.9 | 4.3 | 4.5 |
| 5 | 2.3 | 2.6 | 3.5 | 7.3 | 135 | 46 | 11 | 12 | 3.4 | 4.1 | 4.5 | 3.4 |
| 6 | 2.3 | 2.6 | 3.7 | 8.5 | 91 | 44 | 10 | 9.3 | 3.6 | 4.3 | 4.3 | 2.6 |
| 7 | 2.2 | 2.6 | 3.9 | 8.1 | 76 | 41 | 10 | 8.4 | 3.9 | 3.9 | 4.1 | 2.2 |
| 8 | 2.1 | 2.5 | 3.7 | 9.0 | 109 | 38 | 9.8 | 8.7 | 4.1 | 3.7 | 4.1 | 1.8 |
| 9 | 2.0 | 2.4 | 3.7 | 9.8 | 138 | 36 | 13 | 8.4 | 10 | 3.6 | 4.1 | 2.4 |
| 10 | 2.0 | 2.5 | 3.5 | 9.2 | 175 | 36 | 12 | 7.6 | 37 | 4.5 | 3.9 | 2.8 |
| 11 | 2.0 | 2.6 | 3.3 | 8.8 | 194 | 36 | 11 | 7.6 | 20 | 5.7 | 3.7 | 3.0 |
| 12 | 2.2 | 2.8 | 4.1 | 9.5 | 198 | 34 | 9.5 | 7.9 | 14 | 5.7 | 3.7 | 2.6 |
| 13 | 2.4 | 3.0 | 4.7 | 13 | 188 | 46 | 11 | 7.6 | 10 | 5.7 | 3.6 | 2.6 |
| 14 | 2.5 | 3.1 | 4.5 | 20 | 165 | 43 | 13 | 7.1 | 8.7 | 5.9 | 3.4 | 2.2 |
| 15 | 2.5 | 3.0 | 4.3 | 27 | 125 | 34 | 12 | 6.6 | 7.9 | 5.5 | 2.9 | 2.0 |
| 16 | 2.5 | 3.0 | 4.1 | 23 | 114 | 29 | 13 | 6.2 | 7.1 | 5.5 | 3.2 | 2.5 |
| 17 | 2.5 | 2.9 | 3.9 | 24 | 112 | 26 | 12 | 5.9 | 6.4 | 5.2 | 3.2 | 2.8 |
| 18 | 2.5 | 3.0 | 4.3 | 32 | 122 | 24 | 12 | 5.5 | 5.9 | 5.0 | 3.4 | 3.0 |
| 19 | 2.4 | 3.0 | 5.1 | 31 | 135 | 22 | 14 | 5.2 | 5.5 | 4.8 | 3.2 | 3.5 |
| 20 | 2.4 | 2.9 | 4.5 | 30 | 144 | 21 | 11 | 5.7 | 5.0 | 4.8 | 2.6 | 2.6 |
| 21 | 2.4 | 3.0 | 5.9 | 24 | 150 | 20 | 11 | 5.2 | 5.0 | 4.6 | 2.6 | 3.4 |
| 22 | 2.4 | 3.0 | 5.1 | 26 | 144 | 19 | 12 | 5.0 | 4.6 | 4.5 | 3.2 | 2.9 |
| 23 | 2.5 | 3.5 | 5.4 | 31 | 122 | 18 | 11 | 4.6 | 4.5 | 4.3 | 3.6 | 2.7 |
| 24 | 2.5 | 3.0 | 3.5 | 37 | 105 | 18 | 9.8 | 4.6 | 4.8 | 4.1 | 2.6 | 3.0 |
| 25 | 2.6 | 3.0 | 4.5 | 54 | 94 | 16 | 9.8 | 4.6 | 4.5 | 4.1 | 3.0 | 2.8 |
| 26 | 2.6 | 3.0 | 5.0 | 60 | 107 | 15 | 13 | 4.8 | 5.0 | 4.1 | 2.7 | 3.0 |
| 27 | 2.5 | 3.0 | 5.1 | 77 | 91 | 16 | 14 | 4.5 | 5.2 | 4.1 | 3.0 | 3.1 |
| 28 | 2.5 | 3.1 | 4.9 | 130 | 72 | 16 | 10 | 4.6 | 5.0 | 3.9 | 4.5 | 3.2 |
| 29 | 2.6 | ------ | 4.7 | 164 | 63 | 16 | 10 | 5.7 | 4.6 | 3.9 | 5.7 | 3.1 |
| 30 | 2.6 | ------ | 4.3 | 152 | 57 | 14 | 10 | 5.2 | 4.5 | 3.9 | 5.7 | 3.0 |
| 31 | 2.7 | ------ | 5.3 | ------ | 55 | ------ | 13 | 5.0 | ------ | 3.7 | ------ | 3.0 |
| TOTAL | 74.4 | 79.4 | 133.3 | 1,049.5 | 3,683 | 939 | 354.9 | 219.5 | 215.6 | 139.3 | 110.3 | 96.5 |
| MEAN | 2.40 | 2.84 | 4.30 | 35.0 | 119 | 31.3 | 11.4 | 7.08 | 7.19 | 4.49 | 3.68 | 3.11 |
| MAX | 2.7 | 3.5 | 5.9 | 164 | 198 | 55 | 14 | 15 | 37 | 5.9 | 5.7 | 5.9 |
| MIN | 2.0 | 2.4 | 3.3 | 3.3 | 55 | 14 | 9.5 | 4.5 | 3.4 | 3.6 | 2.6 | 1.8 |
| AC-FT | 148 | 157 | 264 | 2,080 | 7,310 | 1,860 | 704 | 435 | 428 | 276 | 219 | 191 |

CAL YR 1973 TOTAL 7,094.7 MEAN 19.4 MAX 198 MIN 1.8 AC-FT 14,070
WTR YR 1973 TOTAL 7,006.5 MEAN 19.2 MAX 198 MIN 1.6 AC-FT 13,900

PEAK DISCHARGE (BASE, 100 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-29 | 1900 | 3.13 | 281 | 5-10 | 2400 | 3.01 | 229 |
| 5- 5 | 2100 | 2.97 | 212 | | | | |

## 07211000 CIMARRON RIVER AT SPRINGER, N. MEX.

LOCATION.--Lat 36°21'37", long 104°35'53", Colfax County in Maxwell Grant, on left bank at Springer, 400 ft (120 m) downstream from bridge on State Highway 199, 0.3 mi (0.5 km) upstream from Salado Creek, 8.2 mi (13.2 km) upstream from mouth, and at mile 6.0 (9.7 km).

DRAINAGE AREA.--1,032 $mi^2$ (2,673 $km^2$).

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

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

AVERAGE DISCHARGE.--49 calendar years (1921, 1925, 1927-73), 17.8 $ft^3/s$ (0.504 $m^3/s$), 12,900 acre-ft/yr (15.9 $hm^3/yr$); 20 calendar years (1954-73),16.0 $ft^3/s$ (0.453 $m^3/s$), 11,590 acre-ft/yr (14.3 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 414 $ft^3/s$ (11.7 $m^3/s$) May 23 (gage height, 4.86 ft or 1.481 m); minimum, 0.22 $ft^3/s$ (0.006 $m^3/s$) Jan. 27, result of freezeup.
1930-73: Maximum discharge, 29,500 $ft^3/s$ (835 $m^3/s$) June 18, 1965 (gage height, 19.96 ft or 6.084 m, from floodmarks), from rating curve extended above 1,800 $ft^3/s$ (51.0 $m^3/s$) on basis of contracted-opening measurement of peak flow; no flow at times in 1954, 1956-57.
Maximum stage, about 22 ft (6.7 m) Sept. 29, 1904 (backwater from debris on railroad bridge). Another major flood occurred June 11, 1913. Maximum discharges of these floods probably exceeded 10,000 $ft^3/s$ (280 $m^3/s$), but probably were less than 1965 flood.

REMARKS.--Records good except those for winter periods, which are fair. Flow partly regulated by Eagle Nest Lake (see sta 07205500). Diversions for irrigation of about 23,000 acres (93.1 $km^2$) above station and a few hundred acres between station and mouth.

REVISIONS (WATER YEARS).--WSP 827: 1934-36(M). WSP 1281: 1942, 1945-46(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.6 | 3.1 | 2.5 | 9.6 | 151 | 23 | 1.8 | 2.4 | .73 | .94 | 2.9 | 3.8 |
| 2 | 4.2 | 3.2 | 2.5 | 11 | 114 | 20 | 1.7 | 2.2 | .60 | .86 | 2.9 | 3.8 |
| 3 | 3.8 | 3.3 | 2.5 | 11 | 102 | 20 | 1.7 | 2.3 | .53 | .81 | 3.3 | 3.4 |
| 4 | 4.0 | 3.2 | 2.5 | 10 | 79 | 18 | 1.6 | 2.0 | .51 | .85 | 2.8 | 3.6 |
| 5 | 4.2 | 2.9 | 2.5 | 11 | 99 | 9.6 | 1.5 | 1.4 | .54 | 1.1 | 3.1 | 3.5 |
| 6 | 4.0 | 2.9 | 2.3 | 13 | 80 | 6.8 | 1.2 | 1.3 | .57 | 1.1 | 3.3 | 3.4 |
| 7 | 4.2 | 3.1 | 2.5 | 19 | 52 | 9.8 | 1.4 | 1.2 | .62 | .93 | 3.9 | 3.6 |
| 8 | 3.6 | 3.0 | 3.1 | 18 | 89 | 11 | 1.6 | 1.2 | .60 | .81 | 3.8 | 3.8 |
| 9 | 3.0 | 3.1 | 3.8 | 16 | 105 | 9.3 | 3.6 | 1.6 | 2.6 | .78 | 3.3 | 3.7 |
| 10 | 2.0 | 3.2 | 4.3 | 13 | 130 | 5.8 | 4.0 | 1.4 | 132 | 1.8 | 3.1 | 3.5 |
| 11 | 3.0 | 3.2 | 3.9 | 16 | 152 | 4.5 | 4.6 | 1.2 | 30 | 3.2 | 2.8 | 3.6 |
| 12 | 4.2 | 3.0 | 3.3 | 27 | 163 | 5.2 | 3.0 | 1.1 | 12 | 2.0 | 2.9 | 3.9 |
| 13 | 4.9 | 2.8 | 3.3 | 46 | 140 | 11 | 3.0 | 1.1 | 4.9 | 2.1 | 2.8 | 3.6 |
| 14 | 3.7 | 2.8 | 3.3 | 66 | 200 | 9.2 | 2.5 | 1.1 | 2.6 | 1.7 | 2.8 | 3.9 |
| 15 | 3.7 | 2.8 | 3.3 | 124 | 263 | 8.3 | 2.4 | .91 | 1.9 | 1.9 | 2.9 | 3.5 |
| 16 | 3.8 | 2.7 | 3.0 | 72 | 168 | 5.2 | 2.2 | .82 | 1.6 | 1.9 | 3.3 | 3.6 |
| 17 | 4.2 | 3.0 | 2.8 | 50 | 144 | 4.1 | 2.9 | .72 | 1.5 | 2.0 | 3.4 | 3.9 |
| 18 | 3.4 | 2.8 | 2.5 | 39 | 246 | 3.1 | 3.5 | .65 | 1.3 | 2.1 | 1.3 | 4.0 |
| 19 | 3.5 | 2.9 | 2.3 | 49 | 324 | 3.0 | 3.1 | .69 | 1.2 | 2.1 | 1.3 | 2.7 |
| 20 | 3.1 | 2.8 | 2.3 | 37 | 255 | 3.1 | 1.9 | .92 | 1.0 | 2.6 | 3.4 | 2.8 |
| 21 | 3.0 | 2.8 | 2.3 | 88 | 262 | 2.7 | 2.0 | .87 | .90 | 2.8 | 3.9 | 3.7 |
| 22 | 2.8 | 3.0 | 2.5 | 47 | 280 | 2.6 | 2.6 | .72 | .91 | 2.8 | 3.6 | 3.7 |
| 23 | 3.0 | 3.2 | 3.0 | 36 | 398 | 2.4 | 3.7 | .61 | .92 | 2.6 | 3.6 | 3.6 |
| 24 | 3.0 | 3.0 | 4.5 | 38 | 326 | 2.1 | 3.8 | .60 | .89 | 2.3 | 3.5 | 3.9 |
| 25 | 3.0 | 2.9 | 3.9 | 53 | 140 | 1.8 | 2.5 | .54 | .80 | 2.5 | 3.6 | 3.5 |
| 26 | 3.0 | 2.7 | 4.6 | 71 | 125 | 1.8 | 21 | .51 | 1.2 | 2.5 | 3.6 | 3.5 |
| 27 | 2.0 | 2.5 | 4.1 | 74 | 145 | 1.9 | 4.9 | .65 | 1.1 | 2.3 | 3.4 | 3.0 |
| 28 | 3.3 | 2.5 | 4.1 | 88 | 112 | 2.4 | 2.6 | 1.3 | 1.1 | 2.3 | 3.3 | 3.6 |
| 29 | 3.4 | ------ | 7.0 | 138 | 54 | 1.9 | 2.4 | 1.2 | 1.1 | 2.5 | 3.6 | 3.6 |
| 30 | 3.2 | ------ | 9.6 | 178 | 32 | 1.8 | 3.1 | 1.4 | .94 | 2.4 | 3.8 | 4.2 |
| 31 | 3.3 | ------ | 9.6 | ------ | 25 | ------ | 2.9 | 1.0 | ------ | 2.6 | ------ | 3.2 |
| TOTAL | 108.1 | 82.4 | 113.7 | 1,468.6 | 4,955 | 211.4 | 100.7 | 35.61 | 207.16 | 59.18 | 95.2 | 111.1 |
| MEAN | 3.49 | 2.94 | 3.67 | 49.0 | 160 | 7.05 | 3.25 | 1.15 | 6.91 | 1.91 | 3.17 | 3.58 |
| MAX | 4.9 | 3.3 | 9.6 | 178 | 398 | 23 | 21 | 2.4 | 132 | 3.2 | 3.9 | 4.2 |
| MIN | 2.0 | 2.5 | 2.3 | 9.6 | 25 | 1.8 | 1.2 | .51 | .51 | .78 | 1.3 | 2.7 |
| AC-FT | 214 | 163 | 226 | 2,910 | 9,830 | 419 | 200 | 71 | 411 | 117 | 189 | 220 |

CAL YR 1973 TOTAL 7,548.15 MEAN 20.7 MAX 398 MIN .51 AC-FT 14,970
WTR YR 1973 TOTAL 7,718.71 MEAN 21.1 MAX 398 MIN .45 AC-FT 15,310

PEAK DISCHARGE (BASE, 280 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-14 | 2215 | 4.74 | 353 | 5-23 | 0130 | 4.86 | 414 |
| 5-19 | 2145 | 4.79 | 376 | 9-10 | 0715 | 4.71 | 335 |

## 07211500 CANADIAN RIVER NEAR TAYLOR SPRINGS, N. MEX.

LOCATION.--Lat 36°17'49", long 104°29'36", in NW¼SE¼ sec.21, T.24 N., R.23 E., Colfax County, on left bank at head of gorge, 2.0 mi (3.2 km) south of Taylor Springs, 2.3 mi (3.7 km) downstream from Cimarron River, 2.4 mi (3.9 km) upstream from Chico Creek, 7.1 mi (11.4 km) southeast of Springer, and at mile 850.4 (1,368.3 km).

DRAINAGE AREA.--2,850 $mi^2$ (7,380 $km^2$).

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

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

AVERAGE DISCHARGE.--27 calendar years (1940-57, 1965-73), 92.6 $ft^3/s$ (2.622 $m^3/s$), 67,090 acre-ft/yr (82.7 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 3,850 $ft^3/s$ (109 $m^3/s$) Sept. 10 (gage height 5.62 ft or 1.713 m); minimum, 1.2 $ft^3/s$ (0.034 $m^3/s$) Aug. 27, 28.
Period of record: Maximum discharge, 162,000 $ft^3/s$ (4,590 $m^3/s$) June 18, 1965 (gage height, 47.4 ft or 14.448 m, from floodmarks), from rating curve extended above 7,000 $ft^3/s$ (198 $m^3/s$) on basis of slope-area measurement of peak flow; no flow at times.
Maximum flood prior to 1965 occurred Sept. 29, 1904 (discharge published as 91,100 $ft^3/s$ or 2,580 $m^3/s$ in WSP 842, 847).

REMARKS.--Records fair except those for winter periods, which are poor. Diversions for irrigation of about 30,000 acres (121 $km^2$) above station. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1177: Drainage area. WSP 1281: 1941-42(P), 1945-47(M), 1948-50(P).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13 | 14 | 9.0 | 30 | 382 | 37 | 5.0 | 123 | 31 | 9.0 | 9.4 | 14 |
| 2 | 12 | 12 | 9.0 | 38 | 309 | 33 | 5.0 | 50 | 13 | 8.0 | 8.4 | 14 |
| 3 | 12 | 11 | 8.3 | 35 | 276 | 30 | 6.1 | 31 | 7.0 | 7.3 | 9.9 | 11 |
| 4 | 13 | 12 | 7.9 | 28 | 167 | 28 | 5.6 | 26 | 4.2 | 7.0 | 11 | 10 |
| 5 | 14 | 14 | 7.9 | 30 | 136 | 26 | 8.3 | 21 | 2.6 | 7.6 | 10 | 9.0 |
| 6 | 13 | 14 | 7.6 | 34 | 217 | 24 | 6.9 | 18 | 1.6 | 8.4 | 11 | 8.0 |
| 7 | 11 | 13 | 7.6 | 53 | 256 | 22 | 5.0 | 16 | 1.6 | 8.4 | 12 | 8.0 |
| 8 | 9.0 | 11 | 9.7 | 60 | 399 | 20 | 4.8 | 14 | 1.5 | 7.3 | 12 | 9.0 |
| 9 | 8.0 | 10 | 12 | 50 | 519 | 18 | 14 | 19 | 2.0 | 5.7 | 11 | 8.0 |
| 10 | 9.0 | 12 | 15 | 50 | 358 | 17 | 26 | 24 | 1,440 | 8.9 | 11 | 8.0 |
| 11 | 10 | 11 | 12 | 70 | 358 | 16 | 13 | 29 | 310 | 24 | 11 | 9.0 |
| 12 | 12 | 11 | 10 | 130 | 313 | 15 | 11 | 31 | 202 | 20 | 11 | 8.6 |
| 13 | 15 | 10 | 10 | 300 | 318 | 26 | 7.6 | 21 | 60 | 14 | 11 | 8.2 |
| 14 | 17 | 10 | 8.6 | 530 | 426 | 52 | 6.7 | 15 | 29 | 11 | 11 | 8.6 |
| 15 | 19 | 11 | 7.9 | 690 | 432 | 31 | 8.2 | 10 | 20 | 9.4 | 9.4 | 7.6 |
| 16 | 20 | 10 | 8.3 | 340 | 254 | 23 | 22 | 7.6 | 15 | 8.4 | 9.9 | 7.0 |
| 17 | 21 | 11 | 8.3 | 300 | 211 | 19 | 16 | 6.0 | 12 | 8.0 | 11 | 9.0 |
| 18 | 20 | 12 | 7.9 | 362 | 270 | 14 | 14 | 5.0 | 9.9 | 8.7 | 12 | 8.6 |
| 19 | 19 | 11 | 7.6 | 382 | 378 | 10 | 14 | 4.0 | 9.4 | 9.0 | 10 | 8.0 |
| 20 | 16 | 10 | 7.2 | 242 | 331 | 8.6 | 9.0 | 3.5 | 9.0 | 9.0 | 9.9 | 7.0 |
| 21 | 16 | 9.4 | 6.4 | 235 | 331 | 7.2 | 6.9 | 2.9 | 9.4 | 9.0 | 13 | 9.0 |
| 22 | 15 | 9.0 | 6.4 | 176 | 354 | 6.4 | 8.6 | 2.0 | 8.0 | 9.0 | 13 | 8.6 |
| 23 | 16 | 9.0 | 7.6 | 176 | 455 | 6.1 | 102 | 1.8 | 13 | 9.4 | 13 | 8.0 |
| 24 | 17 | 10 | 15 | 208 | 397 | 5.8 | 27 | 1.7 | 24 | 9.0 | 12 | 7.4 |
| 25 | 16 | 11 | 16 | 320 | 218 | 5.6 | 17 | 1.9 | 6.6 | 8.7 | 13 | 7.0 |
| 26 | 15 | 11 | 15 | 554 | 154 | 5.3 | 39 | 1.6 | 8.4 | 8.4 | 11 | 7.4 |
| 27 | 14 | 10 | 15 | 401 | 165 | 5.3 | 78 | 1.4 | 8.7 | 8.4 | 11 | 7.8 |
| 28 | 14 | 9.7 | 16 | 317 | 134 | 7.2 | 20 | 1.4 | 7.6 | 8.4 | 13 | 8.2 |
| 29 | 16 | ------ | 21 | 423 | 193 | 6.1 | 19 | 1.9 | 9.9 | 8.4 | 14 | 8.2 |
| 30 | 15 | ------ | 24 | 363 | 51 | 5.0 | 24 | 4.7 | 9.9 | 8.4 | 14 | 8.6 |
| 31 | 15 | ------ | 26 | ------ | 40 | ------ | 217 | 134 | ------ | 8.7 | ------ | 8.4 |
| TOTAL | 452.0 | 309.1 | 350.2 | 6,927 | 8,802 | 529.6 | 766.7 | 629.4 | 2,286.3 | 294.9 | 338.9 | 269.2 |
| MEAN | 14.6 | 11.0 | 11.3 | 231 | 284 | 17.7 | 24.7 | 20.3 | 76.2 | 9.51 | 11.3 | 8.68 |
| MAX | 21 | 14 | 26 | 690 | 519 | 52 | 217 | 134 | 1,440 | 24 | 14 | 14 |
| MIN | 8.0 | 9.0 | 6.4 | 28 | 40 | 5.0 | 4.8 | 1.4 | 1.5 | 5.7 | 8.4 | 7.0 |
| AC-FT | 897 | 613 | 695 | 13,740 | 17,460 | 1,050 | 1,520 | 1,250 | 4,530 | 585 | 672 | 534 |

CAL YR 1973 TOTAL 21,955.3 MEAN 60.2 MAX 1,440 MIN 1.4 AC-FT 43,550
WTR YR 1973 TOTAL 22,886.4 MEAN 62.7 MAX 1,440 MIN 1.4 AC-FT 45,400

PEAK DISCHARGE (BASE, 3,000 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 9-10 | 0300 | 5.62 | 3,850 | | | | |

## 07214500 MORA RIVER NEAR HOLMAN, N. MEX.

LOCATION.--Lat 36°06'37", long 105°22'33", Mora County, in Mora Grant, on right bank 330 ft (100 m) downstream from bridge, 2.4 mi (3.9 km) south of Chacon, 4.5 mi (7.2 km) downstream from confluence of Luna and Lujan Creeks, 5.0 mi (8.0 km) north of Holman, 8.0 mi (12.9 km) southwest of Guadalupita, and at mile 106.9 (172.0 km).

DRAINAGE AREA.--57 $mi^2$ (148 $km^2$).

PERIOD OF RECORD.--January 1953 to December 1973 (discontinued). Published as Rio Agua Negra near Holman prior to October 1965.

GAGE.--Water-stage recorder. Altitude of gage is 7,845 ft (2,391 m) from topographic map. Prior to Apr. 28, 1972, at site 500 ft (150 m) upstream at datum 7.86 ft (2.396 m) higher.

AVERAGE DISCHARGE.--21 calendar years, 13.5 $ft^3/s$ (0.382 $m^3/s$), 9,780 acre-ft/yr (12.1 $hm^3/yr$); 20 calendar years (1954-73), 13.9 $ft^3/s$ (0.394 $m^3/s$), 10,070 acre-ft/yr (12.4 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 556 $ft^3/s$ (15.7 $m^3/s$) Aug. 4 (gage height, 4.30 ft or 1.311 m), from rating curve extended above 95 $ft^3/s$ (2.69 $m^3/s$); minimum, 0.94 $ft^3/s$ (0.027 $m^3/s$) Dec. 20, result of freezeup.

Period of record: Maximum discharge, 4,700 $ft^3/s$ (133 $m^3/s$) July 22, 1954 (gage height, 6.10 ft or 1.859 m, site and datum then in use), from rating curve extended above 300 $ft^3/s$ (8.50 $m^3/s$) on basis of slope-area measurement of peak flow; minimum, about 0.06 $ft^3/s$ (0.002 $m^3/s$) Jan. 18, 1967, result of freezeup.

A major flood probably occurred Sept. 29, 1904, when the entire Mora River basin was in heavy flood.

REMARKS.--Records good except those for winter periods, which are poor. Diversions for irrigation of about 1,600 acres (6.48 $km^2$) above station.

REVISIONS.--WSP 1511. Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.0 | 4.8 | 5.5 | 8.9 | 140 | 112 | 17 | 13 | 7.3 | 6.0 | 5.1 | 4.3 |
| 2 | 4.0 | 4.5 | 5.7 | 9.0 | 112 | 110 | 16 | 16 | 6.7 | 5.7 | 5.1 | 4.4 |
| 3 | 4.2 | 4.7 | 5.6 | 9.0 | 109 | 102 | 16 | 23 | 6.1 | 5.2 | 5.5 | 4.8 |
| 4 | 4.1 | 4.8 | 5.4 | 9.0 | 143 | 98 | 17 | 57 | 5.8 | 4.9 | 6.1 | 4.5 |
| 5 | 4.0 | 5.0 | 5.8 | 8.0 | 180 | 92 | 16 | 25 | 5.5 | 5.2 | 5.5 | 4.5 |
| 6 | 3.8 | 5.2 | 5.4 | 9.8 | 158 | 84 | 15 | 16 | 4.5 | 6.4 | 5.1 | 4.0 |
| 7 | 3.5 | 5.0 | 5.0 | 15 | 127 | 80 | 14 | 15 | 4.1 | 6.3 | 5.2 | 4.2 |
| 8 | 3.3 | 4.5 | 5.2 | 10 | 137 | 75 | 14 | 13 | 3.7 | 6.0 | 5.2 | 4.4 |
| 9 | 3.2 | 4.8 | 5.5 | 13 | 195 | 72 | 18 | 13 | 30 | 5.9 | 5.4 | 4.6 |
| 10 | 3.0 | 5.0 | 5.0 | 16 | 259 | 69 | 16 | 13 | 21 | 7.6 | 5.5 | 4.8 |
| 11 | 3.2 | 5.0 | 5.5 | 18 | 338 | 67 | 15 | 13 | 23 | 8.1 | 5.5 | 5.2 |
| 12 | 3.5 | 4.8 | 6.0 | 23 | 357 | 68 | 14 | 13 | 13 | 7.1 | 5.5 | 4.7 |
| 13 | 4.0 | 4.5 | 6.0 | 33 | 321 | 76 | 19 | 13 | 11 | 6.7 | 5.2 | 4.5 |
| 14 | 4.5 | 4.2 | 5.6 | 52 | 259 | 87 | 19 | 12 | 10 | 6.6 | 5.1 | 4.4 |
| 15 | 5.0 | 4.0 | 8.3 | 54 | 195 | 69 | 20 | 11 | 9.2 | 6.2 | 5.0 | 4.2 |
| 16 | 5.0 | 4.0 | 8.9 | 49 | 186 | 60 | 18 | 10 | 8.5 | 6.0 | 4.9 | 4.5 |
| 17 | 5.0 | 4.2 | 7.5 | 50 | 204 | 55 | 19 | 9.5 | 7.9 | 5.8 | 4.7 | 4.5 |
| 18 | 5.0 | 4.5 | 8.1 | 58 | 249 | 50 | 19 | 9.2 | 7.6 | 6.0 | 4.1 | 4.2 |
| 19 | 5.5 | 4.5 | 8.6 | 46 | 301 | 45 | 18 | 8.7 | 7.2 | 5.9 | 4.0 | 4.0 |
| 20 | 5.0 | 4.5 | 9.0 | 44 | 322 | 40 | 16 | 8.7 | 6.8 | 5.9 | 3.5 | 4.0 |
| 21 | 4.8 | 4.2 | 9.8 | 40 | 307 | 35 | 16 | 8.8 | 6.4 | 6.0 | 3.8 | 4.5 |
| 22 | 4.5 | 4.0 | 9.0 | 38 | 274 | 30 | 17 | 8.7 | 6.2 | 5.7 | 4.0 | 4.0 |
| 23 | 4.5 | 4.0 | 8.0 | 44 | 217 | 28 | 15 | 7.2 | 6.2 | 5.5 | 4.0 | 3.5 |
| 24 | 4.8 | 4.2 | 7.0 | 51 | 192 | 25 | 14 | 6.7 | 6.7 | 5.5 | 4.0 | 3.5 |
| 25 | 5.0 | 4.5 | 6.0 | 70 | 176 | 35 | 14 | 7.1 | 6.5 | 5.9 | 4.0 | 3.5 |
| 26 | 5.0 | 4.5 | 7.0 | 68 | 185 | 30 | 17 | 7.6 | 7.0 | 5.5 | 4.0 | 3.0 |
| 27 | 4.8 | 4.8 | 8.0 | 82 | 149 | 25 | 14 | 7.9 | 6.8 | 5.1 | 3.8 | 3.2 |
| 28 | 4.8 | 5.0 | 8.1 | 118 | 123 | 23 | 13 | 8.4 | 6.5 | 5.1 | 3.8 | 3.5 |
| 29 | 5.0 | ------ | 7.5 | 150 | 107 | 20 | 14 | 8.5 | 6.3 | 5.2 | 4.0 | 3.8 |
| 30 | 5.0 | ------ | 7.0 | 158 | 105 | 18 | 14 | 8.3 | 6.3 | 5.2 | 4.2 | 4.0 |
| 31 | 5.0 | ------ | 8.0 | ------ | 108 | ------ | 22 | 8.0 | ------ | 5.2 | ------ | 4.0 |
| TOTAL | 136.0 | 127.7 | 213.0 | 1,353.7 | 6,235 | 1,780 | 506 | 399.3 | 263.8 | 183.4 | 140.8 | 129.2 |
| MEAN | 4.39 | 4.56 | 6.87 | 45.1 | 201 | 59.3 | 16.3 | 12.9 | 8.79 | 5.92 | 4.69 | 4.17 |
| MAX | 5.5 | 5.2 | 9.8 | 158 | 357 | 112 | 22 | 57 | 30 | 8.1 | 6.1 | 5.2 |
| MIN | 3.0 | 4.0 | 5.0 | 8.0 | 105 | 18 | 13 | 6.7 | 3.7 | 4.9 | 3.5 | 3.0 |
| AC-FT | 270 | 253 | 422 | 2,690 | 12,370 | 3,530 | 1,000 | 792 | 523 | 364 | 279 | 256 |

CAL YR 1973 TOTAL 11,467.9 MEAN 31.4 MAX 357 MIN 3.0 AC-FT 22,750
WTR YR 1973 TOTAL 11,459.7 MEAN 31.4 MAX 357 MIN 2.0 AC-FT 22,730

PEAK DISCHARGE (BASE, 150 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-29 | 2000 | 3.42 | 182 | 5-20 | 0530 | 3.89 | 338 |
| 5- 5 | 1800 | 3.41 | 190 | 8- 4 | 1830 | 4.30 | 556 |
| 5-12 | 0730 | 4.00 | 379 | 9- 9 | 2015 | 3.66 | 303 |

NOTE.--No gage-height record Jan. 29 to Mar. 1.

## 07215500 MORA RIVER AT LA CUEVA, N. MEX.

LOCATION.--Lat 35°56'19", long 105°14'56", Mora County, in Mora Grant, on right bank 600 ft (180 m) downstream from bridge on State Highway 3, 0.2 mi (0.3 km) south of La Cueva, 0.5 mi (0.8 km) downstream from La Cueva damsite, and at mile 86.6 (139.3 km).

DRAINAGE AREA.--173 $mi^2$ (448 $km^2$).

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

GAGE.--Water-stage recorder. Datum of gage is 6,998.7 ft (2,133.20 m) above mean sea level. Aug. 25, 1903 to Sept. 29, 1904 (destroyed by flood of Sept. 29, 1904) and Feb. 22, 1905 to July 31, 1911, nonrecording gages at sites about 600 ft (180 m) upstream at different datums. Apr. 15, 1931 to Apr. 18, 1962, water-stage recorder at site 600 ft (180 m) upstream at datum about 2 ft (0.6 m) higher.

AVERAGE DISCHARGE.--46 calendar years (1907-10, 1932-73), 28.2 $ft^3/s$ (0.799 $m^3/s$), 20,430 acre-ft/yr (25.2 $hm^3/yr$); 20 calendar years (1954-73), 28.1 $ft^3/s$ (0.796 $m^3/s$), 20,360 acre-ft/yr (25.1 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 512 $ft^3/s$ (14.5 $m^3/s$) May 13 (gage height, 5.83 ft or 1.77 m, from floodmarks); minimum, 1.9 $ft^3/s$ (0.054 $m^3/s$) Dec. 20, 21, 23, result of freezeup.
1931-73: Maximum discharge, 1,530 $ft^3/s$ (43.3 $m^3/s$) Sept. 23, 1941, from rating curve extended above 400 $ft^3/s$ (11.3 $m^3/s$); maximum gage height, 9.00 ft (2.743 m) Aug. 5, 1966; no flow at times.
Flood of Sept. 29, 1904, may have exceeded 20,000 $ft^3/s$ (566 $m^3/s$); another major flood occurred June 11, 1913, but is believed less than that of 1904.

REMARKS.--Records fair except those for winter periods, which are poor. Diversions above station for irrigation of about 7,000 acres (28.3 $km^2$), part of which is below station. See tabulation below for monthly and yearly diversion of La Cueva Canal, which bypasses gage on left bank.

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

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.5 | 9.4 | 4.2 | 28 | 287 | 199 | 80 | 67 | 20 | 16 | 8.8 | 12 |
| 2 | 3.5 | 9.0 | 4.7 | 28 | 243 | 206 | 77 | 57 | 19 | 16 | 8.6 | 13 |
| 3 | 4.0 | 9.0 | 5.9 | 27 | 213 | 183 | 76 | 58 | 18 | 16 | 7.7 | 11 |
| 4 | 4.0 | 9.2 | 5.7 | 27 | 229 | 194 | 73 | 72 | 17 | 16 | 7.6 | 7.6 |
| 5 | 4.0 | 9.2 | 5.7 | 29 | 270 | 177 | 75 | 84 | 16 | 16 | 7.6 | 5.5 |
| 6 | 4.5 | 9.1 | 5.7 | 38 | 261 | 163 | 66 | 58 | 17 | 16 | 8.6 | 5.0 |
| 7 | 4.0 | 9.1 | 5.5 | 43 | 221 | 154 | 64 | 57 | 17 | 16 | 8.6 | 5.3 |
| 8 | 4.0 | 8.8 | 6.0 | 35 | 208 | 137 | 60 | 55 | 18 | 16 | 8.6 | 5.5 |
| 9 | 3.5 | 8.0 | 6.6 | 36 | 241 | 125 | 62 | 51 | 21 | 16 | 8.4 | 6.5 |
| 10 | 3.0 | 8.0 | 11 | 41 | 312 | 140 | 64 | 51 | 87 | 19 | 7.5 | 7.0 |
| 11 | 4.0 | 8.3 | 22 | 58 | 383 | 149 | 62 | 47 | 69 | 20 | 7.0 | 6.9 |
| 12 | 5.0 | 8.0 | 19 | 84 | 452 | 148 | 60 | 40 | 44 | 16 | 6.9 | 6.9 |
| 13 | 6.0 | 7.7 | 17 | 164 | 500 | 157 | 71 | 27 | 37 | 16 | 6.7 | 6.6 |
| 14 | 7.7 | 7.1 | 13 | 211 | 463 | 209 | 88 | 26 | 29 | 16 | 7.3 | 7.0 |
| 15 | 7.6 | 6.5 | 15 | 213 | 386 | 164 | 82 | 27 | 29 | 16 | 7.6 | 6.9 |
| 16 | 7.7 | 6.0 | 15 | 165 | 342 | 147 | 77 | 21 | 26 | 16 | 8.0 | 7.0 |
| 17 | 7.7 | 6.2 | 16 | 164 | 324 | 143 | 82 | 20 | 25 | 16 | 8.3 | 7.0 |
| 18 | 6.5 | 6.8 | 16 | 201 | 348 | 132 | 91 | 20 | 26 | 16 | 8.4 | 6.8 |
| 19 | 6.8 | 6.3 | 17 | 179 | 392 | 125 | 95 | 20 | 26 | 16 | 8.5 | 6.5 |
| 20 | 6.5 | 5.5 | 17 | 156 | 420 | 115 | 84 | 19 | 26 | 15 | 8.4 | 6.0 |
| 21 | 6.0 | 5.2 | 19 | 144 | 422 | 110 | 81 | 19 | 16 | 14 | 7.0 | 5.5 |
| 22 | 5.0 | 5.3 | 18 | 148 | 413 | 107 | 78 | 18 | 15 | 13 | 7.1 | 6.0 |
| 23 | 5.0 | 5.0 | 17 | 165 | 347 | 100 | 74 | 18 | 16 | 13 | 7.8 | 6.0 |
| 24 | 7.0 | 8.0 | 15 | 176 | 309 | 97 | 70 | 17 | 15 | 12 | 7.8 | 6.1 |
| 25 | 9.0 | 5.5 | 19 | 221 | 290 | 92 | 82 | 17 | 15 | 11 | 7.4 | 6.5 |
| 26 | 10 | 4.1 | 23 | 225 | 283 | 87 | 75 | 15 | 15 | 11 | 7.4 | 6.0 |
| 27 | 10 | 3.6 | 27 | 216 | 255 | 101 | 62 | 17 | 16 | 10 | 7.0 | 7.0 |
| 28 | 9.5 | 3.9 | 27 | 261 | 211 | 103 | 61 | 17 | 16 | 9.9 | 10 | 7.5 |
| 29 | 9.5 | ------ | 27 | 310 | 183 | 98 | 61 | 18 | 16 | 9.8 | 13 | 8.0 |
| 30 | 9.9 | ------ | 24 | 320 | 179 | 85 | 59 | 19 | 16 | 9.9 | 13 | 8.6 |
| 31 | 9.6 | ------ | 25 | ------ | 189 | ------ | 62 | 20 | ------ | 9.5 | ------ | 8.5 |
| TOTAL | 194.0 | 197.8 | 469.0 | 4,113 | 9,576 | 4,147 | 2,254 | 1,072 | 743 | 449.1 | 246.6 | 221.7 |
| MEAN | 6.26 | 7.06 | 15.1 | 137 | 309 | 138 | 72.7 | 34.6 | 24.8 | 14.5 | 8.22 | 7.15 |
| MAX | 10 | 9.4 | 27 | 320 | 500 | 209 | 95 | 84 | 87 | 20 | 13 | 13 |
| MIN | 3.0 | 3.6 | 4.2 | 27 | 179 | 85 | 59 | 15 | 15 | 9.5 | 6.7 | 5.0 |
| AC-FT | 385 | 392 | 930 | 8,160 | 18,990 | 8,230 | 4,470 | 2,130 | 1,470 | 891 | 489 | 440 |
| (†) | 222 | 322 | 246 | 20 | 133 | 594 | 387 | 190 | 213 | 319 | 672 | 448 |

CAL YR 1973 TOTAL 23,683.2 MEAN 64.9 MAX 500 MIN 3.0 AC-FT 46,980 † 3,770
WTR YR 1973 TOTAL 23,713.6 MEAN 65.0 MAX 500 MIN 1.4 AC-FT 47,040 † 3,740

PEAK DISCHARGE (BASE, 300 $FT^3/S$).--Apr. 13 (1845) 320 $ft^3/s$ (5.23 ft); Apr. 30 (0315) 339 $ft^3/s$ (4.56 ft); May 13 (about 1000) 512 $ft^3/s$ (5.83 ft, from floodmarks); May 20 (1215) 435 $ft^3/s$ (5.28 ft).

† Diversion, in acre-feet, by La Cueva Canal.
NOTE.--No gage-height record May 12-13.

## 07216500 MORA RIVER NEAR GOLONDRINAS, N. MEX.

LOCATION.--Lat 35°53'27", long 105°09'47", Mora County, in Mora Grant, on right bank, 0.7 mi (1.1 km) upstream from bridge on State Highway 160, 1.2 mi (1.9 km) east of Golondrinas, 1.9 mi (3.1 km) upstream from Coyote Creek, 4.7 mi (7.6 km) downstream from Rito Cebolla, and at mile 75.8 (122.0 km).

DRAINAGE AREA.--267 $mi^2$ (692 $km^2$).

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

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

AVERAGE DISCHARGE.--55 calendar years (1916-20, 1924-73), 35.1 $ft^3/s$ (0.994 $m^3/s$), 25,430 acre-ft/yr (31.4 $hm^3/yr$); 20 calendar years (1954-73), 32.1 $ft^3/s$ (0.909 $m^3/s$), 23,260 acre-ft/yr (28.7 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 755 $ft^3/s$ (21.4 $m^3/s$) Apr. 14 (gage height, 3.49 ft or 1.064 m), from rating curve extended above 370 $ft^3/s$ (10.5 $m^3/s$); minimum, 1.2 $ft^3/s$ (0.034 $m^3/s$) Feb. 10, result of freezeup.

Period of record: Maximum discharge, 14,000 $ft^3/s$ (396 $m^3/s$) Aug. 22, 1952 (gage height, 14.4 ft or 4.39 m), from rating curve extended above 660 $ft^3/s$ (18.7 $m^3/s$) on basis of slope-area measurement of peak flow; no flow at times.

Floods of Sept. 29, 1904 and June 11, 1913, probably exceeded 25,000 $ft^3/s$ (708 $m^3/s$).

REMARKS.--Records good except those for winter periods and those for April, which are poor. Diversions for irrigation of about 12,000 acres (48.6 $km^2$) above station. Off-channel lakes make it possible to divert and store water during non-irrigation season.

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

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.5 | 8.8 | 9.5 | 40 | 309 | 222 | 84 | 71 | 16 | 17 | 7.4 | 13 |
| 2 | 4.5 | 8.3 | 9.1 | 40 | 266 | 238 | 76 | 54 | 16 | 16 | 7.5 | 13 |
| 3 | 5.0 | 9.8 | 9.8 | 40 | 241 | 205 | 79 | 55 | 16 | 14 | 7.7 | 12 |
| 4 | 6.0 | 9.5 | 9.7 | 40 | 254 | 215 | 75 | 71 | 16 | 14 | 7.7 | 11 |
| 5 | 6.0 | 8.6 | 9.9 | 60 | 308 | 192 | 79 | 87 | 15 | 14 | 8.8 | 9.0 |
| 6 | 6.5 | 8.2 | 7.9 | 100 | 317 | 179 | 63 | 53 | 15 | 15 | 10 | 7.0 |
| 7 | 7.0 | 10 | 7.2 | 123 | 269 | 167 | 62 | 51 | 17 | 15 | 9.7 | 7.5 |
| 8 | 7.0 | 10 | 9.7 | 78 | 250 | 149 | 55 | 49 | 17 | 16 | 7.9 | 8.0 |
| 9 | 8.0 | 9.5 | 10 | 76 | 274 | 151 | 59 | 46 | 21 | 16 | 5.5 | 8.0 |
| 10 | 7.0 | 9.5 | 13 | 95 | 342 | 171 | 59 | 47 | 112 | 17 | 5.4 | 8.5 |
| 11 | 8.0 | 9.3 | 23 | 166 | 403 | 191 | 61 | 44 | 137 | 22 | 5.6 | 9.0 |
| 12 | 9.0 | 9.5 | 31 | 239 | 443 | 189 | 54 | 40 | 48 | 17 | 5.2 | 8.0 |
| 13 | 10 | 9.6 | 24 | 348 | 467 | 190 | 72 | 26 | 38 | 16 | 4.5 | 7.5 |
| 14 | 11 | 9.5 | 19 | 557 | 497 | 275 | 105 | 22 | 32 | 16 | 4.7 | 6.8 |
| 15 | 11 | 9.4 | 18 | 449 | 434 | 218 | 93 | 24 | 29 | 16 | 5.0 | 7.5 |
| 16 | 11 | 9.0 | 18 | 290 | 379 | 188 | 83 | 20 | 28 | 16 | 7.0 | 8.0 |
| 17 | 11 | 9.0 | 18 | 269 | 359 | 183 | 88 | 20 | 28 | 16 | 7.8 | 8.5 |
| 18 | 11 | 8.4 | 18 | 301 | 372 | 171 | 113 | 19 | 27 | 15 | 7.1 | 8.5 |
| 19 | 11 | 8.8 | 18 | 244 | 411 | 158 | 114 | 19 | 27 | 15 | 7.2 | 8.0 |
| 20 | 9.5 | 7.8 | 19 | 187 | 446 | 141 | 90 | 18 | 27 | 15 | 9.4 | 7.5 |
| 21 | 9.0 | 7.1 | 21 | 163 | 450 | 133 | 86 | 18 | 23 | 13 | 9.0 | 7.0 |
| 22 | 8.0 | 9.0 | 22 | 166 | 452 | 128 | 86 | 17 | 19 | 12 | 8.5 | 7.0 |
| 23 | 8.0 | 8.4 | 23 | 194 | 394 | 118 | 74 | 17 | 20 | 11 | 8.1 | 7.0 |
| 24 | 9.0 | 9.0 | 20 | 202 | 352 | 113 | 71 | 16 | 19 | 11 | 9.0 | 7.0 |
| 25 | 10 | 16 | 25 | 247 | 330 | 107 | 72 | 14 | 19 | 9.8 | 9.0 | 7.5 |
| 26 | 11 | 12 | 30 | 260 | 323 | 94 | 115 | 13 | 20 | 9.4 | 9.0 | 7.0 |
| 27 | 11 | 10 | 35 | 228 | 305 | 121 | 68 | 13 | 19 | 8.9 | 8.5 | 8.0 |
| 28 | 10 | 10 | 35 | 260 | 246 | 124 | 58 | 13 | 18 | 9.2 | 10 | 10 |
| 29 | 11 | ------ | 35 | 303 | 208 | 113 | 62 | 14 | 17 | 9.2 | 14 | 11 |
| 30 | 12 | ------ | 30 | 324 | 201 | 91 | 59 | 15 | 17 | 7.4 | 15 | 11 |
| 31 | 10 | ------ | 35 | ------ | 215 | ------ | 60 | 15 | ------ | 7.6 | ------ | 11 |
| TOTAL | 273.0 | 264.0 | 612.8 | 6,089 | 10,517 | 4,935 | 2,375 | 1,001 | 873 | 426.5 | 241.2 | 269.8 |
| MEAN | 8.81 | 9.43 | 19.8 | 203 | 339 | 165 | 76.6 | 32.3 | 29.1 | 13.8 | 8.04 | 8.70 |
| MAX | 12 | 16 | 35 | 557 | 497 | 275 | 115 | 87 | 137 | 22 | 15 | 13 |
| MIN | 4.5 | 7.1 | 7.2 | 40 | 201 | 91 | 54 | 13 | 15 | 7.4 | 4.5 | 6.8 |
| AC-FT | 541 | 524 | 1,220 | 12,080 | 20,860 | 9,790 | 4,710 | 1,990 | 1,730 | 846 | 478 | 535 |

CAL YR 1973 TOTAL 27,877.3 MEAN 76.4 MAX 557 MIN 4.5 AC-FT 55,290
WTR YR 1973 TOTAL 28,131.1 MEAN 77.1 MAX 557 MIN 3.1 AC-FT 55,800

PEAK DISCHARGE (BASE, 400 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-14 | 1730 | 3.49 | 755 | 5-14 | 0500 | 3.04 | 533 |

## 07217100 COYOTE CREEK ABOVE GUADALUPITA, N. MEX.

LOCATION.--Lat 36°09'51", long 105°13'49", Mora County, in Mora Grant, on right bank 1.8 mi (2.9 km) north of Guadalupita and at mile 21.2 (34.1 km).

DRAINAGE AREA.--71 $mi^2$ (184 $km^2$).

PERIOD OF RECORD.--May 1956 to December 1973 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 7,605 ft (2,318 m) from topographic map.

AVERAGE DISCHARGE.--17 calendar years, 9.81 $ft^3/s$ (0.278 $m^3/s$), 7,110 acre-ft/yr (8.77 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 221 $ft^3/s$ (6.26 $m^3/s$) May 14 (gage height, 3.38 ft or 1.030 m); minimum, 0.46 $ft^3/s$ (0.013 $m^3/s$) Feb. 4, result of freezeup.
Period of record: Maximum discharge, 1,820 $ft^3/s$ (51.5 $m^3/s$) June 17, 1965 (gage height, 6.70 ft or 2.042 m), from rating curve extended above 150 $ft^3/s$ (4.3 $m^3/s$) on basis of slope-area measurement of peak flow; minimum, 0.04 $ft^3/s$ (0.001 $m^3/s$) June 16, 1963.

REMARKS.--Records good except those for winter periods, which are poor. Diversions for irrigation of about 2,000 acres (8.1 $km^2$) above station.

REVISIONS (WATER YEARS).--WSP 1711: 1959.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.8 | 1.5 | 2.2 | 10 | 78 | 40 | 6.0 | 9.7 | 5.1 | 5.5 | 5.0 | 4.3 |
| 2 | 1.8 | 1.4 | 2.7 | 11 | 68 | 38 | 5.6 | 8.8 | 4.9 | 5.4 | 4.9 | 4.7 |
| 3 | 1.9 | 1.5 | 2.5 | 10 | 64 | 36 | 5.6 | 8.3 | 4.6 | 5.3 | 4.8 | 4.3 |
| 4 | 1.9 | 1.5 | 2.0 | 9.0 | 62 | 35 | 5.3 | 9.1 | 4.3 | 5.2 | 5.0 | 4.0 |
| 5 | 1.7 | 1.5 | 2.0 | 10 | 67 | 31 | 5.1 | 9.7 | 4.3 | 5.3 | 5.0 | 3.8 |
| 6 | 1.7 | 1.6 | 2.5 | 15 | 79 | 29 | 4.9 | 8.8 | 4.2 | 5.5 | 4.9 | 3.5 |
| 7 | 1.7 | 1.6 | 3.0 | 12 | 83 | 27 | 4.7 | 8.5 | 4.1 | 5.5 | 4.8 | 3.8 |
| 8 | 1.6 | 1.5 | 4.0 | 11 | 74 | 25 | 4.8 | 9.0 | 4.0 | 5.4 | 4.8 | 4.2 |
| 9 | 1.6 | 1.4 | 3.5 | 15 | 73 | 23 | 5.1 | 21 | 26 | 5.3 | 4.7 | 3.8 |
| 10 | 1.5 | 1.5 | 4.0 | 20 | 83 | 21 | 5.0 | 11 | 55 | 6.1 | 4.7 | 4.0 |
| 11 | 1.5 | 1.7 | 5.0 | 32 | 111 | 20 | 4.8 | 10 | 65 | 6.7 | 4.6 | 3.9 |
| 12 | 1.5 | 1.7 | 5.5 | 44 | 137 | 20 | 4.7 | 10 | 28 | 6.8 | 4.6 | 3.8 |
| 13 | 1.6 | 1.6 | 6.2 | 66 | 168 | 22 | 4.8 | 8.7 | 19 | 6.7 | 4.5 | 4.0 |
| 14 | 1.8 | 1.5 | 6.0 | 89 | 179 | 30 | 5.1 | 8.0 | 15 | 6.3 | 4.5 | 4.1 |
| 15 | 2.0 | 1.4 | 7.0 | 107 | 127 | 35 | 5.8 | 7.7 | 13 | 6.3 | 4.4 | 3.8 |
| 16 | 1.9 | 1.4 | 8.0 | 93 | 105 | 31 | 5.9 | 7.1 | 11 | 6.4 | 4.3 | 4.0 |
| 17 | 1.7 | 1.6 | 10 | 88 | 98 | 23 | 14 | 6.6 | 10 | 6.4 | 4.3 | 3.8 |
| 18 | 1.8 | 1.8 | 12 | 96 | 91 | 18 | 9.3 | 6.2 | 9.0 | 6.3 | 4.4 | 3.6 |
| 19 | 2.0 | 1.8 | 13 | 65 | 96 | 15 | 8.9 | 5.7 | 8.1 | 6.2 | 4.3 | 3.5 |
| 20 | 1.8 | 2.0 | 16 | 55 | 104 | 13 | 7.6 | 5.6 | 7.5 | 6.1 | 4.2 | 3.8 |
| 21 | 1.7 | 1.9 | 20 | 48 | 113 | 11 | 8.1 | 5.5 | 6.6 | 5.9 | 4.0 | 4.0 |
| 22 | 1.6 | 1.9 | 13 | 52 | 115 | 10 | 7.4 | 5.4 | 6.1 | 5.8 | 4.0 | 3.8 |
| 23 | 1.5 | 1.9 | 10 | 60 | 106 | 9.5 | 6.8 | 5.1 | 5.9 | 5.6 | 4.0 | 3.5 |
| 24 | 1.6 | 1.9 | 9.5 | 62 | 92 | 9.0 | 6.1 | 4.8 | 6.0 | 5.5 | 4.0 | 3.6 |
| 25 | 1.8 | 2.0 | 9.0 | 78 | 80 | 8.6 | 7.7 | 4.7 | 5.8 | 5.4 | 4.0 | 3.6 |
| 26 | 1.8 | 2.0 | 10 | 78 | 83 | 8.1 | 9.7 | 4.6 | 6.1 | 5.4 | 3.8 | 3.5 |
| 27 | 1.7 | 2.0 | 13 | 68 | 102 | 7.8 | 8.6 | 4.4 | 6.1 | 5.3 | 3.5 | 3.2 |
| 28 | 1.5 | 2.1 | 15 | 73 | 72 | 7.7 | 7.5 | 4.8 | 5.9 | 5.1 | 3.8 | 3.3 |
| 29 | 1.6 | ------ | 15 | 88 | 57 | 7.2 | 7.2 | 5.9 | 5.8 | 5.0 | 4.0 | 3.2 |
| 30 | 1.7 | ------ | 12 | 84 | 48 | 6.5 | 8.3 | 5.9 | 5.6 | 4.9 | 4.1 | 3.4 |
| 31 | 1.5 | ------ | 9.0 | ------ | 43 | ------ | 10 | 5.5 | ------ | 4.9 | ------ | 3.2 |
| TOTAL | 52.8 | 47.2 | 252.6 | 1,549.0 | 2,858 | 617.4 | 210.4 | 236.1 | 362.0 | 177.5 | 131.9 | 117.0 |
| MEAN | 1.70 | 1.69 | 8.15 | 51.6 | 92.2 | 20.6 | 6.79 | 7.62 | 12.1 | 5.73 | 4.40 | 3.77 |
| MAX | 2.0 | 2.1 | 20 | 107 | 179 | 40 | 14 | 21 | 65 | 6.8 | 5.0 | 4.7 |
| MIN | 1.5 | 1.4 | 2.0 | 9.0 | 43 | 6.5 | 4.7 | 4.4 | 4.0 | 4.9 | 3.5 | 3.2 |
| AC-FT | 105 | 94 | 501 | 3,070 | 5,670 | 1,220 | 417 | 468 | 718 | 352 | 262 | 232 |

CAL YR 1973 TOTAL 6,611.9 MEAN 18.1 MAX 179 MIN 1.4 AC-FT 13,110
WTR YR 1973 TOTAL 6,488.0 MEAN 17.8 MAX 179 MIN 1.4 AC-FT 12,870

PEAK DISCHARGE (BASE, 50 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-14 | 1915 | 3.12 | 142 | 7-17 | 1330 | 2.97 | 141 |
| 4-29 | 2145 | 2.81 | 93 | 8- 9 | 1730 | 3.27 | 199 |
| 5-14 | 0515 | 3.38 | 221 | 9- 9 | 2000 | 3.06 | 157 |

## 07218000 COYOTE CREEK NEAR GOLONDRINAS, N. MEX.

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

DRAINAGE AREA.--215 $mi^2$ (557 $km^2$).

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

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

AVERAGE DISCHARGE.--45 calendar years, 12.0 $ft^3/s$ (0.340 $m^3/s$), 8,690 acre-ft/yr (10.7 $hm^3/yr$); 20 calendar years (1954-73), 12.0 $ft^3/s$ (0.340 $m^3/s$), 8,690 acre-ft/yr (10.7 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 421 $ft^3/s$ (11.9 $m^3/s$) July 12 (gage height, 4.32 ft or 1.317 m), from rating curve extended above 210 $ft^3/s$ (5.95 $m^3/s$) as explained below; minimum, 1.4 $ft^3/s$ (0.040 $m^3/s$) Jan. 18, Feb. 19, result of freezeup.
Period of record: Maximum discharge, 4,050 $ft^3/s$ (115 $m^3/s$) Aug. 17, 1961 (gage height, 9.60 ft or 2.926 m), from rating curve extended above 250 $ft^3/s$ (7.08 $m^3/s$) on basis of slope-area measurements at gage heights 5.54 ft (1.689 m), 7.74 ft (2.359 m), and 9.60 ft (2.926 m); maximum gage height, 10.1 ft (3.08 m) Aug. 30, 1936 (site and datum then in use); no flow Aug. 4, 1945, Apr. 10, May 9, 10, 1956.

REMARKS.--Records good except those for winter periods, which are poor. Diversions (including off-channel storage) for irrigation of about 4,000 acres (16.2 $km^2$) above station.

REVISIONS (WATER YEARS).--WSP 1281: 1939-40(M), 1941-42, 1945-47. WSP 1511: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.9 | 4.3 | 4.7 | 28 | 142 | 45 | 4.8 | 21 | 8.1 | 8.6 | 6.3 | 8.4 |
| 2 | 5.4 | 4.3 | 4.7 | 30 | 125 | 42 | 4.5 | 16 | 7.4 | 7.8 | 6.5 | 8.8 |
| 3 | 5.4 | 4.2 | 5.0 | 27 | 107 | 40 | 3.6 | 12 | 6.9 | 7.4 | 6.3 | 8.6 |
| 4 | 6.0 | 4.0 | 4.5 | 26 | 106 | 38 | 3.0 | 16 | 6.0 | 6.7 | 6.3 | 8.0 |
| 5 | 5.8 | 4.2 | 4.5 | 27 | 116 | 38 | 3.0 | 16 | 6.0 | 6.7 | 6.2 | 7.6 |
| 6 | 5.6 | 4.2 | 4.5 | 39 | 126 | 36 | 3.0 | 13 | 6.3 | 6.9 | 6.1 | 7.4 |
| 7 | 5.5 | 4.0 | 5.2 | 53 | 125 | 34 | 5.0 | 12 | 7.1 | 6.3 | 6.0 | 7.7 |
| 8 | 5.6 | 4.3 | 6.0 | 48 | 112 | 31 | 3.0 | 11 | 7.4 | 5.4 | 6.3 | 9.0 |
| 9 | 5.6 | 4.2 | 5.6 | 44 | 114 | 26 | 2.8 | 12 | 9.0 | 5.0 | 6.3 | 8.6 |
| 10 | 5.4 | 4.3 | 6.2 | 42 | 129 | 22 | 3.1 | 27 | 84 | 5.0 | 6.7 | 10 |
| 11 | 5.4 | 4.7 | 7.4 | 74 | 160 | 23 | 3.0 | 16 | 88 | 6.5 | 6.9 | 12 |
| 12 | 5.6 | 4.7 | 8.2 | 115 | 195 | 23 | 35 | 13 | 40 | 6.3 | 7.1 | 12 |
| 13 | 5.8 | 4.5 | 8.4 | 148 | 234 | 27 | 38 | 13 | 25 | 4.8 | 7.1 | 12 |
| 14 | 5.7 | 4.3 | 8.0 | 178 | 282 | 47 | 6.0 | 13 | 22 | 4.8 | 7.6 | 11 |
| 15 | 5.6 | 4.0 | 8.2 | 256 | 239 | 26 | 4.1 | 10 | 21 | 4.6 | 7.6 | 10 |
| 16 | 5.4 | 4.0 | 8.4 | 177 | 193 | 26 | 3.9 | 9.4 | 18 | 4.5 | 7.4 | 9.5 |
| 17 | 5.2 | 4.3 | 8.4 | 148 | 164 | 21 | 4.3 | 6.9 | 16 | 4.6 | 7.2 | 10 |
| 18 | 5.4 | 4.5 | 8.4 | 175 | 150 | 17 | 21 | 6.3 | 15 | 5.0 | 7.1 | 9.6 |
| 19 | 5.2 | 4.6 | 9.0 | 142 | 150 | 16 | 16 | 6.3 | 13 | 5.0 | 7.1 | 9.2 |
| 20 | 5.0 | 4.7 | 11 | 99 | 162 | 14 | 10 | 5.8 | 12 | 5.2 | 7.0 | 9.6 |
| 21 | 4.9 | 4.2 | 14 | 83 | 157 | 12 | 9.2 | 5.8 | 11 | 5.0 | 7.0 | 10 |
| 22 | 4.7 | 4.1 | 15 | 77 | 150 | 12 | 8.9 | 6.0 | 10 | 5.0 | 7.0 | 9.6 |
| 23 | 4.5 | 4.3 | 15 | 87 | 137 | 12 | 8.6 | 6.3 | 10 | 4.8 | 7.0 | 9.0 |
| 24 | 4.7 | 4.7 | 16 | 90 | 111 | 11 | 7.8 | 5.6 | 10 | 4.8 | 6.8 | 9.0 |
| 25 | 4.9 | 5.0 | 17 | 111 | 94 | 9.7 | 18 | 5.6 | 10 | 5.0 | 6.6 | 9.0 |
| 26 | 4.7 | 5.4 | 18 | 126 | 86 | 7.4 | 30 | 6.0 | 10 | 5.2 | 6.4 | 8.8 |
| 27 | 4.5 | 5.7 | 20 | 108 | 101 | 10 | 30 | 6.3 | 11 | 5.6 | 6.8 | 9.0 |
| 28 | 4.7 | 5.5 | 22 | 112 | 78 | 16 | 13 | 6.9 | 10 | 5.8 | 7.2 | 9.4 |
| 29 | 4.8 | ------ | 26 | 132 | 62 | 8.0 | 14 | 7.8 | 10 | 5.8 | 7.6 | 9.0 |
| 30 | 4.4 | ------ | 24 | 147 | 54 | 5.4 | 13 | 7.8 | 10 | 5.8 | 8.0 | 8.8 |
| 31 | 4.3 | ------ | 28 | ------ | 50 | ------ | 23 | 8.3 | ------ | 5.8 | ------ | 9.0 |
| TOTAL | 160.6 | 125.2 | 351.3 | 2,949 | 4,211 | 695.5 | 350.6 | 328.1 | 520.2 | 175.7 | 205.3 | 289.6 |
| MEAN | 5.18 | 4.47 | 11.3 | 98.3 | 136 | 23.2 | 11.3 | 10.6 | 17.3 | 5.67 | 6.84 | 9.34 |
| MAX | 6.0 | 5.7 | 28 | 256 | 282 | 47 | 38 | 27 | 88 | 8.6 | 8.0 | 12 |
| MIN | 4.3 | 4.0 | 4.5 | 26 | 50 | 5.4 | 2.8 | 5.6 | 6.0 | 4.5 | 6.0 | 7.4 |
| AC-FT | 319 | 248 | 697 | 5,850 | 8,350 | 1,380 | 695 | 651 | 1,030 | 349 | 407 | 574 |

CAL YR 1973 TOTAL 10,362.1 MEAN 28.4 MAX 282 MIN 2.8 AC-FT 20,550
WTR YR 1973 TOTAL 10,351.7 MEAN 28.4 MAX 282 MIN 2.8 AC-FT 20,530

PEAK DISCHARGE (BASE, 180 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-15 | 0300 | 4.00 | 328 | 5-14 | 1400 | 3.87 | 312 |
| 4-18 | 1000 | 3.52 | 208 | 7-12 | 2330 | 4.32 | 421 |

## 07220000 SAPELLO RIVER AT SAPELLO, N. MEX.

LOCATION.--Lat 35°46'11", long 105°15'05", San Miguel County, in Mora Grant, on downstream end of bridge pier nearest left bank, on State Highway 3, in Sapello, 0.5 mi (0.8 km) downstream from Manuelitas Creek, and at mile 20.3 (32.7 km).

DRAINAGE AREA.--132 $mi^2$ (342 $km^2$).

PERIOD OF RECORD.--May to October 1915, January 1916 to November 1918, February 1919 to May 1921, July to September 1921, July 1956 to December 1973 (discontinued). Monthly discharge only for some periods, published in WSP 1311. Gage heights and discharge measurements published under same name for August 1903 to March 1904 are for a site above Manuelitas Creek, and are not equivalent.

GAGE.--Water-stage recorder. Altitude of gage is 6,910 ft (2,106 m) from topographic map. May 1915 to September 1921, nonrecording gage at site 300 ft (90 m) upstream at different datum.

AVERAGE DISCHARGE.--22 calendar years (1916-20, 1957-73), 24.2 $ft^3/s$ (0.685 $m^3/s$), 17,530 acre-ft/yr (21.6 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 1,930 $ft^3/s$ (54.7 $m^3/s$) Apr. 14 (gage height, 6.3 ft or 1.92 m, from floodmark), from rating curve extended above 410 $ft^3/s$ (11.6 $m^3/s$) on basis of field estimate at gage height 10.6 ft (3.23 m); minimum, 1.4 $ft^3/s$ (0.040 $m^3/s$) Dec. 5.
Period of record: Maximum discharge determined, 6,420 $ft^3/s$ (182 $m^3/s$) Aug. 5, 1966 (gage height, 7.50 ft or 2.286 m), from rating curve extended above 350 $ft^3/s$ (9.91 $m^3/s$) on basis of computation of flow over dam at gage height 7.40 ft (2.256 m); maximum gage height, 10.6 ft (3.23 m) Aug. 8, 1972; no flow at times.
The flood of June 11, 1913, reached a peak discharge of 11,400 $ft^3/s$ (323 $m^3/s$) at a site 3 mi (4.8 km) downstream.

REMARKS.--Records fair. Diversions above station for irrigation of about 4,200 acres (17.0 $km^2$). Sapello Canal diverts from right bank 500 ft (150 m) above station.

REVISIONS (WATER YEARS).--WSP 1511: Drainage area. WSP 1731: 1956(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14 | 8.8 | 29 | 83 | 268 | 112 | 20 | 34 | 7.0 | 7.4 | 4.8 | 5.5 |
| 2 | 13 | 9.0 | 26 | 72 | 222 | 112 | 15 | 24 | 6.2 | 7.4 | 3.7 | 5.5 |
| 3 | 12 | 9.5 | 23 | 70 | 197 | 106 | 14 | 20 | 5.5 | 7.0 | 3.7 | 4.0 |
| 4 | 13 | 9.9 | 20 | 63 | 207 | 92 | 11 | 20 | 5.1 | 6.6 | 3.7 | 3.7 |
| 5 | 14 | 10 | 21 | 78 | 248 | 82 | 11 | 20 | 5.1 | 7.0 | 4.0 | 3.3 |
| 6 | 13 | 8.9 | 20 | 168 | 248 | 77 | 10 | 18 | 5.1 | 8.2 | 4.4 | 3.3 |
| 7 | 13 | 10 | 20 | 150 | 197 | 77 | 9.3 | 16 | 4.8 | 7.4 | 4.4 | 3.8 |
| 8 | 13 | 7.7 | 21 | 140 | 182 | 70 | 8.9 | 16 | 4.8 | 6.2 | 4.0 | 4.2 |
| 9 | 13 | 8.0 | 21 | 133 | 195 | 69 | 10 | 18 | 14 | 5.1 | 4.0 | 4.4 |
| 10 | 13 | 9.0 | 22 | 138 | 244 | 75 | 12 | 19 | 57 | 6.2 | 4.0 | 5.1 |
| 11 | 13 | 8.9 | 34 | 270 | 280 | 75 | 13 | 16 | 66 | 7.8 | 4.0 | 5.5 |
| 12 | 13 | 8.6 | 49 | 352 | 338 | 78 | 11 | 16 | 15 | 7.4 | 4.0 | 6.2 |
| 13 | 13 | 8.3 | 40 | 762 | 333 | 96 | 12 | 16 | 11 | 7.0 | 4.0 | 5.9 |
| 14 | 13 | 9.5 | 28 | 1,200 | 380 | 107 | 22 | 14 | 9.7 | 7.4 | 3.3 | 6.6 |
| 15 | 13 | 9.0 | 29 | 800 | 316 | 86 | 21 | 14 | 8.6 | 8.2 | 3.3 | 5.5 |
| 16 | 13 | 10 | 26 | 600 | 260 | 70 | 24 | 12 | 7.8 | 8.2 | 3.0 | 6.2 |
| 17 | 13 | 11 | 29 | 555 | 228 | 63 | 27 | 10 | 7.0 | 7.8 | 3.0 | 6.6 |
| 18 | 11 | 10 | 33 | 512 | 228 | 53 | 33 | 9.7 | 6.2 | 7.4 | 3.0 | 7.4 |
| 19 | 12 | 11 | 32 | 372 | 248 | 47 | 31 | 9.3 | 5.5 | 7.4 | 3.3 | 5.9 |
| 20 | 11 | 11 | 33 | 285 | 262 | 43 | 22 | 8.2 | 4.8 | 7.8 | 4.0 | 6.0 |
| 21 | 11 | 12 | 45 | 248 | 260 | 39 | 19 | 7.0 | 4.8 | 7.0 | 4.8 | 6.2 |
| 22 | 10 | 11 | 42 | 255 | 262 | 36 | 21 | 6.6 | 4.4 | 6.6 | 4.4 | 6.6 |
| 23 | 10 | 11 | 35 | 278 | 237 | 35 | 18 | 7.6 | 4.4 | 5.9 | 4.4 | 6.6 |
| 24 | 10 | 11 | 30 | 278 | 178 | 35 | 16 | 7.4 | 5.1 | 5.9 | 4.4 | 6.6 |
| 25 | 10 | 14 | 41 | 290 | 163 | 31 | 70 | 6.6 | 4.8 | 5.5 | 4.4 | 6.0 |
| 26 | 10 | 20 | 49 | 268 | 162 | 29 | 49 | 5.9 | 5.5 | 5.5 | 4.4 | 5.1 |
| 27 | 10 | 25 | 74 | 222 | 146 | 25 | 27 | 5.9 | 7.0 | 5.1 | 4.4 | 6.0 |
| 28 | 9.5 | 31 | 68 | 248 | 125 | 27 | 24 | 5.9 | 7.8 | 5.5 | 4.8 | 6.6 |
| 29 | 10 | ------ | 60 | 288 | 112 | 23 | 24 | 6.2 | 7.4 | 5.1 | 5.1 | 7.0 |
| 30 | 10 | ------ | 61 | 303 | 107 | 20 | 23 | 7.4 | 7.4 | 5.1 | 5.5 | 7.0 |
| 31 | 10 | ------ | 75 | ------ | 109 | ------ | 27 | 7.4 | ------ | 5.1 | ------ | 5.1 |
| TOTAL | 366.5 | 323.1 | 1,136 | 9,481 | 6,942 | 1,890 | 655.2 | 404.1 | 314.8 | 207.2 | 122.2 | 173.4 |
| MEAN | 11.8 | 11.5 | 36.6 | 316 | 224 | 63.0 | 21.1 | 13.0 | 10.5 | 6.68 | 4.07 | 5.59 |
| MAX | 14 | 31 | 75 | 1,200 | 380 | 112 | 70 | 34 | 66 | 8.2 | 5.5 | 7.4 |
| MIN | 9.5 | 7.7 | 20 | 63 | 107 | 20 | 8.9 | 5.9 | 4.4 | 5.1 | 3.0 | 3.3 |
| AC-FT | 727 | 641 | 2,250 | 18,810 | 13,770 | 3,750 | 1,300 | 802 | 624 | 411 | 242 | 344 |

CAL YR 1973 TOTAL 22,015.5 MEAN 60.3 MAX 1,200 MIN 3.0 AC-FT 43,670
WTR YR 1973 TOTAL 23,949.7 MEAN 65.6 MAX 1,200 MIN 4.4 AC-FT 47,500

PEAK DISCHARGE (BASE, 800 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-14 | a1800 | b6.3 | 1,930 | 9-10 | 2330 | 4.93 | 1,120 |
| 7-25 | 2130 | 5.89 | 1,680 | | | | |

a About.
b From floodmark.
NOTE.--No gage-height record Apr. 14-17.

07220100 LAKE ISABEL FEEDER CANAL NEAR SAPELLO, N. MEX.

LOCATION.--Lat 35°44'42", long 105°09'25", San Miguel County, in Mora Grant, on right bank 20 ft (6.1 m) upstream from concrete crossing, 1.0 mi (1.6 km) northwest of Los Alamos, 2.0 mi (3.2 km) downstream from canal heading, and 5.7 mi (9.2 km) southeast of Sapello.

PERIOD OF RECORD.--September 1956 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,790 ft (2,070 m) from topographic map. Prior to Aug. 10, 1967, at site 650 ft (200 m) upstream at datum 2.93 ft (0.893 m) higher.

EXTREMES.--Period of record: Maximum daily discharge, 322 $ft^3/s$ (9.12 $m^3/s$) Aug. 2, 1965; no flow at times.

REMARKS.--Records good. Canal diverts water from left bank of Sapello River to fill Lake Isabel which stores water for irrigation.

MONTHLY DIVERSION, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| Month | Maximum | Minimum | Mean | Diversion in acre-feet |
|---|---|---|---|---|
| January | 0 | 0 | 0 | 0 |
| February | .06 | 0 | .002 | .1 |
| March | 0 | 0 | 0 | 0 |
| April | 22 | 0 | .95 | 57 |
| May | 0 | 0 | 0 | 0 |
| June | 0 | 0 | 0 | 0 |
| July | 0 | 0 | 0 | 0 |
| August | 0 | 0 | 0 | 0 |
| September | 0 | 0 | 0 | 0 |
| WTR YR 1973 | 22 | 0 | .08 | 57 |
| October | 0 | 0 | 0 | 0 |
| November | 0 | 0 | 0 | 0 |
| December | 0 | 0 | 0 | 0 |
| CAL YR 1973 | 22 | 0 | .08 | 57 |

NOTE.--The diversion dam on Sapello River washed out during flood of Aug. 8, 1972.

## 07221000 MORA RIVER NEAR SHOEMAKER, N. MEX.

LOCATION.--Lat 35°48'01", long 104°46'58", Mora County, in Mora Grant, on left bank 5.5 mi (8.8 km) east of Shoemaker, 12.3 mi (19.8 km) upstream from Pedroso Creek, and at mile 39.4 (63.4 km).

DRAINAGE AREA.--1,104 $mi^2$ (2,859 $km^2$), of which 71 $mi^2$ (184 $km^2$) is probably noncontributing.

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

GAGE.--Water-stage recorder. Altitude of gage is 6,145 ft (1,873 m) from topographic map. Prior to Oct. 10, 1934, at site 2,000 ft (610 m) upstream at different datum.

AVERAGE DISCHARGE.--54 calendar years (1915-17, 1920-24, 1928-73), 60.3 $ft^3/s$ (1.708 $m^3/s$), 43,690 acre-ft/yr (53.9 $hm^3/yr$); 20 calendar years (1954-73), 54.3 $ft^3/s$ (1.538 $m^3/s$), 39,340 acre-ft/yr (48.5 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 3,060 $ft^3/s$ (86.7 $m^3/s$) Apr. 15 (gage height, 6.60 ft or 2.012 m); minimum, 2.8 $ft^3/s$ (0.079 $m^3/s$) Aug. 27.
Period of record: Maximum discharge, 15,200 $ft^3/s$ (430 $m^3/s$) June 3, 1948 (gage height, 12.79 ft or 3.898 m), from rating curve extended above 2,800 $ft^3/s$ (79.3 $m^3/s$) on basis of slope-area measurements at gage heights 10.09 ft (3.075 m) and 12.79 ft (3.898 m); no flow at times.
Floods of Sept. 29, 1904, and June 11, 1913, probably exceeded 30,000 $ft^3/s$ (850 $m^3/s$).

REMARKS.--Records good except those for January, which are fair, and those for period of no gage-height record, which are poor. Diversions for irrigation of about 26,000 acres (105 $km^2$) above station. Off-channel lakes make it possible to divert and store water during non-irrigation season.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1281: 1931(M), 1933-34(M), 1937(M), 1938(P), 1939-40(M), 1941-42(P). WSP 1731: 1921, 1928, 1951(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 34 | 30 | 51 | 192 | 795 | 350 | 75 | 128 | 7.2 | 21 | 6.8 | 30 |
| 2 | 32 | 26 | 50 | 216 | 689 | 370 | 69 | 102 | 6.8 | 21 | 6.0 | 34 |
| 3 | 30 | 24 | 45 | 153 | 595 | 380 | 59 | 86 | 7.6 | 15 | 5.7 | 38 |
| 4 | 30 | 30 | 42 | 145 | 567 | 330 | 55 | 80 | 7.6 | 15 | 6.4 | 40 |
| 5 | 30 | 38 | 40 | 142 | 623 | 330 | 52 | 93 | 5.2 | 18 | 8.4 | 36 |
| 6 | 28 | 37 | 40 | 179 | 702 | 290 | 58 | 95 | 4.4 | 18 | 8.4 | 34 |
| 7 | 26 | 30 | 40 | 402 | 653 | 230 | 50 | 75 | 4.4 | 14 | 9.2 | 32 |
| 8 | 24 | 30 | 40 | 283 | 563 | 207 | 50 | 68 | 4.4 | 11 | 9.6 | 31 |
| 9 | 22 | 28 | 46 | 335 | 543 | 202 | 47 | 59 | 5.2 | 10 | 10 | 30 |
| 10 | 20 | 25 | 47 | 279 | 631 | 197 | 55 | 47 | 88 | 11 | 9.6 | 31 |
| 11 | 22 | 31 | 46 | 406 | 785 | 228 | 56 | 53 | 266 | 14 | 8.8 | 32 |
| 12 | 25 | 29 | 62 | 601 | 935 | 240 | 52 | 44 | 186 | 14 | 7.6 | 33 |
| 13 | 30 | 30 | 80 | 905 | 1,050 | 240 | 86 | 44 | 93 | 14 | 6.4 | 34 |
| 14 | 34 | 28 | 70 | 1,790 | 1,180 | 316 | 100 | 31 | 69 | 13 | 5.7 | 35 |
| 15 | 37 | 31 | 56 | 2,190 | 1,130 | 332 | 102 | 24 | 60 | 15 | 5.5 | 35 |
| 16 | 40 | 32 | 53 | 1,160 | 900 | 258 | 102 | 23 | 53 | 15 | 5.5 | 35 |
| 17 | 42 | 32 | 52 | 915 | 800 | 228 | 95 | 19 | 45 | 17 | 5.5 | 34 |
| 18 | 38 | 32 | 53 | 1,150 | 761 | 216 | 98 | 16 | 42 | 17 | 6.0 | 30 |
| 19 | 38 | 30 | 50 | 920 | 785 | 189 | 166 | 14 | 39 | 13 | 5.7 | 26 |
| 20 | 36 | 30 | 48 | 676 | 865 | 172 | 128 | 6.0 | 36 | 10 | 5.7 | 26 |
| 21 | 33 | 29 | 53 | 571 | 890 | 149 | 98 | 4.9 | 32 | 9.6 | 6.0 | 30 |
| 22 | 30 | 32 | 68 | 535 | 905 | 138 | 96 | 4.6 | 29 | 11 | 6.8 | 30 |
| 23 | 28 | 35 | 74 | 559 | 845 | 130 | 95 | 4.9 | 25 | 11 | 8.0 | 30 |
| 24 | 30 | 32 | 69 | 603 | 702 | 119 | 81 | 4.4 | 24 | 8.0 | 24 | 30 |
| 25 | 34 | 31 | 90 | 635 | 627 | 111 | 75 | 3.8 | 24 | 7.6 | 24 | 29 |
| 26 | 32 | 40 | 98 | 748 | 555 | 100 | 160 | 3.8 | 24 | 8.4 | 24 | 28 |
| 27 | 30 | 44 | 125 | 658 | 575 | 90 | 165 | 3.8 | 26 | 8.8 | 24 | 26 |
| 28 | 28 | 45 | 153 | 653 | 511 | 110 | 95 | 3.8 | 29 | 7.2 | 25 | 28 |
| 29 | 28 | ------ | 197 | 730 | 420 | 102 | 74 | 4.9 | 28 | 7.6 | 26 | 30 |
| 30 | 30 | ------ | 125 | 795 | 370 | 96 | 72 | 5.7 | 22 | 7.2 | 28 | 30 |
| 31 | 32 | ------ | 151 | ------ | 350 | ------ | 84 | 6.8 | ------ | 6.8 | ------ | 30 |
| TOTAL | 953 | 891 | 2,214 | 19,526 | 22,302 | 6,450 | 2,650 | 1,158.4 | 1,292.8 | 389.2 | 338.3 | 977 |
| MEAN | 30.7 | 31.8 | 71.4 | 651 | 719 | 215 | 85.5 | 37.4 | 43.1 | 12.6 | 11.3 | 31.5 |
| MAX | 42 | 45 | 197 | 2,190 | 1,180 | 380 | 166 | 128 | 266 | 21 | 28 | 40 |
| MIN | 20 | 24 | 40 | 142 | 350 | 90 | 47 | 3.8 | 4.4 | 6.8 | 5.5 | 26 |
| AC-FT | 1,890 | 1,770 | 4,390 | 38,730 | 44,240 | 12,790 | 5,260 | 2,300 | 2,560 | 772 | 671 | 1,940 |

CAL YR 1973 TOTAL 59,141.7 MEAN 162 MAX 2,190 MIN 3.8 AC-FT 117,300
WTR YR 1973 TOTAL 61,937.4 MEAN 170 MAX 2,190 MIN 3.8 AC-FT 122,900

PEAK DISCHARGE (BASE, 800 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-15 | 0500 | 6.60 | 3,060 | 5-15 | 0500 | 4.50 | 1,240 |
| 4-30 | 1800 | 3.84 | 845 | 9-10 | 2230 | 4.09 | 965 |

NOTE.--No gage-height record Nov. 29 to Dec. 31.

## 07221500 CANADIAN RIVER NEAR SANCHEZ, N. MEX.

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

DRAINAGE AREA.--6,015 $mi^2$ (15,579 $km^2$), of which 303 $mi^2$ (785 $km^2$) is probably noncontributing.

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

GAGE.--Water-stage recorder. Altitude of gage is 4,495 ft (1,370 m) from topographic map. May 15, 1912 to Dec. 31, 1914, at two sites within 100 ft (30 m) about 3 mi (4.8 km) upstream at different datums. October 1935 to June 1965 at site 1,000 ft (300 m) upstream at datum 7.32 ft (2.231 m) higher prior to October 1963 and 5.32 ft (1.622 m) higher thereafter. June 1965 to October 1966 at site 0.6 mi (1.0 km) upstream at datum about 20 ft (6.1 m) higher. Supplemental water-stage recorder at site 0.6 mi (1.0 km) upstream used at various times since 1966.

AVERAGE DISCHARGE.--40 calendar years (1913-14, 1936-73), 211 $ft^3/s$ (5.976 $m^3/s$), 152,900 acre-ft/yr (189 $hm^3/yr$); 20 calendar years (1954-73), 159 $ft^3/s$ (4.503 $m^3/s$), 115,200 acre-ft/yr (142 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 3,920 $ft^3/s$ (111 $m^3/s$) Apr. 15 (gage height, 8.58 ft or 2.615 m); minimum, 2.8 $ft^3/s$ (0.079 $m^3/s$) Jan. 28, result of freezeup.
Period of record: Maximum discharge, 145,000 $ft^3/s$ (4,110 $m^3/s$) June 18, 1965 (gage height, about 38.1 ft or 11.61 m, from floodmarks, present site and datum), from rating curve extended above 91,000 $ft^3/s$ (2,580 $m^3/s$) on basis of slope-area measurement of peak flow; no flow at times.
The flood of Sept. 29 or 30, 1904 probably exceeded 100,000 $ft^3/s$ (2,830 $m^3/s$), but is believed to have been less than the peak of June 18, 1965.

REMARKS.--Records good. Diversions for irrigation of about 56,000 acres (227 $km^2$) above station.

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

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 55 | 61 | 55 | 529 | 1,280 | 386 | 122 | 126 | 5.0 | 38 | 17 | 41 |
| 2 | 56 | 55 | 55 | 740 | 1,240 | 366 | 109 | 232 | 11 | 33 | 15 | 44 |
| 3 | 43 | 54 | 59 | 529 | 1,060 | 376 | 98 | 189 | 7.0 | 28 | 15 | 50 |
| 4 | 40 | 54 | 57 | 415 | 870 | 382 | 92 | 160 | 20 | 27 | 14 | 61 |
| 5 | 39 | 51 | 55 | 379 | 720 | 322 | 84 | 124 | 18 | 26 | 14 | 61 |
| 6 | 38 | 52 | 53 | 395 | 711 | 300 | 78 | 109 | 14 | 26 | 15 | 55 |
| 7 | 37 | 54 | 50 | 488 | 830 | 261 | 75 | 113 | 13 | 26 | 15 | 45 |
| 8 | 36 | 55 | 52 | 577 | 840 | 240 | 76 | 100 | 12 | 23 | 16 | 47 |
| 9 | 33 | 52 | 56 | 474 | 828 | 220 | 82 | 83 | 10 | 21 | 16 | 43 |
| 10 | 30 | 50 | 56 | 494 | 1,030 | 200 | 89 | 152 | 135 | 23 | 18 | 40 |
| 11 | 30 | 47 | 56 | 456 | 995 | 203 | 76 | 84 | 1,000 | 38 | 19 | 43 |
| 12 | 30 | 49 | 58 | 639 | 1,200 | 240 | 78 | 52 | 533 | 36 | 20 | 47 |
| 13 | 35 | 45 | 55 | 971 | 1,380 | 246 | 82 | 52 | 466 | 32 | 21 | 45 |
| 14 | 40 | 46 | 72 | 1,800 | 1,480 | 243 | 115 | 49 | 258 | 27 | 21 | 49 |
| 15 | 45 | 47 | 96 | 2,880 | 1,600 | 315 | 167 | 50 | 173 | 33 | 20 | 47 |
| 16 | 52 | 49 | 86 | 2,330 | 1,540 | 334 | 138 | 43 | 126 | 34 | 19 | 49 |
| 17 | 54 | 47 | 72 | 1,630 | 1,120 | 285 | 163 | 34 | 98 | 31 | 19 | 45 |
| 18 | 54 | 50 | 67 | 1,470 | 965 | 249 | 218 | 30 | 84 | 28 | 19 | 50 |
| 19 | 52 | 47 | 65 | 1,520 | 960 | 237 | 172 | 32 | 70 | 27 | 18 | 31 |
| 20 | 58 | 47 | 65 | 1,270 | 1,120 | 209 | 158 | 27 | 61 | 26 | 17 | 39 |
| 21 | 50 | 46 | 62 | 935 | 1,190 | 198 | 156 | 23 | 56 | 25 | 17 | 45 |
| 22 | 44 | 47 | 62 | 750 | 1,220 | 177 | 117 | 19 | 49 | 24 | 17 | 42 |
| 23 | 39 | 47 | 72 | 706 | 1,210 | 165 | 100 | 16 | 33 | 20 | 18 | 41 |
| 24 | 39 | 49 | 113 | 720 | 1,170 | 157 | 100 | 12 | 30 | 17 | 19 | 46 |
| 25 | 42 | 50 | 117 | 755 | 1,020 | 146 | 128 | 9.0 | 25 | 17 | 19 | 41 |
| 26 | 45 | 49 | 100 | 895 | 820 | 139 | 364 | 6.7 | 55 | 17 | 18 | 44 |
| 27 | 44 | 46 | 124 | 1,380 | 644 | 130 | 322 | 5.2 | 69 | 17 | 20 | 36 |
| 28 | 42 | 50 | 140 | 1,120 | 616 | 117 | 267 | 4.0 | 50 | 17 | 35 | 46 |
| 29 | 57 | ------ | 211 | 1,000 | 561 | 116 | 214 | 3.8 | 42 | 17 | 33 | 43 |
| 30 | 54 | ------ | 343 | 1,160 | 470 | 129 | 138 | 3.3 | 37 | 16 | 35 | 51 |
| 31 | 46 | ------ | 343 | ------ | 395 | ------ | 111 | 4.0 | ------ | 17 | ------ | 56 |
| TOTAL | 1,359 | 1,396 | 2,927 | 29,407 | 31,085 | 7,088 | 4,289 | 1,947.0 | 3,560.0 | 787 | 579 | 1,423 |
| MEAN | 43.8 | 49.9 | 94.4 | 980 | 1,003 | 236 | 138 | 62.8 | 119 | 25.4 | 19.3 | 45.9 |
| MAX | 58 | 61 | 343 | 2,880 | 1,600 | 386 | 364 | 232 | 1,000 | 38 | 35 | 61 |
| MIN | 30 | 45 | 50 | 379 | 395 | 116 | 75 | 3.3 | 5.0 | 16 | 14 | 31 |
| AC-FT | 2,700 | 2,770 | 5,810 | 58,330 | 61,660 | 14,060 | 8,510 | 3,860 | 7,060 | 1,560 | 1,150 | 2,820 |

CAL YR 1973 TOTAL 85,847.0 MEAN 235 MAX 2,880 MIN 3.3 AC-FT 170,300
WTR YR 1973 TOTAL 90,679.0 MEAN 248 MAX 2,880 MIN 3.3 AC-FT 179,900

PEAK DISCHARGE (BASE, 3,500 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-15 | 1400 | 8.58 | 3,920 | | | | |

## 07222500 CONCHAS RIVER AT VARIADERO, N. MEX.

LOCATION.--Lat 35°24'10", long 104°26'35", in NE¼NE¼ sec.36, T.14 N., R.23 E., San Miguel County, on left bank 1.5 mi (2.4 km) northeast of Variadero, 14 mi (23 km) west of Conchas Dam, and at mile 15.0 (24.1 km).

DRAINAGE AREA.--523 mi² (1,355 km²), of which 130 mi² (337 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Altitude of gage is 4,430 ft (1,350 m) from topographic map. Prior to Mar. 30, 1942, at site 1.5 mi (2.4 km) upstream at different datum. Mar. 30, 1942 to May 18, 1950, at present site at datum 0.5 ft (0.15 m) higher.

AVERAGE DISCHARGE.--37 calendar years, 16.7 ft³/s (0.473 m³/s), 12,100 acre-ft/yr (14.9 hm³/yr); 20 calendar years (1954-73), 10.9 ft³/s (0.309 m³/s), 7,900 acre-ft/yr (9.74 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,830 ft³/s (51.8 m³/s) July 26 (gage height, 4.85 ft or 1.478 m), from rating curve extended above 760 ft³/s (21.5 m³/s) as explained below; no flow many days.
Period of record: Maximum discharge, 44,000 ft³/s (1,250 m³/s) Sept. 1, 1942 (gage height, 19.96 ft or 6.084 m, present datum), from rating curve extended above 760 ft³/s (21.5 m³/s) on basis of slope-area measurements at gage heights 10.5 ft (3.20 m) and 19.96 ft (6.084 m), present datum; no flow many days.

REMARKS.--Records fair. Diversions for irrigation of about 300 acres (1.21 km²) above station.

REVISIONS (WATER YEARS).--WSP 1281: 1937-39, 1941-47.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .83 | .77 | .89 | 6.0 | 2.7 | .60 | 0 | 2.0 | 3.3 | 0 | 0 | .01 |
| 2 | .89 | .65 | .77 | 5.3 | 2.5 | .50 | 0 | 1.0 | 6.2 | 0 | 0 | 0 |
| 3 | .80 | .65 | .65 | 33 | 2.3 | .33 | 0 | 0 | 2.6 | 0 | 0 | .08 |
| 4 | .90 | .60 | .65 | 21 | 2.0 | .29 | 0 | 0 | 1.2 | 0 | 0 | .13 |
| 5 | 1.2 | .55 | .65 | 23 | 2.1 | .22 | 0 | 0 | .55 | 0 | 0 | .10 |
| 6 | 1.1 | .55 | .55 | 23 | 2.1 | .22 | 0 | 0 | .29 | .02 | 0 | .10 |
| 7 | 1.2 | .60 | .55 | 28 | 1.7 | .22 | 0 | 0 | .22 | 0 | .01 | .06 |
| 8 | 1.1 | .65 | .65 | 44 | 1.8 | .16 | 0 | 0 | .16 | 0 | .01 | .08 |
| 9 | 1.1 | .83 | .83 | 30 | 1.4 | .13 | 0 | 0 | .08 | 0 | .02 | .08 |
| 10 | 1.1 | .83 | .89 | 31 | 1.4 | .08 | 0 | 14 | .50 | .29 | .02 | .08 |
| 11 | 1.1 | .83 | .71 | 19 | 1.2 | .04 | 0 | 3.0 | 2.4 | .25 | .02 | .08 |
| 12 | 1.2 | .83 | .60 | 27 | 1.3 | .04 | .09 | 2.0 | 9.5 | .02 | .01 | .08 |
| 13 | 1.4 | .83 | .71 | 77 | 1.9 | .37 | .05 | 5.8 | 4.6 | .01 | .01 | .08 |
| 14 | 1.4 | .95 | .45 | 54 | 3.1 | .77 | .03 | 5.4 | 2.7 | 0 | 0 | .08 |
| 15 | 1.2 | .83 | .41 | 37 | 3.0 | .41 | 0 | 1.4 | 1.5 | 0 | .01 | .06 |
| 16 | 1.0 | .95 | .37 | 25 | 3.1 | .19 | 0 | .55 | .89 | .01 | 0 | .06 |
| 17 | .95 | 1.2 | .37 | 15 | 3.0 | .05 | 0 | .25 | .55 | .01 | 0 | .06 |
| 18 | .77 | .95 | .33 | 11 | 2.5 | 0 | 4.6 | .10 | .45 | .01 | .01 | .06 |
| 19 | .65 | .95 | .29 | 8.7 | 2.0 | 0 | 17 | .04 | .25 | .01 | .01 | .04 |
| 20 | .65 | .89 | .29 | 7.2 | 1.8 | 0 | 10 | .01 | .13 | .01 | .01 | .04 |
| 21 | .71 | .77 | .33 | 6.5 | 1.3 | 0 | 4.0 | 0 | .04 | 0 | .01 | .04 |
| 22 | .65 | 1.3 | .25 | 6.0 | 1.3 | 0 | 3.8 | 0 | 0 | 0 | .01 | .06 |
| 23 | .60 | 1.7 | .65 | 5.7 | 1.3 | 0 | 4.1 | 0 | 0 | 0 | 0 | .06 |
| 24 | .65 | 1.4 | 1.4 | 5.7 | 1.0 | 0 | 3.5 | 0 | 0 | 0 | 0 | .08 |
| 25 | .65 | 1.4 | .89 | 5.7 | .89 | 0 | 2.8 | 0 | 0 | 0 | .01 | .10 |
| 26 | .71 | 1.3 | .89 | 5.0 | .60 | 0 | 436 | 0 | 0 | 0 | .01 | .10 |
| 27 | .70 | 1.2 | .95 | 4.7 | .41 | 0 | 122 | 0 | 0 | 0 | 0 | .10 |
| 28 | .70 | 1.1 | .83 | 4.2 | .37 | 0 | 20 | 0 | 0 | 0 | 0 | .10 |
| 29 | .60 | ------ | 1.5 | 3.5 | .41 | 0 | 8.5 | 0 | 0 | 0 | 0 | .13 |
| 30 | .60 | ------ | 4.4 | 3.1 | .45 | 0 | 5.0 | 0 | 0 | 0 | .01 | .13 |
| 31 | .77 | ------ | 5.2 | ------ | .50 | ------ | 3.0 | 0 | ------ | 0 | ------ | .08 |
| TOTAL | 27.88 | 26.06 | 28.90 | 575.3 | 51.43 | 4.62 | 644.47 | 35.95 | 38.11 | .64 | .19 | 2.34 |
| MEAN | .90 | .93 | .93 | 19.2 | 1.66 | .15 | 20.8 | 1.15 | 1.27 | .021 | .006 | .076 |
| MAX | 1.4 | 1.7 | 5.2 | 77 | 3.1 | .77 | 436 | 14 | 9.5 | .29 | .02 | .13 |
| MIN | .60 | .55 | .25 | 3.1 | .37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 55 | 52 | 57 | 1,140 | 102 | 9.2 | 1,280 | 71 | 76 | 1.3 | .4 | 4.6 |

CAL YR 1973 TOTAL 1,435.49 MEAN 3.93 MAX 436 MIN 0 AC-FT 2,850
WTR YR 1973 TOTAL 1,700.23 MEAN 4.66 MAX 436 MIN 0 AC-FT 3,370

PEAK DISCHARGE (BASE, 1,500 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 7-26 | 0030 | 4.85 | 1,830 | | | | |

07223000 BELL RANCH CANAL BELOW CONCHAS DAM, N. MEX.

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

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

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

EXTREMES.--Period of record: Maximum daily discharge, 21 $ft^3/s$ (0.595 $m^3/s$) July 10-13, Sept. 7-10, 1948, June 27, Aug. 7, 1951; no flow many days each year.

REMARKS.--Records good. Canal diverts from Conchas Lake (see sta 07223500) for irrigation of about 700 acres (2.83 $km^2$) on Bell Ranch.

MONTHLY DIVERSION, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| Month | Maximum | Minimum | Mean | Diversion in acre-feet |
|---|---|---|---|---|
| January | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 |
| March | 0 | 0 | 0 | 0 |
| April | 0 | 0 | 0 | 0 |
| May | 8.2 | 0 | 3.95 | 243 |
| June | 13 | .02 | 5.89 | 350 |
| July | 13 | 0 | 7.55 | 464 |
| August | 12 | 0 | 8.99 | 553 |
| September | 11 | 0 | 9.70 | 577 |
| WTR YR 1973 | 13 | 0 | 3.02 | 2,190 |
| October | 0 | 0 | 0 | 0 |
| November | 6.4 | 0 | 3.27 | 194 |
| December | .38 | 0 | .01 | .8 |
| CAL YR 1973 | 13 | 0 | 3.29 | 2,380 |

07223300 CONCHAS CANAL BELOW CONCHAS DAM, N. MEX.

LOCATION.--Lat 35°22'35", long 104°10'03", San Miguel County, in Pablo Montoya Grant, on left bank at upstream end of tunnel transition section, 1.0 mi (1.6 km) downstream from headgates in Conchas Dam, and 21.5 mi (34.6 km) north of Newkirk.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,157.1 ft (1,267.08 m) above mean sea level (from Bureau of Reclamation elevation of concrete structure). Prior to Nov. 19, 1948, at site 0.8 mi (1.3 km) upstream at different datum.

EXTREMES.--Period of record.--Maximum daily discharge, 751 $ft^3/s$ (21.3 $m^3/s$) Aug. 31, 1961; no flow many days each year.

REMARKS.--Records good. No diversion or wasteway between canal headworks and gage. Water is diverted from Conchas Lake for irrigation of about 35,000 acres (142 $km^2$) on Tucumcari Project (1966 conditions). Water quality records for the current year are published in Part 2 of this report.

MONTHLY DIVERSION, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| Month | Maximum | Minimum | Mean | Diversion in acre-feet |
|---|---|---|---|---|
| January | 0 | 0 | 0 | 0 |
| February | 3.8 | 0 | .28 | 15 |
| March | .10 | .10 | .10 | 6.1 |
| April | .10 | 0 | .02 | 1.2 |
| May | 431 | .10 | 283 | 17,380 |
| June | 418 | 216 | 308 | 18,350 |
| July | 373 | 68 | 221 | 13,600 |
| August | 475 | 101 | 369 | 22,680 |
| September | 342 | 128 | 223 | 13,290 |
| WTR YR 1973 | 475 | 0 | 124 | 90,060 |
| October | 305 | .27 | 131 | 7,810 |
| November | .98 | .37 | .64 | 38 |
| December | 1.7 | .63 | 1.00 | 61 |
| CAL YR 1973 | 475 | 0 | 129 | 93,230 |

## 07223500 CONCHAS LAKE AT CONCHAS DAM, N. MEX.

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

DRAINAGE AREA.--7,409 mi² (19,189 km²), of which 433 mi² (1,121 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents, 315,800 acre-ft (389 hm³) June 2 (elevation, 4,199.49 ft or 1,280.005 m); minimum, 217,000 acre-ft (268 hm³) Jan. 1 (elevation, 4,187.12 ft or 1,276.234 m).
Period of record: Maximum contents, 479,600 acre-ft (591 hm³) Apr. 24, 1942 (elevation, 4,208.41 ft or 1,282.723 m); minimum after initial filling, 82,840 acre-ft (102 hm³) Sept. 12, 13, 1964 (elevation, 4,156.05 ft or 1,266.764 m); minimum elevation, 4,155.80 ft (1,266.688 m) Sept. 24, 1954.

REMARKS.--Lake is formed by dam consisting of concrete main section and earthfill wings, completed Sept. 15, 1939; storage began Dec. 29, 1938. Capacity, 330,100 acre-ft (407 hm³) between elevations 4,060.0 ft (1,237.49 m) and 4,201.0 ft (1,280.46 m), crest of 300-ft (91.4-m) ungated service spillway. Inactive storage, 70,490 acre-ft (86.9 hm³) at elevation 4,155.0 ft (1,266.44 m). Lake usually not drawn below elevation, 4,157.35 ft (1,267.160 m), sill of irrigation outlet (capacity, 77,790 acre-ft or 95.9 hm³) except for minor sluicing and operation of small powerplant; during 1954-55, 1964 there was some pumping into Conchas Canal. Capacity of 198,800 acre-ft (245 hm³) between elevations 4,201.0 ft (1,280.46 m), crest of 300-ft (91.4-m) ungated service spillway, and 4,218.0 ft (1,285.65 m), crest of 3,000-ft (914-m) ungated emergency spillway, acts as detention storage in the control of floods. Figures given herein represent total contents. Lake is used for irrigation, flood control, and recreation. Diversion above station for irrigation of about 57,000 acres (231 km²). Direct diversions through Conchas Dam to Bell Ranch Canal and Conchas Canal (see sta 07223000, 07223300) irrigate about 36,000 acres (146 km²) near Tucumcari, and on Bell Ranch.

COOPERATION.--Records furnished by Corps of Engineers.

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

| | | | |
|---|---|---|---|
| 4,186 | 209,600 | 4,194 | 267,900 |
| 4,188 | 223,000 | 4,196 | 284,500 |
| 4,190 | 237,100 | 4,198 | 302,100 |
| 4,192 | 252,100 | 4,200 | 320,500 |

CONTENTS, IN ACRE-FEET, AT 2400, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 217,000 | 219,200 | 221,200 | 226,700 | 279,600 | 315,600 | 305,200 | 301,100 | 277,100 | 265,400 | 256,200 | 253,100 |
| 2 | 217,200 | 219,300 | 221,300 | 228,400 | 281,700 | 315,500 | 304,700 | 301,100 | 276,200 | 264,700 | 256,100 | 253,100 |
| 3 | 217,300 | 219,400 | 221,300 | 229,400 | 283,300 | 315,500 | 304,100 | 301,000 | 275,600 | 263,900 | 256,100 | 253,500 |
| 4 | 217,300 | 219,500 | 221,400 | 230,400 | 284,500 | 315,500 | 303,300 | 300,800 | 275,000 | 263,200 | 255,800 | 253,600 |
| 5 | 217,300 | 219,500 | 221,400 | 231,100 | 285,700 | 315,400 | 302,600 | 300,400 | 274,300 | 263,000 | 255,800 | 253,600 |
| 6 | 217,500 | 219,600 | 221,500 | 231,900 | 286,400 | 315,300 | 302,000 | 299,800 | 273,600 | 262,400 | 255,800 | 253,600 |
| 7 | 217,500 | 219,600 | 221,600 | 232,800 | 287,500 | 315,200 | 301,100 | 299,200 | 273,100 | 261,800 | 255,700 | 253,600 |
| 8 | 217,500 | 219,700 | 221,700 | 233,700 | 288,400 | 315,000 | 300,400 | 298,700 | 272,600 | 261,200 | 255,700 | 253,600 |
| 9 | 217,500 | 219,800 | 221,800 | 234,800 | 289,400 | 314,700 | 299,700 | 298,000 | 272,200 | 260,500 | 255,600 | 253,600 |
| 10 | 217,700 | 219,900 | 221,900 | 235,800 | 290,500 | 314,300 | 299,200 | 297,300 | 271,800 | 260,100 | 255,500 | 253,700 |
| 11 | 217,700 | 219,900 | 221,900 | 236,500 | 291,400 | 313,700 | 298,600 | 296,500 | 272,700 | 259,700 | 255,400 | 253,700 |
| 12 | 217,800 | 219,900 | 222,000 | 237,900 | 292,600 | 313,400 | 298,100 | 295,800 | 273,600 | 259,100 | 255,300 | 253,600 |
| 13 | 217,900 | 220,000 | 222,100 | 239,600 | 294,200 | 313,500 | 297,600 | 294,900 | 274,100 | 258,600 | 255,300 | 253,700 |
| 14 | 218,000 | 220,000 | 222,100 | 242,000 | 296,200 | 313,400 | 297,400 | 294,000 | 274,400 | 258,300 | 255,000 | 253,800 |
| 15 | 218,100 | 220,000 | 222,100 | 247,700 | 298,600 | 313,100 | 297,100 | 293,000 | 274,500 | 257,800 | 255,000 | 253,800 |
| 16 | 218,300 | 220,200 | 222,200 | 251,100 | 300,500 | 313,000 | 296,900 | 292,200 | 274,400 | 257,600 | 254,900 | 253,800 |
| 17 | 218,300 | 220,200 | 222,300 | 254,300 | 302,000 | 312,900 | 296,600 | 291,400 | 274,100 | 257,600 | 254,700 | 253,900 |
| 18 | 218,300 | 220,300 | 222,300 | 256,600 | 303,400 | 312,600 | 296,600 | 290,400 | 274,000 | 257,600 | 254,700 | 253,800 |
| 19 | 218,400 | 220,300 | 222,300 | 258,800 | 304,400 | 312,300 | 296,500 | 289,400 | 273,500 | 257,500 | 254,500 | 253,700 |
| 20 | 218,500 | 220,400 | 222,400 | 260,900 | 305,800 | 312,000 | 296,000 | 288,700 | 272,900 | 257,500 | 254,500 | 253,700 |
| 21 | 218,500 | 220,400 | 222,500 | 262,600 | 307,000 | 311,600 | 295,800 | 287,600 | 272,300 | 257,500 | 254,300 | 253,800 |
| 22 | 218,600 | 220,700 | 222,500 | 264,000 | 308,500 | 311,000 | 295,800 | 286,600 | 271,800 | 257,400 | 254,200 | 253,800 |
| 23 | 218,600 | 220,800 | 222,900 | 265,400 | 310,100 | 310,500 | 296,100 | 285,600 | 271,100 | 257,200 | 254,000 | 253,800 |
| 24 | 218,700 | 220,900 | 223,000 | 266,600 | 311,500 | 309,900 | 295,900 | 284,500 | 270,500 | 257,100 | 254,000 | 253,800 |
| 25 | 218,700 | 221,000 | 223,100 | 268,200 | 312,800 | 309,300 | 296,200 | 283,300 | 269,900 | 257,000 | 254,000 | 253,800 |
| 26 | 218,900 | 221,000 | 223,200 | 269,900 | 313,600 | 308,500 | 298,800 | 282,200 | 268,900 | 256,900 | 253,800 | 253,800 |
| 27 | 218,900 | 221,000 | 223,300 | 271,900 | 314,100 | 307,900 | 300,000 | 281,100 | 268,200 | 256,800 | 253,700 | 253,800 |
| 28 | 218,900 | 221,100 | 223,600 | 274,000 | 314,500 | 307,200 | 300,700 | 280,000 | 267,300 | 256,700 | 253,300 | 253,800 |
| 29 | 218,900 | ------ | 224,400 | 275,800 | 314,900 | 306,400 | 301,000 | 279,000 | 266,800 | 256,600 | 253,300 | 253,800 |
| 30 | 218,900 | ------ | 225,000 | 277,700 | 315,200 | 305,800 | 301,100 | 278,500 | 266,100 | 256,600 | 253,200 | 253,800 |
| 31 | 219,100 | ------ | 225,900 | ------ | 315,400 | ------ | 301,200 | 277,800 | ------ | 256,600 | ------ | 253,900 |
| MAX | 219,100 | 221,100 | 225,900 | 277,700 | 315,400 | 315,600 | 305,200 | 301,100 | 277,100 | 265,400 | 256,200 | 253,900 |
| MIN | 217,000 | 219,200 | 221,200 | 226,700 | 279,600 | 305,800 | 295,800 | 277,800 | 266,100 | 256,600 | 253,200 | 253,100 |
| (†) | 4,187.43 | 4,187.73 | 4,188.42 | 4,195.19 | 4,199.45 | 4,198.41 | 4,197.90 | 4,195.20 | 4,193.77 | 4,192.58 | 4,192.14 | 4,192.23 |
| (‡) | +2,200 | +2,000 | +4,800 | +51,800 | +37,700 | -9,600 | -4,600 | -23,400 | -11,700 | -9,500 | -3,400 | +700 |

CAL YR 1973 MAX 315,600 MIN 217,000 ‡ +37,000
WTR YR 1973 MAX 315,600 MIN 207,000 ‡ +55,300

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

07226500 Ute Creek near Logan, N. Mex.

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

DRAINAGE AREA.--2,060 $mi^2$ (5,335 $km^2$), of which 617 $mi^2$ (1,598 $km^2$) is probably noncontributing.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,815 ft (1,163 m) from topographic map. Prior to May 24, 1914, at site 4.2 mi (6.8 km) downstream at different datum. Jan. 13, 1942 to Dec. 15, 1955, at site 4.8 mi (7.7 km) downstream at datum of 3,758.50 ft (1,145.591 m) above mean sea level. Dec. 16, 1955 to Sept. 30, 1964, at site 4.8 mi (7.7 km) downstream at datum of 3,757.50 ft (1,145.286 m) above mean sea level.

AVERAGE DISCHARGE.--32 calendar years, 28.4 $ft^3/s$ (0.804 $m^3/s$), 20,580 acre-ft/yr (25.4 $hm^3/yr$); 20 calendar years (1954-73), 25.3 $ft^3/s$ (0.716 $m^3/s$), 18,330 acre-ft/yr (22.6 $hm^3$).

EXTREMES.--Current year: Maximum discharge, 426 $ft^3/s$ (12.1 $m^3/s$) about July 13 (gage height, 2.80 ft or 0.853 m, from floodmark); no flow most of time.
1942-73: Maximum discharge, 24,500 $ft^3/s$ (694 $m^3/s$) May 28, 1946, July 12, 1951 (gage height, 8.4 ft or 2.56 m, site and datum then in use), from rating curve extended above 7,700 $ft^3/s$ (218 $m^3/s$) on basis of slope-area measurements at gage heights 5.2 ft (1.58 m) and 7.2 ft (2.19 m); maximum gage height, 8.76 ft (2.670 m) July 17, 1972; no flow most of time.
Flood of May 1, 1914, reached a stage of 22.95 ft (6.995 m) site and datum then in use. Another major flood reached a stage of 16.0 ft (4.88 m), 1942 datum, sometime in 1941, from information furnished by Bureau of Reclamation (discharge, about 70,000 $ft^3/s$ or 1,980 $m^3/s$).

REMARKS.--Records poor. Diversions for irrigation of a few hundred acres above station.

REVISIONS (WATER YEARS).--WSP 1281: 1942-48, 1950, 1951(P). See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.2 | 7.0 | 1.8 | 19 | .05 | | 0 | 17 | | | | |
| 2 | 3.6 | 4.0 | .50 | 27 | 0 | | 0 | 51 | | | | |
| 3 | 3.0 | 5.3 | .07 | 21 | 0 | | 0 | 15 | | | | |
| 4 | 3.0 | 7.6 | .07 | 16 | 0 | | 0 | 3.0 | | | | |
| 5 | 2.5 | 4.4 | .09 | 14 | 0 | | 0 | 0 | | | | |
| 6 | 2.0 | 2.6 | 0 | 9.7 | 0 | | 0 | 0 | | | | |
| 7 | 1.0 | 4.0 | 0 | 7.0 | 0 | | 0 | 0 | | | | |
| 8 | 1.0 | 1.5 | 0 | 5.0 | 0 | | 0 | 0 | | | | |
| 9 | 1.0 | 2.9 | 0 | 4.9 | 0 | | 0 | 0 | | | | |
| 10 | .50 | 2.0 | 0 | 4.4 | 0 | | 0 | 0 | | | | |
| 11 | .22 | 2.9 | 0 | 4.9 | 0 | | 0 | 0 | | | | |
| 12 | 2.0 | 2.6 | 0 | 5.8 | 0 | | 0 | 0 | | | | |
| 13 | 4.0 | 1.8 | 0 | 6.4 | 0 | | 0 | 0 | | | | |
| 14 | 6.0 | 2.6 | 0 | 2.9 | .37 | | 70 | 0 | | | | |
| 15 | 7.0 | 4.0 | 0 | .50 | .09 | | 30 | 6.3 | | | | |
| 16 | 12 | 3.2 | 0 | .02 | 0 | | 4.0 | 6.3 | | | | |
| 17 | 10 | 4.0 | 0 | 0 | 0 | | 0 | .23 | | | | |
| 18 | 9.7 | 2.9 | 0 | 0 | 0 | | 0 | 0 | | | | |
| 19 | 5.8 | 3.6 | 0 | 0 | 0 | | 0 | 0 | | | | |
| 20 | 6.4 | 2.6 | 0 | 0 | 0 | | 0 | 0 | | | | |
| 21 | 4.4 | 2.3 | 1.0 | 0 | 0 | | 0 | 0 | | | | |
| 22 | 2.6 | 3.2 | 2.0 | 0 | 0 | | .78 | 0 | | | | |
| 23 | 1.5 | 4.9 | 3.0 | 0 | 0 | | .01 | 0 | | | | |
| 24 | 1.8 | 7.0 | 4.0 | 0 | 0 | | 0 | 0 | | | | |
| 25 | 2.6 | 9.0 | 5.0 | 1.3 | 0 | | 0 | 0 | | | | |
| 26 | 2.6 | 9.0 | 6.4 | 4.4 | 0 | | 0 | 0 | | | | |
| 27 | 1.5 | 5.8 | 3.6 | 1.2 | 0 | | 0 | 0 | | | | |
| 28 | .33 | 3.2 | 1.2 | 4.9 | 0 | | 69 | 0 | | | | |
| 29 | .80 | ------ | .84 | 4.4 | 0 | | 29 | 0 | | | | |
| 30 | .80 | ------ | 8.3 | .84 | 0 | | 4.2 | 0 | | | | |
| 31 | 4.4 | ------ | 22 | ------ | 0 | ------ | .02 | 0 | ------ | | ------ | |
| TOTAL | 107.25 | 115.9 | 59.87 | 165.56 | .51 | 0 | 207.01 | 98.83 | 0 | 0 | 0 | 0 |
| MEAN | 3.46 | 4.14 | 1.93 | 5.52 | .017 | 0 | 6.68 | 3.19 | 0 | 0 | 0 | 0 |
| MAX | 12 | 9.0 | 22 | 27 | .37 | 0 | 70 | 51 | 0 | 0 | 0 | 0 |
| MIN | .22 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 213 | 230 | 119 | 328 | 1.0 | 0 | 411 | 196 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 754.93 MEAN 2.07 MAX 70 MIN 0 AC-FT 1,500
WTR YR 1973 TOTAL 1,722.81 MEAN 4.72 MAX 74 MIN 0 AC-FT 3,420

PEAK DISCHARGE (BASE, 3,700 $FT^3/S$).--No peak above base.

NOTE.--No gage-height record June 15 to July 17.

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, on face of Ute Dam on Canadian River, 2.5 mi (4.0 km) southwest of Logan, 3.5 mi (5.6 km) downstream from Ute Creek, and at mile 673.1 (1,083.0 km).

DRAINAGE AREA.--11,140 $mi^2$ (28,853 $km^2$), of which 1,110 $mi^2$ (2,875 $km^2$) is probably noncontributing.

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

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by Interstate Stream Commission).

EXTREMES.--Current year: Maximum contents observed, 102,300 acre-ft (126 $hm^3$) July 31 (elevation, 3,758.2 ft or 1,145.50 m); minimum observed, 93,840 acre-ft (116 $hm^3$) Dec. 19-31 (elevation 3,756.0 ft or 1,144.83 m). Period of record: Maximum contents observed, 119,900 acre-ft (148 $hm^3$) June 17, 1969 (elevation, 3,762.4 ft or 1,146.78 m); minimum, 22,230 acre-ft (27.4 $hm^3$) Aug. 7, 1964 (elevation, 3,726.2 ft or 1,135.75 m).

REMARKS.--Reservoir is formed by earthfill dam 121 ft (37 m) high above streambed, 2,050 ft (620 m) long; an earth-dike section on north (left) bank of Canadian River is 2,860 ft (870 m) long and has a maximum height of 27 ft (8 m); a concrete spillway section 840 ft (260 m) long is constructed between main embankment and the dike. Construction completed in May 1963; storage began Dec. 13, 1962. Capacity, 109,600 acre-ft (135 $hm^3$) at elevation 3,760.0 ft (1,146.05 m), crest of 840-ft (260-m) ungated service spillway. Top of dam is at elevation 3,801.0 ft (1,158.54 m). Maximum design capacity of 307,000 acre-ft (379 $hm^3$) at elevation 3,791.0 ft (1,155.50 m), 31.0 ft (9.4 m) above crest of spillway, allows 197,400 acre-ft (243 $hm^3$) of capacity for protection of the structure. Dead storage, 20,710 acre-ft (25.5 $hm^3$) at elevation 3,725.0 ft (1,135.38 m), sill of outlet gate; inactive pool of 49,870 acre-ft (61.5 $hm^3$) below elevation 3,741.6 ft (1,140.44 m) is maintained for fish and wildlife. Figures given herein represent total contents. Reservoir is planned to furnish water for municipal and industrial uses and for recreational purposes; some incidental flood control. Diversions above station for irrigation of about 90,000 acres (364 $km^2$). Water quality records for the current year are published in Part 2 of this report.

COOPERATION.--Records furnished by New Mexico Interstate Stream Commission.

CONTENTS, IN ACRE-FEET, AT 0800, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 99,560 | 99,170 | 99,170 | 99,170 | 100,700 | 99,950 | 99,170 | 101,500 | 99,170 | 98,400 | 97,630 | 94,780 |
| 2 | 99,560 | 99,170 | 99,170 | 99,170 | 100,700 | 99,950 | 99,170 | 101,100 | 99,170 | 98,400 | 97,630 | 94,590 |
| 3 | 99,560 | 99,170 | 99,170 | 99,170 | 100,700 | 99,950 | 99,170 | 100,300 | 99,170 | 98,400 | 97,630 | 94,590 |
| 4 | 99,560 | 99,170 | 99,170 | 99,170 | 100,300 | 99,950 | 99,170 | 99,560 | 99,170 | 98,020 | 97,630 | 94,590 |
| 5 | 99,560 | 99,170 | 99,170 | 99,170 | 100,300 | 99,950 | 98,790 | 99,560 | 99,170 | 98,020 | 97,250 | 94,590 |
| 6 | 99,170 | 99,170 | 99,170 | 99,560 | 100,300 | 99,950 | 98,790 | 99,560 | 99,170 | 98,020 | 97,250 | 94,590 |
| 7 | 99,170 | 99,170 | 99,170 | 99,950 | 100,300 | 99,950 | 98,790 | 99,950 | 99,170 | 98,020 | 97,250 | 94,590 |
| 8 | 99,170 | 99,170 | 99,170 | 100,700 | 100,300 | 99,950 | 98,790 | 100,100 | 99,170 | 98,020 | 97,250 | 94,590 |
| 9 | 99,170 | 99,170 | 99,170 | 101,900 | 100,300 | 99,950 | 98,790 | 100,300 | 98,790 | 98,020 | 97,250 | 94,590 |
| 10 | 99,170 | 99,170 | 99,170 | 101,900 | 100,300 | 99,950 | 98,790 | 100,100 | 98,790 | 98,020 | 97,250 | 94,590 |
| 11 | 99,170 | 99,170 | 99,170 | 101,900 | 100,300 | 99,950 | 98,790 | 100,100 | 98,790 | 98,020 | 97,250 | 94,210 |
| 12 | 99,170 | 99,170 | 99,170 | 101,900 | 100,300 | 99,560 | 98,790 | 99,950 | 98,790 | 98,020 | 97,250 | 94,210 |
| 13 | 99,170 | 99,170 | 99,170 | 101,900 | 100,300 | 99,560 | 98,790 | 99,950 | 98,790 | 98,020 | 96,860 | 94,210 |
| 14 | 99,170 | 99,170 | 99,170 | 101,700 | 100,300 | 99,560 | 98,790 | 99,950 | 98,790 | 98,020 | 96,860 | 94,210 |
| 15 | 99,170 | 99,170 | 99,170 | 101,700 | 100,300 | 99,560 | 98,790 | 99,950 | 98,790 | 98,020 | 96,860 | 94,210 |
| 16 | 99,170 | 99,170 | 99,170 | 101,700 | 100,300 | 99,560 | 98,790 | 99,950 | 98,790 | 98,020 | 96,860 | 94,210 |
| 17 | 99,170 | 99,170 | 99,170 | 101,700 | 100,300 | 99,560 | 98,790 | 99,560 | 98,790 | 98,020 | 96,860 | 94,210 |
| 18 | 99,170 | 99,170 | 99,170 | 101,500 | 100,300 | 99,560 | 98,790 | 99,560 | 98,790 | 98,020 | 96,860 | 94,210 |
| 19 | 99,170 | 99,170 | 99,170 | 101,100 | 100,300 | 99,560 | 98,790 | 99,560 | 98,790 | 98,020 | 96,480 | 93,840 |
| 20 | 99,170 | 99,170 | 99,170 | 101,100 | 100,300 | 99,560 | 98,790 | 99,560 | 98,790 | 98,020 | 96,480 | 93,840 |
| 21 | 99,170 | 99,170 | 99,170 | 100,700 | 100,300 | 99,560 | 99,560 | 99,560 | 98,790 | 98,020 | 96,480 | 93,840 |
| 22 | 99,170 | 99,170 | 99,170 | 100,700 | 100,300 | 99,560 | 99,950 | 99,560 | 98,400 | 97,630 | 96,480 | 93,840 |
| 23 | 99,170 | 99,170 | 99,170 | 100,700 | 100,300 | 99,560 | 100,300 | 99,560 | 98,400 | 97,630 | 96,480 | 93,840 |
| 24 | 99,170 | 99,170 | 99,170 | 100,700 | 100,300 | 99,170 | 100,300 | 99,560 | 98,400 | 97,630 | 96,480 | 93,840 |
| 25 | 99,170 | 99,170 | 99,170 | 100,700 | 100,300 | 99,170 | 100,300 | 99,560 | 98,400 | 97,630 | 96,480 | 93,840 |
| 26 | 99,170 | 99,170 | 99,170 | 100,700 | 99,950 | 99,170 | 100,300 | 99,170 | 98,400 | 97,630 | 96,480 | 93,840 |
| 27 | 99,170 | 99,170 | 99,170 | 100,700 | 99,950 | 99,170 | 100,700 | 99,170 | 98,400 | 97,630 | 94,970 | 93,840 |
| 28 | 99,170 | 99,170 | 99,170 | 100,700 | 99,950 | 99,170 | 101,100 | 99,170 | 98,400 | 97,630 | 94,970 | 93,840 |
| 29 | 99,170 | ------ | 99,170 | 100,700 | 99,950 | 99,170 | 101,500 | 99,170 | 98,400 | 97,630 | 94,970 | 93,840 |
| 30 | 99,170 | ------ | 99,170 | 100,700 | 99,950 | 99,170 | 101,900 | 99,170 | 98,400 | 97,630 | 94,970 | 93,840 |
| 31 | 99,170 | ------ | 99,170 | ------ | 99,950 | ------ | 102,300 | 99,170 | ------ | 97,630 | ------ | 93,840 |
| MAX | 99,560 | 99,170 | 99,170 | 101,900 | 100,700 | 99,950 | 102,300 | 101,500 | 99,170 | 98,400 | 97,630 | 94,780 |
| MIN | 99,170 | 99,170 | 99,170 | 99,170 | 99,950 | 99,170 | 98,790 | 99,170 | 98,400 | 97,630 | 94,970 | 93,840 |
| (†) | 3,757.4 | 3,757.4 | 3,757.4 | 3,757.8 | 3,757.6 | 3,757.4 | 3,758.2 | 3,757.4 | 3,757.2 | 3,757.0 | 3,756.3 | 3,756.0 |
| (‡) | -390 | 0 | 0 | +1,530 | -750 | -780 | +3,130 | -3,130 | -770 | -770 | -2,660 | -1,130 |

CAL YR 1973 MAX 102,300 MIN 93,840 ‡ -5,720
WTR YR 1973 MAX 102,300 MIN 98,400 ‡ -1,900

† Elevation, in feet, at end of year.
‡ Change in contents, in acre-feet.
NOTE.--Gage reset to datum Nov. 27 resulting in an indicated loss of 1,510 acre-feet of storage; effective period of indicated adjustment is unknown.

## 07227000 CANADIAN RIVER AT LOGAN, N. MEX.

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

DRAINAGE AREA.--11,141 mi² (28,855 km²), of which 1,110 mi² (2,875 km²) is probably noncontributing.

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

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

AVERAGE DISCHARGE.--14 calendar years (1912-13, 1927-38), 338 ft³/s (10.99 m³/s), 281,100 acre-ft/yr (347 hm³/yr), prior to completion of Conchas Dam; 24 calendar years (1939-62), 254 ft³/s (7.193 m³/s), 184,000 acre-ft/yr (227 hm³/yr), prior to completion of Ute Dam; 11 calendar years (1963-73), 40.5 ft³/s (1.147 m³/s), 29,340 acre-ft/yr (36.2 hm³/yr).

EXTREMES.--Current year: Maximum daily discharge, 318 ft³/s (9.01 m³/s) July 31, Aug. 2,3; maximum gage height, 3.39 ft (1.033 m) Aug. 3; minimum discharge, 0.83 ft³/s (0.024 m³/s) Dec. 19, result of freezeup.
1930-73: Maximum discharge, 219,000 ft³/s (6,200 m³/s) Sept. 22, 1941 (gage height, 29.3 ft or 8.93 m, from floodmarks), from rating curve extended above 75,000 ft³/s (2,120 m³/s); no flow at times prior to completion of Ute Dam.
Maximum discharge, 278,000 ft³/s (7,870 m³/s) Sept. 30, 1904 (gage height, about 36.5 ft or 11.13 m, site and datum used in 1909), from rating curve extended above 14,000 ft³/s (396 m³/s), from Ninth Biennial Report of State Engineer.

REMARKS.--Records fair. Flow regulated by Conchas Lake, 45 mi (72 km) upstream (see sta 07223500) and Ute Reservoir, 2 mi (3 km) upstream (see sta 07226800). Diversions for irrigation of about 90,000 acres (364 km²) above station.

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

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.4 | 2.6 | 2.6 | 2.3 | 2.3 | 2.4 | 2.6 | 305 | 2.4 | 2.3 | 2.1 | 2.4 |
| 2 | 2.4 | 2.4 | 2.6 | 3.1 | 2.3 | 2.4 | 5.0 | 318 | 2.3 | 2.1 | 2.1 | 2.4 |
| 3 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.6 | 3.1 | 318 | 2.1 | 2.0 | 2.4 | 2.6 |
| 4 | 2.3 | 2.3 | 2.6 | 2.3 | 2.3 | 2.6 | 2.1 | 154 | 2.1 | 2.1 | 2.4 | 2.9 |
| 5 | 2.3 | 2.3 | 2.4 | 2.3 | 2.3 | 2.6 | 2.0 | 7.2 | 2.1 | 2.6 | 2.4 | 2.6 |
| 6 | 2.3 | 2.3 | 2.4 | 2.1 | 2.4 | 2.6 | 2.0 | 4.3 | 2.3 | 2.4 | 2.4 | 2.4 |
| 7 | 2.1 | 2.3 | 2.4 | 2.1 | 2.4 | 2.9 | 1.8 | 3.8 | 2.6 | 2.0 | 2.4 | 2.3 |
| 8 | 2.0 | 2.4 | 2.6 | 2.1 | 2.4 | 2.6 | 1.8 | 3.1 | 2.3 | 2.0 | 2.4 | 2.3 |
| 9 | 2.0 | 2.4 | 2.6 | 115 | 2.4 | 2.4 | 2.1 | 3.8 | 2.1 | 1.8 | 2.4 | 2.3 |
| 10 | 2.0 | 2.4 | 3.1 | 250 | 2.4 | 2.6 | 2.1 | 3.4 | 2.1 | 2.3 | 2.4 | 2.3 |
| 11 | 1.8 | 2.4 | 2.6 | 254 | 2.4 | 2.6 | 2.0 | 2.3 | 2.3 | 2.3 | 2.4 | 2.3 |
| 12 | 2.0 | 2.6 | 2.4 | 254 | 2.4 | 3.4 | 2.0 | 2.1 | 2.3 | 2.0 | 2.4 | 2.4 |
| 13 | 2.4 | 2.6 | 4.4 | 254 | 3.1 | 3.4 | 2.1 | 2.1 | 2.3 | 2.0 | 2.3 | 2.4 |
| 14 | 2.6 | 2.6 | 3.4 | 254 | 3.1 | 3.8 | 2.1 | 2.1 | 2.3 | 2.1 | 2.3 | 2.4 |
| 15 | 2.4 | 2.6 | 3.4 | 254 | 2.4 | 2.9 | 2.1 | 2.1 | 2.3 | 2.1 | 2.4 | 2.4 |
| 16 | 2.4 | 2.6 | 3.1 | 243 | 2.4 | 2.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.4 | 2.4 |
| 17 | 2.6 | 2.6 | 2.9 | 228 | 2.4 | 2.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.4 | 2.4 |
| 18 | 2.9 | 2.6 | 2.6 | 133 | 2.4 | 2.6 | 2.1 | 2.0 | 2.1 | 2.1 | 2.4 | 2.3 |
| 19 | 2.9 | 2.4 | 2.4 | 11 | 2.6 | 2.6 | 2.0 | 2.0 | 2.1 | 2.1 | 2.4 | 2.4 |
| 20 | 2.9 | 2.4 | 2.6 | 4.3 | 2.4 | 2.6 | 2.0 | 2.0 | 2.0 | 2.1 | 2.4 | 2.9 |
| 21 | 2.9 | 2.4 | 2.4 | 3.6 | 2.4 | 2.6 | 2.3 | 2.0 | 2.0 | 2.1 | 2.4 | 2.9 |
| 22 | 2.9 | 3.1 | 2.3 | 3.4 | 2.4 | 2.6 | 4.1 | 2.0 | 2.1 | 2.0 | 2.4 | 2.3 |
| 23 | 3.1 | 2.9 | 3.4 | 3.1 | 2.4 | 2.9 | 4.8 | 2.0 | 2.0 | 2.0 | 2.4 | 2.3 |
| 24 | 2.9 | 2.6 | 2.4 | 3.1 | 2.3 | 2.9 | 2.0 | 2.0 | 2.0 | 2.1 | 2.4 | 2.3 |
| 25 | 2.9 | 2.4 | 2.4 | 3.1 | 2.1 | 2.9 | 2.4 | 2.0 | 2.0 | 2.1 | 2.4 | 2.4 |
| 26 | 2.6 | 2.4 | 2.4 | 2.8 | 2.3 | 2.9 | 1.8 | 2.0 | 2.0 | 2.1 | 2.4 | 2.1 |
| 27 | 2.1 | 2.4 | 2.4 | 2.4 | 2.3 | 2.9 | 1.7 | 2.0 | 2.1 | 2.1 | 2.4 | 2.6 |
| 28 | 2.0 | 2.6 | 2.4 | 2.3 | 2.3 | 2.9 | 1.7 | 2.0 | 2.3 | 2.1 | 2.4 | 2.3 |
| 29 | 2.2 | ------ | 2.9 | 2.3 | 2.4 | 2.9 | 1.7 | 2.0 | 2.3 | 2.1 | 2.4 | 2.3 |
| 30 | 2.4 | ------ | 3.4 | 2.3 | 2.4 | 2.9 | 132 | 5.8 | 2.3 | 2.1 | 2.4 | 2.3 |
| 31 | 2.9 | ------ | 2.4 | ------ | 2.9 | ------ | 318 | 6.8 | ------ | 2.3 | ------ | 2.3 |
| TOTAL | 76.0 | 70.0 | 84.3 | 2,301.3 | 75.3 | 83.8 | 517.5 | 1,171.9 | 65.4 | 65.7 | 71.2 | 74.9 |
| MEAN | 2.45 | 2.50 | 2.72 | 76.7 | 2.43 | 2.79 | 16.7 | 37.8 | 2.18 | 2.12 | 2.37 | 2.42 |
| MAX | 3.1 | 3.1 | 4.4 | 254 | 3.1 | 3.8 | 318 | 318 | 2.6 | 2.6 | 2.4 | 2.9 |
| MIN | 1.8 | 2.3 | 2.3 | 2.1 | 2.1 | 2.4 | 1.7 | 2.0 | 2.0 | 1.8 | 2.1 | 2.1 |
| AC-FT | 151 | 139 | 167 | 4,560 | 149 | 166 | 1,030 | 2,320 | 130 | 130 | 141 | 149 |

CAL YR 1973 TOTAL 4,657.3 MEAN 12.8 MAX 318 MIN 1.7 AC-FT 9,240
WTR YR 1973 TOTAL 5,295.5 MEAN 14.5 MAX 318 MIN 1.7 AC-FT 10,500

## 07227100 REVUELTO CREEK NEAR LOGAN, N. MEX.

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

DRAINAGE AREA.--786 $mi^2$ (2,036 $km^2$).

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

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

AVERAGE DISCHARGE.--14 calendar years, 54.1 $ft^3/s$ (1.532 $m^3/s$), 39,200 acre-ft/yr (48.3 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 4,010 $ft^3/s$ (114 $m^3/s$) July 23 (gage height, 6.05 ft or 1.844 m); no flow at times.
Period of record: Maximum discharge, 26,700 $ft^3/s$ (756 $m^3/s$) July 9, 1960 (gage height, 14.3 ft or 4.36 m); no flow at times.
1941-47: Maximum discharge determined, about 13,400 $ft^3/s$ (379 $m^3/s$) Sept. 18, 1946 (gage height, 9.04 ft or 2.755 m), at site 500 ft (150 m) downstream at different datum, from unpublished records collected by Bureau of Reclamation.
A peak of 26,100 $ft^3/s$ (739 $m^3/s$) date unknown (gage height, 12.9 ft or 3.93 m), was measured by slope-area method in May 1957.

REMARKS.--Records poor. Low flows supplemented by surface and ground water return from irrigation in vicinity of Tucumcari. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.0 | 8.9 | 3.3 | 11 | 0 | 24 | 2.6 | 7.1 | 76 | 24 | 1.2 | 1.2 |
| 2 | 5.0 | 7.1 | 2.6 | 35 | 0 | 20 | 26 | 7.1 | 38 | 22 | .60 | 1.2 |
| 3 | 4.0 | 6.0 | 2.3 | 109 | 0 | 17 | 24 | 4.5 | 20 | 24 | .46 | 1.4 |
| 4 | 4.0 | 4.1 | 2.6 | 28 | 0 | 17 | 7.1 | 4.1 | 16 | 21 | .60 | 5.0 |
| 5 | 3.0 | 4.1 | 2.3 | 18 | 0 | 16 | 5.0 | 3.0 | 20 | 24 | .60 | 10 |
| 6 | 3.0 | 3.0 | 1.8 | 17 | 0 | 16 | 3.7 | 2.3 | 19 | 52 | .74 | 7.0 |
| 7 | 2.0 | 3.3 | 1.8 | 17 | 0 | 17 | 3.3 | 3.7 | 101 | 21 | 1.0 | 6.0 |
| 8 | 2.0 | 3.0 | 2.3 | 14 | 2.1 | 16 | 2.3 | 7.1 | 56 | 16 | 1.2 | 5.0 |
| 9 | 1.0 | 2.8 | 3.3 | 26 | 15 | 13 | 5.5 | 26 | 16 | 16 | 1.2 | 5.0 |
| 10 | 0 | 2.6 | 100 | 21 | 15 | 9.5 | 69 | 15 | 11 | 50 | 1.4 | 5.0 |
| 11 | 1.0 | 2.6 | 30 | 17 | 16 | 9.5 | 51 | 17 | 8.9 | 40 | 1.6 | 6.0 |
| 12 | 2.0 | 2.7 | 15 | 12 | 12 | 16 | 36 | 17 | 6.5 | 30 | 2.1 | 7.0 |
| 13 | 4.0 | 2.8 | 10 | 7.1 | 17 | 53 | 20 | 18 | 3.7 | 26 | 1.2 | 6.0 |
| 14 | 10 | 3.0 | 6.0 | 5.0 | 35 | 124 | 60 | 54 | 106 | 22 | .33 | 4.5 |
| 15 | 25 | 3.0 | 4.0 | 2.1 | 42 | 67 | 51 | 51 | 54 | 20 | 0 | 3.3 |
| 16 | 16 | 3.3 | 3.0 | 1.4 | 42 | 27 | 38 | 49 | 15 | 24 | 0 | 2.6 |
| 17 | 15 | 3.7 | 2.5 | .74 | 35 | 11 | 22 | 41 | 13 | 25 | 0 | 3.3 |
| 18 | 4.1 | 3.7 | 2.0 | .33 | 32 | 6.0 | 11 | 31 | 11 | 17 | 0 | 3.0 |
| 19 | 3.3 | 4.1 | 2.0 | 0 | 32 | 2.6 | 47 | 26 | 8.2 | 13 | 0 | 2.5 |
| 20 | 3.3 | 3.7 | 2.0 | 0 | 42 | 1.4 | 31 | 27 | 5.5 | 11 | 0 | 2.5 |
| 21 | 2.6 | 3.3 | 2.0 | 0 | 31 | .74 | 27 | 25 | 4.5 | 14 | .46 | 2.5 |
| 22 | 2.1 | 5.0 | 2.5 | 0 | 24 | 1.0 | 244 | 19 | 7.6 | 13 | .60 | 2.6 |
| 23 | 2.0 | 8.2 | 3.0 | 0 | 69 | .74 | 1,040 | 25 | 8.2 | 6.0 | 1.0 | 3.0 |
| 24 | 2.0 | 24 | 4.0 | 0 | 28 | .60 | 126 | 28 | 6.5 | 3.0 | 1.4 | 3.4 |
| 25 | 3.0 | 11 | 5.0 | .20 | 21 | 1.8 | 70 | 28 | 6.5 | 2.3 | 1.6 | 3.6 |
| 26 | 3.7 | 5.5 | 6.0 | 5.0 | 14 | 2.6 | 179 | 34 | 10 | 2.6 | 1.8 | 3.6 |
| 27 | 4.5 | 4.5 | 3.7 | 10 | 12 | 1.8 | 82 | 36 | 15 | 2.1 | 1.6 | 3.7 |
| 28 | 3.7 | 3.3 | 2.6 | 3.3 | 14 | 1.8 | 84 | 40 | 18 | 1.8 | 1.2 | 3.7 |
| 29 | 3.0 | ------ | 3.7 | .89 | 14 | 1.6 | 42 | 38 | 21 | 1.8 | 1.0 | 3.7 |
| 30 | 4.0 | ------ | 30 | 0 | 16 | 2.1 | 21 | 67 | 22 | 1.0 | 1.2 | 3.0 |
| 31 | 5.5 | ------ | 32 | ------ | 21 | ------ | 13 | 265 | ------ | 1.0 | ------ | 1.8 |
| TOTAL | 148.8 | 142.3 | 293.3 | 361.06 | 601.1 | 497.78 | 2,443.5 | 1,015.9 | 724.1 | 546.6 | 26.09 | 122.1 |
| MEAN | 4.80 | 5.08 | 9.46 | 12.0 | 19.4 | 16.6 | 78.8 | 32.8 | 24.1 | 17.6 | .87 | 3.94 |
| MAX | 25 | 24 | 100 | 109 | 69 | 124 | 1,040 | 265 | 106 | 52 | 2.1 | 10 |
| MIN | 0 | 2.6 | 1.8 | 0 | 0 | .60 | 2.3 | 2.3 | 3.7 | 1.0 | 0 | 1.2 |
| AC-FT | 295 | 282 | 582 | 716 | 1,190 | 987 | 4,850 | 2,020 | 1,440 | 1,080 | 52 | 242 |

CAL YR 1973 TOTAL 6,922.63 MEAN 19.0 MAX 1,040 MIN 0 AC-FT 13,730
WTR YR 1973 TOTAL 7,429.34 MEAN 20.4 MAX 1,040 MIN 0 AC-FT 14,740

PEAK DISCHARGE (BASE, 3,500 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 7-23 | 0030 | 6.05 | 4,010 | | | | |

07227200 TRAMPEROS CREEK NEAR STEAD, N. MEX.

LOCATION.--Lat 36°04'15", long 103°12'10", in NW¼NW¼ sec.10, T.21 N., R.35 E., Union County, at downstream end of bridge pier on State Highway 18, 2.1 mi (3.4 km) south of Stead, 3.2 mi (5.1 km) downstream from Pinabetes Creek, 17.8 mi (28.6 km) upstream from New Mexico-Texas State line, and 26 mi (4.2 km) south of Clayton.

DRAINAGE AREA.--556 $mi^2$ (1,440 $km^2$), approximately.

PERIOD OF RECORD.--October 1964 to May 1966 (annual maximum only), June 1966 to December 1973 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 4,481.19 ft (1,365.867 m) above mean sea level. Prior to Feb. 6, 1969, at site 90 ft (27 m) upstream at datum 1.61 ft (0.491 m) lower.

AVERAGE DISCHARGE.--7 calendar years, 4.37 $ft^3/s$ (0.124 $m^3/s$), 3,170 acre-ft/yr (3.91 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 13 $ft^3/s$ (0.37 $m^3/s$) Mar. 30 (gage height, 2.71 ft or 0.826 m); no flow most of time.
Period of record: Maximum discharge, 12,300 $ft^3/s$ (348 $m^3/s$) Oct. 17, 1965 (gage height, 14.9 ft or 4.54 m, from floodmark, present datum), by slope-area measurement; no flow most of time.
A flood in 1904 reached a stage of about 27.4 ft (8.35 m), discharge about 45,500 $ft^3/s$ (1,290 $m^3/s$) with only a single span bridge, and a flood in 1937 reached a stage of about 20.4 ft (6.22 m), discharge about 31,600 $ft^3/s$ (895 $m^3/s$), from information by State Highway Department.

REMARKS.--Records poor. Minor regulation by detention reservoirs and stock ponds.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .46 | .61 | .53 | 6.2 | 1.1 | | | | | | | |
| 2 | .46 | .80 | .46 | 7.0 | .80 | | | | | | | |
| 3 | .53 | .61 | .27 | 6.2 | .80 | | | | | | | |
| 4 | .61 | .40 | .21 | 4.8 | .46 | | | | | | | |
| 5 | .61 | .46 | .33 | 4.1 | .21 | | | | | | | |
| 6 | .53 | .40 | .21 | 3.5 | .11 | | | | | | | |
| 7 | .46 | .33 | .27 | 3.1 | .16 | | | | | | | |
| 8 | .40 | .61 | .40 | 2.5 | .16 | | | | | | | |
| 9 | .53 | .21 | .80 | 2.5 | .03 | | | | | | | |
| 10 | .61 | .61 | .70 | 1.8 | .01 | | | | | | | |
| 11 | .61 | .70 | .53 | 1.6 | 0 | | | | | | | |
| 12 | .70 | .70 | .40 | 1.4 | 0 | | | | | | | |
| 13 | .70 | .53 | 2.1 | 1.1 | .44 | | | | | | | |
| 14 | 1.2 | .40 | 2.5 | 1.0 | 1.6 | | | | | | | |
| 15 | 1.3 | .46 | 2.4 | .70 | 1.3 | | | | | | | |
| 16 | 1.2 | .40 | 2.7 | .90 | .53 | | | | | | | |
| 17 | 1.1 | .53 | 2.7 | .70 | .40 | | | | | | | |
| 18 | .80 | .40 | 2.2 | .70 | .16 | | | | | | | |
| 19 | .70 | .53 | 2.0 | 1.6 | .02 | | | | | | | |
| 20 | .61 | .40 | 2.5 | 1.2 | .01 | | | | | | | |
| 21 | .40 | .27 | 2.5 | 1.3 | 0 | | | | | | | |
| 22 | .70 | .53 | 2.2 | 2.0 | 0 | | | | | | | |
| 23 | .40 | .90 | 2.7 | 3.3 | .21 | | | | | | | |
| 24 | .46 | .90 | 4.8 | 3.1 | .06 | | | | | | | |
| 25 | .70 | .90 | 4.4 | 4.4 | 0 | | | | | | | |
| 26 | .61 | .80 | 4.4 | 4.1 | 0 | | | | | | | |
| 27 | .33 | .70 | 6.2 | 3.1 | 0 | | | | | | | |
| 28 | .08 | .61 | 6.7 | 2.5 | 0 | | | | | | | |
| 29 | .15 | ------ | 5.1 | 1.7 | 0 | | | | | | | |
| 30 | .67 | ------ | 8.1 | 1.6 | 0 | | | | | | | |
| 31 | .90 | ------ | 6.4 | ------ | 0 | ------ | | | ------ | | ------ | |
| TOTAL | 19.52 | 15.70 | 77.71 | 79.70 | 8.57 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN | .63 | .56 | 2.51 | 2.66 | .28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX | 1.3 | .90 | 8.1 | 7.0 | 1.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN | .08 | .21 | .21 | .70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 39 | 31 | 154 | 158 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 201.20 MEAN .55 MAX 8.1 MIN 0 AC-FT 399
WTR YR 1973 TOTAL 269.94 MEAN .74 MAX 8.1 MIN 0 AC-FT 535

PEAK DISCHARGE (BASE, 1,200 $FT^3/S$).--No peak above base.

## 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, on right bank at highway bridge, 6 mi (10 km) north of Colorado-New Mexico State line, 7 mi (11 km) downstream from Culebra Creek, 10 mi (16 km) east of Lobatos, 14 mi (23 km) east of Antonito and at mile 1,722.1 (2,770.9 km).

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

PERIOD OF RECORD.--June 1889 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "at Cenicero" 1899-1901, and as "near Cenicero" 1902-4.

GAGE.--Water-stage recorder. Datum of gage is 7,427.63 ft (2,263.942 m) above mean sea level. Prior to Nov. 8, 1910, non-recording gages at same site and datum.

AVERAGE DISCHARGE.--74 calendar years, 595 ft³/s (16.85 m³/s), 431,100 acre-ft/yr (531 hm³/yr); 20 calendar years (1954-73), 330 ft³/s (9.346 m³/s), 239,100 acre-ft/yr (295 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,560 ft³/s (101 m³/s) May 23 (gage height, 4.69 ft or 1.430 m); minimum daily, 216 ft³/s (6.12 m³/s) Aug.30, Sept. 25, and Oct.5.
Period of record: Maximum discharge observed, 13,200 ft³/s (374 m³/s) June 8, 1905 (gage height, 9.1 ft or 2.77 m), from rating curve extended above 8,000 ft³/s (230 m³/s); no flow at times in 1950-51, 1956.
Maximum stage since at least 1828, that of June 8, 1905.

REMARKS.--Records good except those for winter periods, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Water quality records for the current year are published in Part 2 of this report.

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

REVISIONS (WATER YEARS).--WSP 210: Drainage area. WSP 1312: 1907 (monthly runoff).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 290 | 290 | 400 | 556 | 824 | 2,500 | 1,790 | 792 | 294 | 238 | 455 | 350 |
| 2 | 285 | 275 | 410 | 544 | 657 | 2,780 | 1,600 | 760 | 410 | 242 | 455 | 375 |
| 3 | 285 | 265 | 415 | 526 | 478 | 2,960 | 1,520 | 643 | 450 | 230 | 450 | 380 |
| 4 | 285 | 265 | 425 | 502 | 395 | 2,740 | 1,290 | 587 | 380 | 223 | 455 | 370 |
| 5 | 275 | 285 | 450 | 478 | 435 | 2,420 | 1,120 | 544 | 310 | 216 | 450 | 320 |
| 6 | 280 | 295 | 470 | 466 | 636 | 2,150 | 1,160 | 508 | 294 | 223 | 445 | 275 |
| 7 | 285 | 290 | 480 | 460 | 580 | 1,970 | 1,280 | 478 | 278 | 258 | 425 | 270 |
| 8 | 290 | 285 | 500 | 460 | 460 | 1,960 | 1,080 | 450 | 258 | 310 | 405 | 280 |
| 9 | 290 | 285 | 500 | 460 | 478 | 2,120 | 970 | 450 | 258 | 340 | 380 | 285 |
| 10 | 280 | 290 | 520 | 450 | 643 | 2,320 | 979 | 385 | 266 | 365 | 345 | 290 |
| 11 | 275 | 295 | 560 | 455 | 916 | 2,630 | 1,100 | 325 | 258 | 420 | 330 | 300 |
| 12 | 270 | 305 | 580 | 490 | 1,430 | 2,750 | 1,220 | 294 | 298 | 435 | 320 | 330 |
| 13 | 270 | 310 | 520 | 526 | 1,740 | 2,810 | 1,130 | 266 | 360 | 425 | 315 | 365 |
| 14 | 265 | 300 | 560 | 568 | 1,850 | 2,960 | 1,060 | 242 | 415 | 435 | 320 | 380 |
| 15 | 265 | 300 | 580 | 629 | 1,870 | 2,970 | 1,010 | 234 | 405 | 440 | 335 | 365 |
| 16 | 275 | 310 | 574 | 692 | 1,850 | 2,730 | 1,120 | 230 | 370 | 435 | 340 | 325 |
| 17 | 280 | 305 | 568 | 671 | 1,870 | 2,700 | 1,160 | 270 | 330 | 472 | 330 | 325 |
| 18 | 285 | 300 | 608 | 562 | 1,980 | 2,800 | 1,150 | 282 | 310 | 532 | 315 | 330 |
| 19 | 285 | 295 | 629 | 502 | 2,080 | 2,310 | 1,200 | 270 | 310 | 544 | 315 | 275 |
| 20 | 290 | 290 | 636 | 472 | 2,490 | 2,060 | 1,450 | 274 | 298 | 538 | 335 | 255 |
| 21 | 290 | 300 | 622 | 395 | 2,740 | 1,950 | 1,450 | 286 | 270 | 538 | 340 | 280 |
| 22 | 285 | 295 | 643 | 355 | 3,290 | 1,970 | 1,360 | 290 | 250 | 532 | 360 | 290 |
| 23 | 280 | 295 | 615 | 335 | 3,500 | 2,050 | 1,100 | 246 | 242 | 526 | 350 | 275 |
| 24 | 280 | 295 | 601 | 345 | 3,060 | 2,090 | 970 | 246 | 226 | 520 | 340 | 260 |
| 25 | 275 | 300 | 568 | 370 | 2,500 | 2,050 | 934 | 250 | 216 | 508 | 335 | 255 |
| 26 | 270 | 300 | 550 | 440 | 2,570 | 2,100 | 961 | 238 | 220 | 496 | 305 | 255 |
| 27 | 275 | 310 | 556 | 502 | 2,940 | 2,100 | 970 | 226 | 234 | 490 | 280 | 245 |
| 28 | 275 | 350 | 587 | 550 | 2,960 | 2,060 | 988 | 230 | 246 | 478 | 270 | 255 |
| 29 | 280 | ------ | 594 | 615 | 2,500 | 1,810 | 1,020 | 246 | 250 | 478 | 290 | 270 |
| 30 | 285 | ------ | 587 | 768 | 2,170 | 1,810 | 916 | 216 | 242 | 460 | 325 | 270 |
| 31 | 290 | ------ | 580 | ------ | 2,280 | ------ | 832 | 258 | ------ | 455 | ------ | 260 |
| TOTAL | 8,690 | 8,280 | 16,888 | 15,144 | 54,172 | 70,630 | 35,890 | 11,016 | 8,948 | 12,802 | 10,715 | 9,360 |
| MEAN | 280 | 296 | 545 | 505 | 1,747 | 2,354 | 1,158 | 355 | 298 | 413 | 357 | 302 |
| MAX | 290 | 350 | 643 | 768 | 3,500 | 2,970 | 1,790 | 792 | 450 | 544 | 455 | 380 |
| MIN | 265 | 265 | 400 | 335 | 395 | 1,810 | 832 | 216 | 216 | 216 | 270 | 245 |
| AC-FT | 17,240 | 16,420 | 33,500 | 30,040 | 107,500 | 140,100 | 71,190 | 21,850 | 17,750 | 25,390 | 21,250 | 18,570 |

CAL YR 1973 TOTAL 262,535 MEAN 719 MAX 3,500 MIN 216 AC-FT 520,700
WTR YR 1973 TOTAL 258,681 MEAN 709 MAX 3,500 MIN 67 AC-FT 513,100

## 08252000 RIO GRANDE AT COLORADO-NEW MEXICO STATE LINE

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

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

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

AVERAGE DISCHARGE.--20 calendar years, 327 $ft^3/s$ (9.261 $m^3/s$), 236,900 acre-ft/yr (292 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 3,540 $ft^3/s$ (100 $m^3/s$) May 23 (gage height, 6.66 ft or 2,030 m); minimum daily, 210 $ft^3/s$ (5.95 $m^3/s$) Sept. 25.
Period of record: Maximum discharge, 4,150 $ft^3/s$ (118 $m^3/s$) May 29, 1958 (gage height, 7.07 ft or 2.155 m); no flow at times in 1956.
Flood of June 8, 1905 (daily discharge, 13,100 $ft^3/s$ or 371 $m^3/s$ at station near Lobatos 5.8 mi or 9.3 km upstream), was probably the greatest since at least 1828.

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

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

REVISIONS (WATER YEARS).--WSP 1732: 1954(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 290 | 290 | 380 | 545 | 800 | 2,420 | 1,740 | 756 | 268 | 237 | 480 | 545 |
| 2 | 290 | 280 | 405 | 539 | 684 | 2,700 | 1,550 | 738 | 359 | 243 | 473 | 575 |
| 3 | 285 | 270 | 415 | 515 | 508 | 2,920 | 1,480 | 644 | 431 | 237 | 462 | 575 |
| 4 | 285 | 265 | 420 | 501 | 408 | 2,740 | 1,290 | 575 | 368 | 225 | 466 | 380 |
| 5 | 280 | 275 | 440 | 473 | 431 | 2,380 | 1,100 | 535 | 308 | 216 | 459 | 345 |
| 6 | 280 | 290 | 465 | 459 | 619 | 2,130 | 1,100 | 494 | 286 | 219 | 452 | 280 |
| 7 | 280 | 290 | 475 | 452 | 611 | 1,930 | 1,240 | 473 | 271 | 240 | 435 | 270 |
| 8 | 285 | 285 | 495 | 421 | 476 | 1,890 | 1,060 | 442 | 246 | 295 | 414 | 280 |
| 9 | 290 | 285 | 500 | 462 | 462 | 2,030 | 938 | 428 | 246 | 324 | 388 | 285 |
| 10 | 285 | 290 | 515 | 442 | 587 | 2,220 | 926 | 381 | 252 | 349 | 359 | 290 |
| 11 | 280 | 295 | 550 | 442 | 820 | 2,520 | 1,030 | 324 | 246 | 398 | 343 | 290 |
| 12 | 275 | 300 | 575 | 470 | 1,280 | 2,710 | 1,150 | 295 | 274 | 425 | 330 | 320 |
| 13 | 270 | 310 | 530 | 512 | 1,680 | 2,740 | 1,090 | 258 | 333 | 418 | 317 | 360 |
| 14 | 270 | 305 | 550 | 539 | 1,830 | 2,860 | 1,000 | 231 | 385 | 421 | 320 | 380 |
| 15 | 265 | 300 | 575 | 603 | 1,870 | 2,880 | 956 | 225 | 378 | 442 | 336 | 375 |
| 16 | 270 | 305 | 575 | 676 | 1,820 | 2,670 | 1,050 | 222 | 346 | 438 | 340 | 290 |
| 17 | 280 | 305 | 570 | 666 | 1,880 | 2,590 | 1,100 | 243 | 324 | 466 | 330 | 320 |
| 18 | 280 | 300 | 590 | 579 | 1,940 | 2,720 | 1,100 | 268 | 298 | 523 | 317 | 340 |
| 19 | 285 | 295 | 611 | 490 | 2,050 | 2,290 | 1,130 | 264 | 295 | 551 | 314 | 250 |
| 20 | 285 | 290 | 635 | 480 | 2,380 | 2,010 | 1,400 | 261 | 283 | 547 | 324 | 250 |
| 21 | 290 | 295 | 603 | 401 | 2,830 | 1,900 | 1,400 | 274 | 261 | 547 | 336 | 280 |
| 22 | 285 | 295 | 623 | 352 | 3,240 | 1,910 | 1,370 | 280 | 246 | 547 | 360 | 315 |
| 23 | 285 | 295 | 615 | 330 | 3,460 | 1,950 | 1,120 | 246 | 234 | 539 | 356 | 280 |
| 24 | 280 | 295 | 591 | 336 | 3,100 | 2,030 | 950 | 234 | 222 | 539 | 340 | 275 |
| 25 | 275 | 300 | 575 | 362 | 2,520 | 1,990 | 905 | 237 | 210 | 531 | 346 | 265 |
| 26 | 275 | 300 | 535 | 428 | 2,520 | 2,040 | 920 | 228 | 213 | 523 | 308 | 275 |
| 27 | 270 | 305 | 527 | 480 | 2,850 | 2,030 | 926 | 216 | 222 | 515 | 290 | 245 |
| 28 | 275 | 340 | 555 | 535 | 2,930 | 2,020 | 926 | 219 | 240 | 512 | 264 | 250 |
| 29 | 275 | ------ | 579 | 575 | 2,470 | 1,780 | 962 | 237 | 249 | 504 | 280 | 265 |
| 30 | 280 | ------ | 567 | 716 | 2,060 | 1,750 | 885 | 213 | 246 | 501 | 320 | 270 |
| 31 | 285 | ------ | 563 | ------ | 2,180 | ------ | 800 | 231 | ------ | 490 | ------ | 280 |
| TOTAL | 8,685 | 8,250 | 16,604 | 14,779 | 53,296 | 68,750 | 34,594 | 10,672 | 8,540 | 12,962 | 10,859 | 9,390 |
| MEAN | 280 | 295 | 536 | 493 | 1,719 | 2,292 | 1,116 | 344 | 285 | 418 | 362 | 303 |
| MAX | 290 | 340 | 635 | 716 | 3,460 | 2,920 | 1,740 | 756 | 431 | 551 | 480 | 380 |
| MIN | 265 | 265 | 380 | 330 | 408 | 1,750 | 800 | 213 | 210 | 216 | 264 | 245 |
| AC-FT | 17,230 | 16,360 | 32,930 | 29,310 | 105,700 | 136,400 | 68,620 | 21,170 | 16,940 | 25,710 | 21,540 | 18,630 |

CAL YR 1973 TOTAL 257,381 MEAN 705 MAX 3,460 MIN 210 AC-FT 510,500
WTR YR 1973 TOTAL 252,961 MEAN 693 MAX 3,460 MIN 68 AC-FT 501,700

## 08252500 COSTILLA CREEK ABOVE COSTILLA DAM, N. MEX.

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

DRAINAGE AREA.--25.1 mi² (65.0 km²).

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

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

EXTREMES.--Current year: Maximum discharge, 94 ft³/s (2.66 m³/s) May 28 (gage height, 3.03 ft or 0.924 m); minimum not determined.
Period of record: Maximum discharge, 3,870 ft³/s (110 m³/s) July 22, 1954 (gage height, 6.3 ft or 1.92 m, from floodmarks, present site and datum), on basis of slope-area measurement of peak flow; minimum not determined.
The flood in 1954 destroyed the gaging station and is highest known since about 1909, from information by local range rider. A portion of this flow may have originated in Casias Creek basin (see REMARKS).

REMARKS.--Records good. Natural flow may be augmented by transbasin diversions or irrigation returns from about 1,300 acres (5.26 km²) irrigated from Casias Creek (see sta 08253000).

REVISIONS (WATER YEARS).--WSP 878: 1937. WSP 1923: 1937-50, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1975

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | - | 56 | 25 | 5.8 | 3.4 | 2.8 | | |
| 2 | | | | | - | 51 | 23 | 5.8 | 2.6 | 2.6 | | |
| 3 | | | | | - | 49 | 21 | 6.5 | 2.5 | 2.5 | | |
| 4 | | | | | - | 57 | 19 | 6.5 | 2.5 | - | | |
| 5 | | | | | - | 49 | 18 | 5.8 | 2.5 | - | | |
| 6 | | | | | - | 44 | 16 | 5.2 | 2.4 | - | | |
| 7 | | | | | - | 47 | 16 | 5.1 | 2.5 | - | | |
| 8 | | | | | - | 52 | 16 | 4.7 | 2.4 | - | | |
| 9 | | | | | - | 61 | 19 | 4.5 | 3.0 | - | | |
| 10 | | | | | - | 67 | 15 | 4.5 | 4.1 | - | | |
| 11 | | | | | - | 68 | 12 | 4.5 | 5.1 | - | | |
| 12 | | | | | - | 68 | 14 | 4.7 | 3.4 | - | | |
| 13 | | | | | - | 62 | 19 | 4.5 | 2.9 | - | | |
| 14 | | | | | - | 62 | 18 | 4.5 | 2.6 | - | | |
| 15 | | | | | 36 | 51 | 14 | 4.1 | 2.6 | - | | |
| 16 | | | | | 33 | 42 | 11 | 3.8 | 2.6 | - | | |
| 17 | | | | | 39 | 36 | 10 | 3.4 | 2.5 | - | | |
| 18 | | | | | 49 | 34 | 10 | 3.2 | 2.3 | - | | |
| 19 | | | | | 58 | 32 | 10 | 3.2 | 2.2 | - | | |
| 20 | | | | | 66 | 30 | 8.1 | 3.7 | 2.2 | - | | |
| 21 | | | | | 67 | 29 | 8.1 | 3.4 | 2.1 | - | | |
| 22 | | | | | 60 | 29 | 8.4 | 3.4 | 2.2 | - | | |
| 23 | | | | | 54 | 30 | 7.6 | 3.1 | 2.4 | - | | |
| 24 | | | | | 54 | 30 | 6.7 | 2.9 | 2.9 | - | | |
| 25 | | | | | 52 | 28 | 6.7 | 3.4 | 2.9 | - | | |
| 26 | | | | | 57 | 30 | 7.2 | 4.0 | 4.0 | - | | |
| 27 | | | | | 48 | 32 | 6.3 | 3.2 | 3.7 | - | | |
| 28 | | | | | 55 | 32 | 6.7 | 3.4 | 3.4 | - | | |
| 29 | | ------ | | | 44 | 30 | 7.0 | 4.0 | 3.1 | - | | |
| 30 | | ------ | | | 46 | 28 | 7.0 | 3.8 | 2.9 | - | | |
| 31 | | ------ | | ------ | 48 | ------ | 6.3 | 3.8 | ------ | - | ------ | |
| TOTAL | - | - | - | - | - | 1,316 | 392.1 | 132.2 | 85.9 | - | - | - |
| MEAN | - | - | - | - | - | 43.9 | 12.6 | 4.26 | 2.86 | - | - | - |
| MAX | - | - | - | - | - | 68 | 25 | 6.5 | 5.1 | - | - | - |
| MIN | - | - | - | - | - | 28 | 6.3 | 2.9 | 2.1 | - | - | - |
| AC-FT | - | - | - | - | - | 2,610 | 778 | 262 | 170 | - | - | - |

PEAK DISCHARGE (BASE, 40 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-20 | 2100 | 2.96 | 85 | 7- 9 | 1400 | 2.72 | 48 |
| 5-28 | 1800 | 3.03 | 94 | 7-12 | 2300 | 2.71 | 47 |
| 6- 4 | 0030 | 2.94 | 81 | | | | |

## 08253000 CASIAS CREEK NEAR COSTILLA, N. MEX.

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

DRAINAGE AREA.--16.6 mi² (43.0 km²).

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

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

EXTREMES.--Current year: Maximum discharge, 113 ft³/s (3.20 m³/s) July 9 (gage height, 1.70 ft or 0.518 m); maximum gage height, 1.72 ft (0.524 m) June 14 (backwater from debris); minimum discharge not determined.
Period of record: Maximum discharge, 181 ft³/s (5.13 m³/s) July 20, 1971 (gage height, 2.07 ft or 0.631 m), from rating curve extended above 85 ft³/s (2.41 m³/s); minimum not determined.

REMARKS.--Records good. Diversion 3.5 mi (5.6 km) upstream for irrigation of about 1,300 acres (5.26 km²), part of which is in Costilla Creek basin.

REVISIONS (WATER YEARS).--WSP 1282: 1948-51. WSP 1923: Drainage area. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | - | 33 | 79 | 21 | 11 | 7.3 | | |
| 2 | | | | | - | 33 | 75 | 21 | 9.8 | 6.9 | | |
| 3 | | | | | - | 32 | 68 | 21 | 9.3 | 6.5 | | |
| 4 | | | | | - | 33 | 63 | 21 | 8.8 | - | | |
| 5 | | | | | - | 32 | 57 | 20 | 8.8 | " | | |
| 6 | | | | | - | 31 | 53 | 19 | 8.4 | " | | |
| 7 | | | | | - | 34 | 50 | 19 | 8.4 | " | | |
| 8 | | | | | - | 37 | 53 | 18 | 8.0 | - | | |
| 9 | | | | | 10 | 44 | 55 | 17 | 8.4 | - | | |
| 10 | | | | | 18 | 54 | 46 | 16 | 9.8 | " | | |
| 11 | | | | | 20 | 63 | 44 | 17 | 10 | " | | |
| 12 | | | | | 23 | 71 | 42 | 17 | 8.8 | " | | |
| 13 | | | | | 24 | 85 | 47 | 16 | 8.0 | " | | |
| 14 | | | | | 22 | 85 | 51 | 18 | 8.0 | - | | |
| 15 | | | | | 20 | 77 | 44 | 16 | 7.7 | - | | |
| 16 | | | | | 19 | 80 | 40 | 15 | 7.7 | " | | |
| 17 | | | | | 20 | 77 | 38 | 15 | 7.3 | - | | |
| 18 | | | | | 24 | 73 | 37 | 13 | 7.3 | - | | |
| 19 | | | | | 29 | 65 | 35 | 13 | 6.9 | - | | |
| 20 | | | | | 35 | 67 | 32 | 13 | 6.9 | " | | |
| 21 | | | | | 39 | 67 | 32 | 13 | 6.5 | - | | |
| 22 | | | | | 38 | 69 | 31 | 13 | 6.5 | - | | |
| 23 | | | | | 34 | 72 | 27 | 12 | 7.3 | " | | |
| 24 | | | | | 34 | 73 | 25 | 12 | 8.0 | " | | |
| 25 | | | | | 33 | 72 | 24 | 12 | 8.0 | - | | |
| 26 | | | | | 38 | 75 | 24 | 12 | 8.8 | " | | |
| 27 | | | | | 38 | 75 | 22 | 12 | 8.4 | - | | |
| 28 | | | | | 34 | 83 | 23 | 11 | 8.0 | " | | |
| 29 | | ------ | | | 31 | 88 | 23 | 12 | 7.7 | - | | |
| 30 | | ------ | | | 30 | 85 | 21 | 12 | 7.3 | " | | |
| 31 | | ------ | | ------ | 30 | ------ | 20 | 12 | ------ | - | ------ | |
| TOTAL | - | - | - | - | - | 1,865 | 1,281 | 479 | 245.8 | - | - | - |
| MEAN | - | - | - | - | - | 62.2 | 41.3 | 15.5 | 8.19 | - | - | - |
| MAX | - | - | - | - | - | 88 | 79 | 21 | 11 | - | - | - |
| MIN | - | - | - | - | - | 31 | 20 | 11 | 6.5 | - | - | - |
| AC-FT | - | - | - | - | - | 3,700 | 2,540 | 950 | 488 | - | - | - |

PEAK DISCHARGE (BASE, 35 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-21 | 2100 | 1.24 | 47 | 6-29 | 2200 | 1.57 | 92 |
| 5-27 | 1730 | 1.27 | 51 | 7-9 | 1300 | 1.70 | 113 |
| 6-13 | 2200 | 1.60 | 95 | 7-14 | 1800 | 1.44 | 73 |

## 08253500 SANTISTEVAN CREEK NEAR COSTILLA, N. MEX.

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

DRAINAGE AREA.--2.15 mi² (5.57 km²).

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

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

EXTREMES.--Current year: Maximum discharge, 15 ft³/s (0.425 m³/s) July 9 (gage height, 1.48 ft or 0.451 m); minimum not determined. Period of record: Maximum discharge, 18 ft³/s (0.510 m³/s) Aug. 11, 1941, July 12, 1957; maximum gage height 1.73 ft (0.527 m) Aug. 11, 1941; minimum not determined.

REMARKS.--Records fair. No diversions above or below station.

REVISIONS.--WSP 1923: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1975

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | - | 6.4 | 11 | 3.5 | 1.8 | 1.2 | | |
| 2 | | | | | - | 6.4 | 11 | 3.4 | 1.6 | 1.2 | | |
| 3 | | | | | - | 6.6 | 10 | 3.4 | 1.6 | 1.2 | | |
| 4 | | | | | - | 6.7 | 9.9 | 3.4 | 1.5 | - | | |
| 5 | | | | | - | 6.8 | 9.4 | 3.3 | 1.5 | - | | |
| 6 | | | | | - | 7.0 | 8.9 | 3.2 | 1.5 | - | | |
| 7 | | | | | - | 7.4 | 8.8 | 3.1 | 1.5 | - | | |
| 8 | | | | | - | 7.9 | 8.2 | 2.9 | 1.5 | - | | |
| 9 | | | | | 1.8 | 8.9 | 8.4 | 2.9 | 1.5 | - | | |
| 10 | | | | | 2.0 | 10 | 7.6 | 2.8 | 1.6 | - | | |
| 11 | | | | | 2.7 | 11 | 7.3 | 2.8 | 1.7 | - | | |
| 12 | | | | | 3.2 | 12 | 7.0 | 2.7 | 1.5 | - | | |
| 13 | | | | | 3.1 | 13 | 7.2 | 2.7 | 1.4 | - | | |
| 14 | | | | | 3.0 | 13 | 7.2 | 3.1 | 1.4 | - | | |
| 15 | | | | | 3.0 | 12 | 6.6 | 2.6 | 1.4 | - | | |
| 16 | | | | | 2.9 | 12 | 6.2 | 2.6 | 1.4 | - | | |
| 17 | | | | | 3.3 | 11 | 6.0 | 2.5 | 1.3 | - | | |
| 18 | | | | | 4.1 | 11 | 5.8 | 2.4 | 1.3 | - | | |
| 19 | | | | | 4.8 | 11 | 5.7 | 2.3 | 1.3 | - | | |
| 20 | | | | | 5.4 | 10 | 5.3 | 2.3 | 1.2 | - | | |
| 21 | | | | | 5.9 | 9.8 | 5.2 | 2.2 | 1.2 | - | | |
| 22 | | | | | 5.7 | 9.7 | 5.0 | 2.2 | 1.1 | - | | |
| 23 | | | | | 5.6 | 9.8 | 4.7 | 2.1 | 1.2 | - | | |
| 24 | | | | | 5.7 | 9.7 | 4.5 | 2.1 | 1.2 | - | | |
| 25 | | | | | 5.8 | 9.5 | 4.6 | 2.0 | 1.2 | - | | |
| 26 | | | | | 5.9 | 9.8 | 4.4 | 2.0 | 1.3 | - | | |
| 27 | | | | | 5.8 | 10 | 4.1 | 1.9 | 1.4 | - | | |
| 28 | | | | | 5.7 | 10 | 3.9 | 2.0 | 1.4 | - | | |
| 29 | | ------- | | | 5.4 | 11 | 3.9 | 1.9 | 1.4 | - | | |
| 30 | | ------- | | | 5.9 | 11 | 3.7 | 1.9 | 1.2 | - | | |
| 31 | | ------- | | ------- | 6.1 | ------- | 3.5 | 1.9 | ------- | - | ------- | |
| TOTAL | - | - | - | - | - | 290.4 | 205.0 | 80.1 | 42.1 | - | - | - |
| MEAN | - | - | - | - | - | 9.68 | 6.61 | 2.58 | 1.40 | - | - | - |
| MAX | - | - | - | - | - | 13 | 11 | 3.5 | 1.8 | - | - | - |
| MIN | - | - | - | - | - | 6.4 | 3.5 | 1.9 | 1.1 | - | - | - |
| AC-FT | - | - | - | - | - | 576 | 407 | 159 | 84 | - | - | - |

PEAK DISCHARGE (BASE, 6.0 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-21 | 1830 | 0.82 | 6.3 | 7- 9 | 1200 | 1.48 | 15 |
| 6-13 | 1830 | 1.56 | 14 | | | | |

## 08253900 COSTILLA RESERVOIR NEAR COSTILLA, N. MEX.

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

DRAINAGE AREA.--54.6 mi² (141.4 km²).

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

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

EXTREMES.--Current year: Maximum contents observed, 13,310 acre-ft (16.4 hm³) July 8 (gage height, 9,506.8 ft or 2,897.67 m); minimum, about 1,600 acre-ft (1.97 hm³) Jan. 1.
Period of record: Maximum contents observed, 15,130 acre-ft (18.7 hm³) June 13, 1938, June 20-23, 1941 (gage height, 9,511.5 ft or 2,899.11 m); no contents October 1925 to February 1926, September 1956, Aug. 22 to Sept. 24, 1972.

REMARKS.--Reservoir is formed by earthfill dam faced with broken stone. Storage began in 1920. Capacity 15,740 acre-ft (19.4 hm³) between gage heights 9,405.0 ft (2,866.64 m), sill of outlet, and 9,513.0 ft (2,899.56 m), crest of ungated spillway cut in natural rock. By order of New Mexico State Engineer storage is limited to 14,540 acre-ft (17.9 hm³) maximum, and 10,880 acre-ft (13.4 hm³) for not to exceed 60 days. Diversions for irrigation of about 1,300 acres (5.26 km²) above Reservoir.

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

REVISIONS.--WSP 1923: Drainage area.

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

| | | | |
|---|---|---|---|
| 9,458 | 1,540 | 9,490 | 7,790 |
| 9,460 | 1,760 | 9,500 | 10,880 |
| 9,470 | 3,260 | 9,510 | 14,540 |
| 9,480 | 5,270 | | |

CONTENTS, IN ACRE-FEET, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | - | - | - | - | - | 8,190 | 13,010 | 10,850 | - | - | - | - |
| 2 | - | - | - | - | - | - | 13,160 | 10,580 | - | - | - | - |
| 3 | - | - | - | - | - | - | 13,090 | 10,450 | - | 4,810 | - | - |
| 4 | - | - | - | - | - | 8,780 | 13,090 | - | 4,620 | - | - | - |
| 5 | - | - | - | - | - | - | 13,090 | - | 4,510 | - | - | - |
| 6 | - | - | - | - | - | 9,110 | 13,050 | 10,350 | 4,350 | - | - | - |
| 7 | - | - | - | - | - | 9,230 | 13,200 | 10,150 | 4,290 | - | - | - |
| 8 | - | - | - | - | - | 9,420 | 13,310 | 9,890 | - | - | - | - |
| 9 | - | - | - | - | 4,430 | - | 13,280 | 9,640 | - | - | - | - |
| 10 | - | - | - | - | - | 9,930 | 13,200 | 9,390 | - | - | - | - |
| 11 | - | - | - | - | - | 10,150 | 13,120 | 9,110 | 4,310 | - | - | - |
| 12 | - | - | - | - | - | 10,380 | 13,010 | - | - | - | - | - |
| 13 | - | - | - | - | - | 10,710 | 13,010 | 8,660 | - | - | - | - |
| 14 | - | - | - | - | - | 11,020 | 13,050 | 8,390 | 4,410 | - | - | - |
| 15 | - | - | - | - | 5,230 | 11,220 | 13,090 | 8,220 | - | - | - | - |
| 16 | - | - | - | - | 5,360 | - | 13,050 | 7,910 | - | - | - | - |
| 17 | - | - | - | - | 5,480 | - | 12,830 | 7,630 | 4,450 | - | - | - |
| 18 | - | - | - | - | 5,590 | 11,680 | 12,680 | - | - | - | - | - |
| 19 | - | - | - | - | - | 11,780 | 12,540 | - | - | - | - | - |
| 20 | - | - | - | - | - | 11,890 | 12,350 | - | - | - | - | - |
| 21 | - | - | - | - | 6,190 | 12,070 | 12,320 | 6,800 | - | - | - | - |
| 22 | - | - | - | - | - | 12,170 | 12,280 | 6,620 | - | - | - | - |
| 23 | - | - | - | - | 6,560 | 12,320 | 12,210 | - | - | - | - | - |
| 24 | - | - | - | - | - | 12,500 | 11,990 | 6,220 | - | - | - | - |
| 25 | - | - | - | - | 6,930 | 12,540 | 11,820 | - | - | - | - | - |
| 26 | - | - | - | - | - | 12,570 | 11,640 | 5,620 | - | - | - | - |
| 27 | - | - | - | - | - | 12,640 | 11,470 | - | - | - | - | - |
| 28 | - | 2,400 | - | - | 7,520 | 12,640 | - | 5,360 | - | - | - | - |
| 29 | - | ------ | - | - | - | 12,640 | - | - | - | 5,340 | - | - |
| 30 | - | ------ | - | 3,760 | 7,880 | 12,830 | 11,360 | 5,050 | 4,700 | - | 5,800 | - |
| 31 | 2,000 | ------ | 2,900 | ------ | 8,020 | ------ | 11,100 | 5,000 | ------ | 5,400 | ------ | 6,100 |
| (†) | - | - | - | 9,472.7 | 9,490.8 | 9,505.5 | - | 9,478.8 | - | - | - | - |
| (‡) | +400 | +400 | +500 | +860 | +4,260 | +4,810 | -1,730 | -6,100 | -300 | +700 | +400 | +300 |

CAL YR 1973..... ‡ +4,500
WTR YR 1973..... ‡ +4,600

† Gage height, in feet, at end of month.
‡ Change in contents, in acre-feet.
NOTE.--Contents interpolated at end of month except Apr. 30, May 31, June 30, and Aug. 31.

## 08254000 COSTILLA CREEK BELOW COSTILLA DAM, N. MEX.

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

DRAINAGE AREA.--54.6 mi² (141.4 km²).

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

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

AVERAGE DISCHARGE.--26 calendar years (1945-46, 1950-73), 16.7 ft³/s (0.473 m³/s), 12,100 acre-ft/yr (14.9 hm³/yr); 20 calendar years (1954-73), 17.0 ft³/s (0.481 m³/s), 12,320 acre-ft/yr (15.2 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 213 ft³/s (6.03 m³/s) June 28 (gage height, 2.45 ft or 0.747 m); minimum not determined. Period of record: Maximum discharge, 286 ft³/s (8.10 m³/s) May 9, 10, 1942 (gage height, 2.65 ft or 0.808 m); no flow at times.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. Flow regulated by Costilla Reservoir (see sta 08253900). Diversions for irrigation of about 1,300 acres (5.26 km²) above Reservoir.

REVISIONS.--WSP 1923: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .02 | .03 | .03 | .03 | .03 | .04 | 34 | 146 | 12 | .03 | .02 | .02 |
| 2 | .02 | .03 | .03 | .03 | .03 | .04 | 100 | 146 | 43 | .04 | .02 | .02 |
| 3 | .02 | .03 | .03 | .03 | .03 | .03 | 100 | 76 | 114 | .04 | .02 | .02 |
| 4 | .02 | .03 | .03 | .03 | .03 | .03 | 100 | 26 | 102 | .04 | .02 | .02 |
| 5 | .02 | .03 | .03 | .03 | .03 | .03 | 100 | 55 | 86 | .04 | .02 | .02 |
| 6 | .02 | .03 | .03 | .03 | .03 | .03 | 57 | 128 | 65 | .03 | .02 | .02 |
| 7 | .02 | .03 | .03 | .03 | .03 | .03 | 22 | 134 | 21 | .03 | .02 | .02 |
| 8 | .02 | .03 | .03 | .03 | .03 | .03 | 41 | 155 | 1.4 | .02 | .02 | .02 |
| 9 | .02 | .03 | .03 | .03 | .03 | .03 | 107 | 155 | 1.3 | .02 | .03 | .02 |
| 10 | .02 | .03 | .03 | .03 | .03 | .03 | 126 | 155 | 17 | .02 | .03 | .02 |
| 11 | .02 | .03 | .03 | .03 | .03 | .03 | 126 | 153 | 20 | .02 | .03 | .02 |
| 12 | .02 | .03 | .03 | .03 | .03 | .03 | 84 | 153 | .03 | .02 | .03 | .02 |
| 13 | .02 | .03 | .03 | .03 | .03 | 9.5 | 58 | 152 | .03 | .02 | .03 | .02 |
| 14 | .02 | .03 | .03 | .03 | .03 | 35 | 58 | 152 | .03 | .02 | .02 | .02 |
| 15 | .02 | .03 | .03 | .03 | .04 | 37 | 79 | 152 | .03 | .02 | .02 | .02 |
| 16 | .02 | .03 | .03 | .03 | .04 | 36 | 140 | 152 | .03 | .02 | .02 | .02 |
| 17 | .02 | .03 | .03 | .03 | .05 | 40 | 138 | 138 | .03 | .04 | .02 | .02 |
| 18 | .02 | .03 | .03 | .03 | .04 | 52 | 138 | 119 | .03 | .05 | .02 | .02 |
| 19 | .02 | .03 | .03 | .03 | .03 | 53 | 138 | 119 | .03 | .05 | .02 | .02 |
| 20 | .02 | .03 | .03 | .03 | .03 | 39 | 91 | 117 | .03 | .04 | .02 | .02 |
| 21 | .02 | .03 | .03 | .03 | .03 | 28 | 56 | 117 | .03 | .03 | .02 | .02 |
| 22 | .02 | .03 | .03 | .03 | .03 | 35 | 70 | 117 | .03 | .03 | .02 | .02 |
| 23 | .02 | .03 | .03 | .03 | .03 | 22 | 128 | 117 | .03 | .03 | .02 | .02 |
| 24 | .02 | .03 | .03 | .03 | .03 | 43 | 128 | 116 | .03 | .03 | .02 | .02 |
| 25 | .02 | .03 | .03 | .03 | .04 | 97 | 128 | 111 | .03 | .03 | .02 | .02 |
| 26 | .02 | .03 | .03 | .03 | .05 | 97 | 128 | 104 | .03 | .03 | .02 | .02 |
| 27 | .02 | .03 | .03 | .03 | .04 | 94 | 71 | 102 | .03 | .03 | .02 | .02 |
| 28 | .02 | .03 | .03 | .03 | .04 | 94 | 30 | 102 | .03 | .03 | .02 | .02 |
| 29 | .02 | ------ | .03 | .03 | .04 | 74 | 54 | 102 | .03 | .03 | .02 | .02 |
| 30 | .02 | ------ | .03 | .03 | .04 | 13 | 146 | 101 | .03 | .03 | .02 | .02 |
| 31 | .02 | ------ | .03 | ------ | .04 | ------ | 146 | 48 | ------ | .03 | ------ | .02 |
| TOTAL | .62 | .84 | .93 | .90 | 1.06 | 898.88 | 2,927 | 3,720 | 483.27 | .94 | .65 | .62 |
| MEAN | .020 | .030 | .030 | .030 | .034 | 30.0 | 94.4 | 120 | 16.1 | .030 | .022 | .020 |
| MAX | .02 | .03 | .03 | .03 | .05 | 97 | 146 | 155 | 114 | .05 | .03 | .02 |
| MIN | .02 | .03 | .03 | .03 | .03 | .03 | 22 | 26 | .03 | .02 | .02 | .02 |
| AC-FT | 1.2 | 1.7 | 1.8 | 1.8 | 2.1 | 1,780 | 5,810 | 7,380 | 959 | 1.9 | 1.3 | 1.2 |

CAL YR 1973 TOTAL 8,035.71 MEAN 22.0 MAX 155 MIN .02 AC-FT 15,940
WTR YR 1973 TOTAL 8,034.42 MEAN 22.0 MAX 155 MIN .01 AC-FT 15,940

NOTE.--No gage-height record Jan. 1 to Apr. 29, Nov. 30 to Dec. 31.

## 08254500 COSTILLA CREEK NEAR AMALIA, N. MEX.

LOCATION.--Lat 36°52'33", long 105°23'22", Taos County, in Sangre de Cristo Grant, on right bank 40 ft (12 m) downstream from third bridge upstream from Amalia, 2.4 mi (3.9 km) downstream from Latir Creek, 5.8 mi (9.3 km) southeast of Amalia, 10.5 mi (16.9 km) southeast of Costilla, and at mile 25.4 (40.9 km).

DRAINAGE AREA.--152 $mi^2$ (394 $km^2$).

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

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

EXTREMES.--Current year: Maximum discharge, 250 $ft^3/s$ (7.08 $m^3/s$) Apr. 29 (gage height, 2.81 ft or 0.856 m); minimum not determined. Period of record: Maximum discharge, 689 $ft^3/s$ (19.5 $m^3/s$) Apr. 25, 1958 (gage height, 3.70 ft or 1.128 m, site and datum then in use); maximum gage height, 3.11 ft (0.948 m) July 27, 1966; minimum discharge not determined.

REMARKS.--Records good. Flow regulated by Costilla Reservoir (see sta 08253900) about 10 mi (16 km) upstream. Diversions for irrigation of about 1,300 acres (5.26 $km^2$) above Costilla Reservoir.

REVISIONS (WATER YEARS).--WSP 1732: 1956(M). WSP 1923: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | - | 75 | 124 | 62 | 156 | 25 | 7.0 | | |
| 2 | | | | - | 68 | 124 | 132 | 153 | 53 | 6.4 | | |
| 3 | | | | - | 77 | 116 | 132 | 110 | 114 | 6.2 | | |
| 4 | | | | - | 113 | 109 | 130 | 44 | 110 | 6.2 | | |
| 5 | | | | - | 111 | 101 | 128 | 52 | 95 | - | | |
| 6 | | | | - | 78 | 96 | 100 | 134 | 77 | - | | |
| 7 | | | | - | 77 | 96 | 57 | 140 | 44 | - | | |
| 8 | | | | - | 91 | 100 | 65 | 160 | 12 | - | | |
| 9 | | | | - | 118 | 106 | 132 | 160 | 9.3 | - | | |
| 10 | | | | - | 153 | 110 | 151 | 156 | 16 | - | | |
| 11 | | | | - | 175 | 114 | 146 | 158 | 41 | - | | |
| 12 | | | | - | 180 | 117 | 117 | 160 | 12 | - | | |
| 13 | | | | - | 172 | 119 | 92 | 160 | 9.0 | - | | |
| 14 | | | | - | 151 | 148 | 89 | 160 | 8.1 | - | | |
| 15 | | | | - | 122 | 134 | 96 | 160 | 7.6 | - | | |
| 16 | | | | - | 121 | 124 | 158 | 158 | 7.0 | - | | |
| 17 | | | | - | 128 | 119 | 160 | 149 | 6.7 | - | | |
| 18 | | | | 26 | 149 | 126 | 158 | 126 | 6.4 | - | | |
| 19 | | | | 17 | 180 | 121 | 158 | 124 | 6.2 | - | | |
| 20 | | | | 18 | 203 | 110 | 120 | 124 | 5.7 | - | | |
| 21 | | | | 19 | 206 | 84 | 79 | 124 | 5.5 | - | | |
| 22 | | | | 21 | 197 | 96 | 81 | 122 | 5.5 | - | | |
| 23 | | | | 29 | 180 | 78 | 140 | 121 | 5.7 | - | | |
| 24 | | | | 53 | 167 | 85 | 140 | 121 | 6.7 | - | | |
| 25 | | | | 39 | 165 | 142 | 140 | 121 | 7.0 | - | | |
| 26 | | | | 42 | 178 | 140 | 140 | 112 | 8.7 | - | | |
| 27 | | | | 54 | 158 | 138 | 98 | 110 | 8.7 | - | | |
| 28 | | | | 73 | 136 | 136 | 46 | 110 | 8.4 | - | | |
| 29 | | ------ | | 109 | 110 | 127 | 60 | 110 | 7.6 | - | | |
| 30 | | ------ | | 102 | 108 | 60 | 156 | 110 | 7.3 | - | | |
| 31 | | ------ | | ------ | 114 | ------ | 156 | 74 | ------ | - | ------ | |
| TOTAL | - | - | - | - | 4,261 | 3,400 | 3,619 | 3,979 | 716.1 | - | - | - |
| MEAN | - | - | - | - | 137 | 113 | 117 | 128 | 23.9 | - | - | - |
| MAX | - | - | - | - | 206 | 148 | 160 | 160 | 114 | - | - | - |
| MIN | - | - | - | - | 68 | 60 | 46 | 44 | 5.5 | - | - | - |
| AC-FT | - | - | - | - | 8,450 | 6,740 | 7,180 | 7,890 | 1,420 | - | - | - |

## 08255500 COSTILLA CREEK NEAR COSTILLA, N. MEX.

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

DRAINAGE AREA.--195 mi² (505 km²).

PERIOD OF RECORD.--March 1936 to current year (no winter records 1936-43). Monthly discharge for March 1943 and calendar-year estimates for 1942-43, published in WSP 1312.

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

AVERAGE DISCHARGE.--32 calendar years (1942-73), 42.0 ft³/s (1.189 m³/s), 30,430 acre-ft/yr (37.5 hm³/yr); 20 calendar years (1954-73), 37.0 ft³/s (1.048 m³/s), 26,810 acre-ft/yr (33.1 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 303 ft³/s (8.58 m³/s) May 21 (gage height, 3.71 ft or 1.131 m); minimum, 1.8 ft³/s (0.051 m³/s) Apr. 5, result of freezeup.
Period of record: Maximum discharge, 1,150 ft³/s (32.6 m³/s) May 11, 1942 (gage height, 5.37 ft or 1.637 m, site and datum then in use); minimum, 0.34 ft³/s (0.010 m³/s) Mar. 15, 1969, result of freezeup.
A major flood occurred in 1886, from information by local residents.

REMARKS.--Records good except those for January, February, and December, which are fair. Regulation by Costilla Reservoir (see sta 08253900) 19 mi (31 km) upstream. Diversions for irrigation of about 2,000 acres (8.09 km²) above station. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1312: 1937-39(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.5 | 6.5 | 10 | 12 | 95 | 188 | 89 | 165 | 41 | 9.9 | 8.4 | 6.0 |
| 2 | 6.0 | 6.5 | 10 | 11 | 84 | 185 | 147 | 165 | 32 | 9.5 | 8.4 | 5.0 |
| 3 | 5.5 | 6.0 | 9.5 | 9.0 | 85 | 169 | 155 | 140 | 109 | 9.2 | 8.5 | 4.5 |
| 4 | 5.0 | 6.5 | 9.5 | 10 | 112 | 183 | 153 | 60 | 115 | 9.0 | 8.9 | 4.0 |
| 5 | 5.0 | 7.5 | 10 | 11 | 134 | 154 | 149 | 53 | 102 | 9.0 | 8.3 | 3.5 |
| 6 | 5.0 | 7.0 | 9.9 | 12 | 103 | 149 | 129 | 132 | 86 | 9.1 | 8.4 | 4.0 |
| 7 | 6.0 | 7.5 | 9.8 | 11 | 94 | 159 | 76 | 141 | 62 | 8.8 | 8.6 | 4.0 |
| 8 | 6.0 | 7.0 | 10 | 7.8 | 104 | 171 | 70 | 162 | 23 | 8.5 | 8.4 | 4.5 |
| 9 | 6.0 | 6.5 | 10 | 15 | 125 | 183 | 130 | 162 | 18 | 8.5 | 8.7 | 4.5 |
| 10 | 6.0 | 6.4 | 9.6 | 14 | 150 | 188 | 156 | 162 | 17 | 9.1 | 8.5 | 4.5 |
| 11 | 6.0 | 7.7 | 8.9 | 15 | 189 | 184 | 160 | 164 | 50 | 10 | 8.8 | 5.0 |
| 12 | 6.0 | 8.4 | 11 | 17 | 208 | 189 | 149 | 165 | 23 | 13 | 8.8 | 5.0 |
| 13 | 6.5 | 8.0 | 11 | 18 | 204 | 180 | 120 | 166 | 16 | 13 | 9.2 | 5.0 |
| 14 | 7.0 | 7.5 | 8.6 | 22 | 182 | 213 | 115 | 165 | 14 | 13 | 8.6 | 4.0 |
| 15 | 7.0 | 6.8 | 10 | 26 | 157 | 192 | 112 | 166 | 13 | 12 | 6.5 | 4.5 |
| 16 | 7.6 | 6.5 | 11 | 24 | 153 | 173 | 170 | 164 | 12 | 12 | 6.4 | 5.0 |
| 17 | 7.6 | 7.0 | 11 | 27 | 163 | 158 | 177 | 162 | 11 | 11 | 6.7 | 6.0 |
| 18 | 7.6 | 5.7 | 13 | 36 | 190 | 165 | 180 | 136 | 11 | 11 | 7.2 | 6.0 |
| 19 | 7.4 | 6.1 | 14 | 27 | 231 | 157 | 178 | 133 | 9.8 | 11 | 8.4 | 7.0 |
| 20 | 7.6 | 5.5 | 13 | 24 | 271 | 148 | 153 | 134 | 9.2 | 11 | 7.3 | 7.0 |
| 21 | 7.6 | 6.0 | 17 | 25 | 295 | 114 | 96 | 134 | 8.9 | 10 | 7.3 | 6.0 |
| 22 | 6.8 | 6.0 | 12 | 26 | 272 | 125 | 95 | 132 | 8.6 | 9.7 | 6.0 | 7.0 |
| 23 | 6.8 | 6.5 | 13 | 33 | 236 | 107 | 153 | 130 | 8.9 | 10 | 5.5 | 8.0 |
| 24 | 6.1 | 7.0 | 12 | 40 | 214 | 102 | 160 | 131 | 9.5 | 10 | 5.0 | 8.0 |
| 25 | 6.0 | 7.5 | 11 | 48 | 209 | 148 | 158 | 126 | 9.4 | 8.7 | 5.5 | 8.0 |
| 26 | 6.0 | 7.5 | 12 | 48 | 232 | 156 | 162 | 117 | 13 | 8.7 | 5.5 | 7.0 |
| 27 | 6.0 | 8.0 | 13 | 57 | 209 | 165 | 139 | 115 | 12 | 8.3 | 5.0 | 7.0 |
| 28 | 6.0 | 9.0 | 12 | 80 | 169 | 167 | 65 | 118 | 12 | 8.3 | 5.0 | 8.0 |
| 29 | 6.0 | ------ | 10 | 107 | 152 | 168 | 62 | 120 | 11 | 8.8 | 5.5 | 9.0 |
| 30 | 6.0 | ------ | 11 | 125 | 152 | 102 | 159 | 124 | 11 | 8.6 | 5.5 | 9.0 |
| 31 | 6.5 | ------ | 12 | ------ | 169 | ------ | 166 | 105 | ------ | 7.9 | ------ | 9.0 |
| TOTAL | 197.1 | 194.1 | 345.0 | 937.8 | 5,341 | 4,822 | 4,183 | 4,249 | 878.3 | 306.6 | 218.8 | 185.0 |
| MEAN | 6.36 | 6.93 | 11.1 | 31.3 | 172 | 161 | 135 | 137 | 29.3 | 9.89 | 7.29 | 5.97 |
| MAX | 7.6 | 9.0 | 17 | 125 | 295 | 213 | 180 | 166 | 115 | 13 | 9.2 | 9.0 |
| MIN | 5.0 | 5.5 | 8.8 | 7.8 | 84 | 102 | 62 | 53 | 8.6 | 7.9 | 5.0 | 3.5 |
| AC-FT | 391 | 385 | 684 | 1,860 | 10,590 | 9,560 | 8,300 | 8,430 | 1,740 | 608 | 434 | 367 |

CAL YR 1973 TOTAL 21,857.7 MEAN 59.9 MAX 293 MIN 3.5 AC-FT 43,350
WTR YR 1973 TOTAL 21,810.8 MEAN 59.8 MAX 293 MIN 3.6 AC-FT 43,260

PEAK DISCHARGE (BASE, 175 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-30 | 0145 | 3.33 | 182 | 5-21 | 0100 | 3.71 | 303 |
| 5- 5 | 0200 | 3.38 | 192 | 6- 1 | 2215 | 3.25 | 199 |
| 5-12 | 2400 | 3.49 | 224 | 6-14 | 0515 | 3.37 | 229 |

## 08260500 COSTILLA CREEK BELOW DIVERSION DAM, AT COSTILLA, N. MEX.

LOCATION.--Lat 36°58'03", long 105°31'00", Taos County, in Sangre de Cristo Grant, on right bank 650 ft (200 m) downstream rrom diversion dam, 1.1 mi (1.8 km) southeast of Costilla, and at mile 15.3 (24.6 km).

DRAINAGE AREA.--197 $mi^2$ (510 $km^2$).

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

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

EXTREMES.--Current year: Maximum discharge, 249 $ft^3/s$ (7.05 $m^3/s$) May 20 (gage height, 3.09 ft or 0.942 m), from rating curve extended above 92 $ft^3/s$ (2.61 $m^3/s$); minimum not determined.
Period of record: Maximum discharge, 525 $ft^3/s$ (14.9 $m^3/s$) July 22, 1954 (gage height, 4.03 ft or 1.228 m); maximum gage height, 5.05 ft (1.539 m) July 24, 1957 (backwater from debris); no flow Oct. 14, 1963.
A major flood occurred in 1886, from information by local residents. Flood of May 11, 1942, probably exceeded 1,000 $ft^3/s$ (28.3 $m^3/s$), based on records for upstream station (see sta 08255500).

REMARKS.--Records good. Flow partly regulated by Costilla Reservoir (see sta 08253900) 20 mi (32 km) upstream, and by canal headgates or sluice gates at diversion dam. Diversions above station for irrigation of about 5,000 acres (20.2 $km^2$), 3,000 acres (12.1 $km^2$) of which are below station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | - | 57 | 63 | 12 | 24 | 17 | .45 | | |
| 2 | | | | - | 58 | 64 | 18 | 24 | 6.8 | .42 | | |
| 3 | | | | - | 76 | 50 | 18 | 38 | 14 | .42 | | |
| 4 | | | | - | 81 | 41 | 16 | 29 | 6.5 | .42 | | |
| 5 | | | | - | 96 | 32 | 15 | 8.3 | 5.8 | - | | |
| 6 | | | | - | 66 | 30 | 31 | 23 | 5.5 | - | | |
| 7 | | | | - | 61 | 35 | 37 | 11 | 5.1 | - | | |
| 8 | | | | - | 74 | 83 | 13 | 14 | 4.4 | - | | |
| 9 | | | | - | 85 | 113 | 19 | 12 | 4.1 | - | | |
| 10 | | | | - | 92 | 70 | 21 | 11 | 3.8 | - | | |
| 11 | | | | - | 134 | 64 | 16 | 10 | 4.2 | - | | |
| 12 | | | | - | 154 | 56 | 11 | 16 | 3.6 | - | | |
| 13 | | | | - | 148 | 44 | 39 | 16 | 3.3 | - | | |
| 14 | | | | - | 128 | 67 | 51 | 16 | 3.2 | - | | |
| 15 | | | | - | 98 | 90 | 12 | 14 | 3.1 | - | | |
| 16 | | | | - | 94 | 89 | 30 | 9.8 | 2.9 | - | | |
| 17 | | | | - | 91 | 31 | 27 | 10 | 2.9 | - | | |
| 18 | | | | - | 118 | 36 | 30 | 6.8 | 2.9 | - | | |
| 19 | | | | - | 165 | 28 | 35 | 6.3 | 2.2 | - | | |
| 20 | | | | .81 | 194 | 28 | 52 | 5.8 | 1.1 | - | | |
| 21 | | | | .67 | 214 | 12 | 46 | 5.5 | .88 | - | | |
| 22 | | | | .71 | 167 | 58 | 17 | 4.2 | .82 | - | | |
| 23 | | | | .71 | 151 | 64 | 24 | 3.7 | .70 | - | | |
| 24 | | | | .69 | 116 | 11 | 17 | 3.4 | .55 | - | | |
| 25 | | | | .64 | 121 | 23 | 21 | 3.1 | .51 | - | | |
| 26 | | | | .74 | 160 | 20 | 30 | 5.6 | .51 | - | | |
| 27 | | | | 2.1 | 119 | 24 | 38 | 8.3 | .51 | - | | |
| 28 | | | | 13 | 92 | 24 | 26 | 7.9 | .49 | - | | |
| 29 | | ------ | | 42 | 53 | 55 | 7.4 | 7.3 | .46 | - | | |
| 30 | | ------ | | 80 | 38 | 53 | 28 | 6.4 | .46 | - | | |
| 31 | | ------ | | ------ | 45 | ------ | 24 | 22 | ------ | - | ------ | |
| TOTAL | - | - | - | - | 3,346 | 1,458 | 781.4 | 382.4 | 108.29 | - | - | - |
| MEAN | - | - | - | - | 108 | 48.6 | 25.2 | 12.3 | 3.61 | - | - | - |
| MAX | - | - | - | - | 214 | 113 | 52 | 38 | 17 | - | - | - |
| MIN | - | - | - | - | 38 | 11 | 7.4 | 3.1 | .46 | - | - | - |
| AC-FT | - | - | - | - | 6,640 | 2,890 | 1,550 | 758 | 215 | - | - | - |

## 08261000 COSTILLA CREEK AT GARCIA, COLO.

LOCATION.--Lat 36°59'21", long 105°31'54", Taos County, in Sangre de Cristo Grant, on left bank 0.4 mi (0.6 km) downstream from old State Highway 3, 0.5 mi (0.8 km) upstream from New Mexico-Colorado State line, 0.9 mi (1.4 km) south of Garcia, and at mile 13.3 (21.4 km).

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

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

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

EXTREMES.--Current year: Maximum discharge, 266 ft³/s (7.53 m³/s) May 20 (gage height, 4.09 ft or 1.247 m); no flow for many days. Period of record: Maximum discharge, 460 ft³/s (13.0 m³/s) July 24, 1957 (gage height, 4.76 ft or 1.451 m); no flow for many days most years.
A major flood occurred in 1886, from information by local residents. Flood of May 11, 1942, probably reached a discharge of 1,000 ft³/s (28.3 m³/s).

REMARKS.--Records good. Flow partly regulated by Costilla Reservoir (see sta 08253900) 22 mi (35 km) upstream. Diversions above station for irrigation of about 5,500 acres, (22.3 km²), 2,000 acres (8.09 km²) of which are below station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | 60 | 55 | 10 | 22 | 17 | 0 | | |
| 2 | | | | | 53 | 61 | 21 | 21 | 4.7 | - | | |
| 3 | | | | | 74 | 47 | 16 | 34 | 11 | - | | |
| 4 | | | | | 83 | 38 | 14 | 29 | 4.7 | - | | |
| 5 | | | | | 111 | 27 | 14 | 6.3 | 3.7 | - | | |
| 6 | | | | | 74 | 24 | 28 | 18 | 3.2 | - | | |
| 7 | | | | | 62 | 31 | 36 | 11 | 3.1 | - | | |
| 8 | | | | | 75 | 74 | 7.3 | 12 | 2.1 | - | | |
| 9 | | | | | 89 | 119 | 19 | 11 | 1.9 | - | | |
| 10 | | | | | 91 | 66 | 20 | 8.7 | 1.9 | - | | |
| 11 | | | | | 132 | 60 | 15 | 6.8 | 2.0 | - | | |
| 12 | | | | | 152 | 54 | 11 | 11 | 1.6 | - | | |
| 13 | | | | | 155 | 41 | 32 | 13 | 1.4 | - | | |
| 14 | | | | | 132 | 65 | 57 | 12 | 1.3 | - | | |
| 15 | | | | | 92 | 83 | 12 | 12 | 1.1 | - | | |
| 16 | | | | | 86 | 101 | 28 | 8.1 | 1.0 | - | | |
| 17 | | | | | 83 | 29 | 25 | 7.8 | 1.0 | - | | |
| 18 | | | | | 112 | 31 | 28 | 4.9 | .94 | - | | |
| 19 | | | | | 171 | 23 | 34 | 4.3 | .74 | - | | |
| 20 | | | | | 204 | 23 | 50 | 3.6 | 0 | - | | |
| 21 | | | | | 221 | 9.7 | 48 | 2.0 | 0 | - | | |
| 22 | | | | | 180 | 43 | 17 | 1.6 | 0 | - | | |
| 23 | | | | | 156 | 58 | 25 | 1.3 | 0 | - | | |
| 24 | | | | | 114 | 6.0 | 17 | 1.1 | 0 | - | | |
| 25 | | | | | 112 | 18 | 18 | 1.0 | 0 | - | | |
| 26 | | | | | 167 | 16 | 28 | 2.4 | 0 | - | | |
| 27 | | | | | 120 | 20 | 38 | 5.8 | 0 | - | | |
| 28 | | | | | 88 | 21 | 30 | 4.7 | 0 | - | | |
| 29 | | ------ | | | 51 | 53 | 6.3 | 4.1 | 0 | - | | |
| 30 | | ------ | | | 32 | 62 | 24 | 3.4 | 0 | - | | |
| 31 | | ------ | | ------ | 38 | ------ | 22 | 15 | ------ | - | ------ | |
| TOTAL | - | - | - | - | 3,370 | 1,358.7 | 750.6 | 298.9 | 64.38 | - | - | - |
| MEAN | - | - | - | - | 109 | 45.3 | 24.2 | 9.64 | 2.15 | - | - | - |
| MAX | - | - | - | - | 221 | 119 | 57 | 38 | 17 | - | - | - |
| MIN | - | - | - | - | 32 | 6.0 | 6.3 | 1.0 | 0 | - | - | - |
| AC-FT | - | - | - | - | 6,680 | 2,690 | 1,490 | 593 | 128 | - | - | - |

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

Records of discharge are collected at 8 gaging stations on 3 diversions from Costilla Creek. Each of these stations is equipped with a water-stage recorder and a Parshall flume. Water diverted is used for irrigation in the Sangre de Cristo Grant in New Mexico and Colorado below the gaging station on Costilla Creek near Costilla, N. Mex. Records collected during irrigation season only except for sta 08262000.

08256000 ACEQUIA MADRE AT COSTILLA, N. MEX.--Lat 36°58'03", long 105°30'57", Taos County, 275 ft (84 m) downstream from diversion dam. Period of record May 1944 to current year. Acequia diverts from right bank of Costilla Creek.

08256500 MESA DITCH NEAR GARCIA, COLO.--Lat 36°59'50", long 105°30'49", Costilla County, 429 ft (130 m) north of milepost No. 136 + 54 on New Mexico-Colorado State line. Period of record, June 1944 to September 1965, May 1969 to current year. Ditch diverts from right bank of Acequia Madre for irrigation in Colorado.

08257500 CORDILLERA DITCH AT GARCIA, COLO.--Lat 36°59'41", long 105°31'39", Taos County, 570 ft (170 m) south of New Mexico-Colorado State line. Period of record, June 1944 to current year. Ditch diverts from left bank of Acequia Madre for irrigation in Colorado.

08258000 CERRO CANAL AT COSTILLA, N. MEX.--Lat 36°57'56", long 105°31'07", Taos County, 1,400 ft (430 m) downstream from diversion dam. Period of record, April 1944 to current year. Canal diverts from left bank of Costilla Creek.

08258600 CERRO CANAL BELOW ASSOCIATION DITCH AT COSTILLA, N. MEX.--Lat 36°57'41", long 105°32'05", Taos County, 220 ft (67 m) downstream from head of Association ditch. Period of record, May 1972 to current year.

08259500 NEW MEXICO BRANCH CERRO CANAL NEAR JAROSO, COLO.--Lat 36°59'37", long 105°34'28", Taos County, 45 ft (14 m) downstream from headgate. Period of record, June 1944 to current year. Canal diverts from left bank of Cerro Canal for irrigation in New Mexico.

08259600 CERRO CANAL AT STATE LINE NEAR JAROSO, COLO.--Lat 36°59'41", long 105°34'36", Taos County, 780 ft (240 m) downstream from head of N. Mex. branch Cerro Canal. Period of record, April to October 1973. Flow measured is delivered to Colorado.

08262000 EASTDALE NO. 1 INTAKE CANAL NEAR JAROSO, COLO.--Lat 37°02'25", long 105°36'15", Costilla County, 750 ft (230 m) downstream from headgate. Period of record, June 1944 to current year. Canal diverts from right bank of Costilla Creek to Eastdale Reservoir No. 1 for irrigation in Colorado.

MONTHLY DIVERSIONS, IN ACRE-FEET, CALENDAR YEAR 1973

| | Acequia Madre | Mesa ditch | Cordillera ditch | Cerro Canal at Costilla | Cerro Canal below Association ditch | New Mexico branch Cerro Canal | Cerro Canal at State line nr Jaroso | Eastdale No. 1 intake canal |
|---|---|---|---|---|---|---|---|---|
| January | -- | -- | -- | -- | -- | -- | -- | 0 |
| February | -- | -- | -- | -- | -- | -- | -- | 0 |
| March | -- | -- | -- | -- | -- | -- | -- | 47 |
| April | -- | -- | -- | -- | -- | -- | -- | 1,040 |
| May | 599 | 0 | 7.6 | 3,320 | 2,310 | 247 | 2,010 | 2,610 |
| June | 1,050 | 0 | 13 | 5,740 | 3,170 | 307 | 2,710 | 1,320 |
| July | 861 | 0 | 6.1 | 5,780 | 3,240 | 205 | 2,770 | 641 |
| August | 1,120 | 0 | 1.8 | 6,540 | 2,760 | 357 | 2,130 | 387 |
| September | 354 | 0 | 25 | 1,130 | 440 | 3.9 | 430 | 117 |
| WTR YR 1973 | -- | -- | -- | -- | -- | -- | -- | 6,170 |
| October | -- | -- | -- | -- | -- | -- | -- | 19 |
| November | -- | -- | -- | -- | -- | -- | -- | .6 |
| December | -- | -- | -- | -- | -- | -- | -- | 0 |
| CAL YR 1973 | -- | -- | -- | -- | -- | -- | -- | 6,180 |

## 08263500 RIO GRANDE NEAR CERRO, N. MEX.

LOCATION.--Lat 36°44'24", long 105°40'59", in NW¼NE¼ sec.20, T.29 N., R.12 E., Taos County, on left bank 4 mi (6 km) southwest of Cerro, 5.5 mi (8.8 km) northwest of Questa, and 7.4 mi (11.9 km) upstream from Red River, and at mile 1,693.1 (2,724.2 km).

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

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

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

AVERAGE DISCHARGE.--25 calendar years, 378 ft³/s (10.70 m³/s), 273,900 acre-ft/yr (338 hm³/yr); 20 calendar years (1954-73), 367 ft³/s (10.39 m³/s), 265,900 acre-ft/yr (328 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,580 ft³/s (101 m³/s) May 23 (gage height, 10.67 ft or 3.252 m); minimum, 203 ft³/s (5.75 m³/s) Dec. 21.
Period of record: Maximum discharge, 9,740 ft³/s (276 m³/s) June 22, 1949 (gage height, 15.78 ft or 4.810 m); minimum, 43 ft³/s (1.22 m³/s) Sept. 22, 1956.

REMARKS.--Records good. Diversions above station for irrigation of about 620,000 acres (2,510 km²) in Colorado and 7,000 acres (28.3 km²) in New Mexico.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 314 | 307 | 364 | 610 | 860 | 2,460 | 1,830 | 791 | 289 | 285 | 509 | 346 |
| 2 | 314 | 309 | 418 | 593 | 851 | 2,680 | 1,640 | 785 | 324 | 285 | 503 | 395 |
| 3 | 309 | 300 | 426 | 579 | 655 | 2,990 | 1,540 | 708 | 439 | 287 | 487 | 395 |
| 4 | 309 | 292 | 439 | 559 | 515 | 2,930 | 1,390 | 615 | 443 | 275 | 485 | 414 |
| 5 | 309 | 297 | 454 | 535 | 450 | 2,550 | 1,190 | 579 | 382 | 264 | 479 | 395 |
| 6 | 299 | 312 | 467 | 517 | 575 | 2,250 | 1,110 | 535 | 330 | 257 | 473 | 321 |
| 7 | 300 | 321 | 493 | 503 | 722 | 2,060 | 1,250 | 505 | 323 | 265 | 464 | 284 |
| 8 | 302 | 319 | 501 | 462 | 610 | 1,960 | 1,150 | 481 | 306 | 300 | 441 | 300 |
| 9 | 304 | 318 | 513 | 507 | 511 | 2,110 | 1,010 | 450 | 290 | 339 | 412 | 300 |
| 10 | 307 | 319 | 513 | 505 | 571 | 2,250 | 964 | 429 | 295 | 367 | 390 | 318 |
| 11 | 304 | 321 | 533 | 505 | 788 | 2,520 | 1,020 | 367 | 309 | 412 | 364 | 307 |
| 12 | 299 | 324 | 575 | 505 | 1,160 | 2,800 | 1,150 | 330 | 300 | 450 | 353 | 312 |
| 13 | 300 | 333 | 622 | 551 | 1,660 | 2,810 | 1,150 | 310 | 342 | 458 | 344 | 374 |
| 14 | 294 | 337 | 589 | 587 | 1,860 | 2,970 | 1,050 | 285 | 401 | 448 | 337 | 396 |
| 15 | 295 | 330 | 620 | 632 | 1,970 | 3,000 | 1,030 | 270 | 433 | 466 | 346 | 427 |
| 16 | 295 | 331 | 655 | 712 | 1,860 | 2,890 | 1,040 | 265 | 408 | 475 | 358 | 369 |
| 17 | 302 | 337 | 648 | 750 | 1,930 | 2,660 | 1,120 | 260 | 380 | 471 | 362 | 326 |
| 18 | 306 | 333 | 648 | 700 | 1,920 | 2,820 | 1,130 | 285 | 357 | 527 | 353 | 363 |
| 19 | 312 | 331 | 672 | 579 | 2,060 | 2,520 | 1,120 | 285 | 344 | 569 | 342 | 348 |
| 20 | 311 | 328 | 730 | 547 | 2,280 | 2,140 | 1,320 | 478 | 337 | 575 | 351 | 269 |
| 21 | 319 | 324 | 672 | 503 | 2,820 | 2,000 | 1,380 | 344 | 321 | 575 | 342 | 273 |
| 22 | 319 | 324 | 685 | 429 | 3,220 | 1,990 | 1,380 | 310 | 304 | 573 | 358 | 318 |
| 23 | 318 | 335 | 682 | 403 | 3,530 | 2,020 | 1,200 | 300 | 289 | 569 | 401 | 318 |
| 24 | 316 | 326 | 652 | 382 | 3,300 | 2,110 | 1,020 | 270 | 278 | 561 | 355 | 297 |
| 25 | 306 | 330 | 640 | 397 | 2,750 | 2,070 | 974 | 280 | 267 | 559 | 349 | 278 |
| 26 | 309 | 335 | 602 | 443 | 2,370 | 2,090 | 960 | 270 | 265 | 547 | 355 | 290 |
| 27 | 304 | 335 | 583 | 527 | 2,860 | 2,110 | 971 | 260 | 264 | 543 | 309 | 272 |
| 28 | 307 | 344 | 608 | 587 | 3,100 | 2,320 | 950 | 261 | 280 | 537 | 309 | 262 |
| 29 | 304 | ------ | 640 | 620 | 2,680 | 1,900 | 992 | 267 | 289 | 531 | 277 | 285 |
| 30 | 306 | ------ | 635 | 732 | 2,200 | 1,820 | 950 | 275 | 292 | 529 | 339 | 294 |
| 31 | 306 | ------ | 628 | ------ | 2,200 | ------ | 854 | 254 | ------ | 513 | ------ | 294 |
| TOTAL | 9,499 | 9,052 | 17,907 | 16,461 | 55,038 | 71,600 | 35,835 | 12,104 | 9,881 | 13,812 | 11,547 | 10,140 |
| MEAN | 306 | 323 | 578 | 549 | 1,775 | 2,387 | 1,156 | 390 | 329 | 446 | 385 | 327 |
| MAX | 319 | 344 | 730 | 750 | 3,530 | 3,000 | 1,830 | 791 | 443 | 575 | 509 | 427 |
| MIN | 294 | 292 | 364 | 382 | 450 | 1,820 | 854 | 254 | 264 | 257 | 277 | 262 |
| AC-FT | 18,840 | 17,950 | 35,520 | 32,650 | 109,200 | 142,000 | 71,080 | 24,010 | 19,600 | 27,400 | 22,900 | 20,110 |

CAL YR 1973 TOTAL 272,876 MEAN 748 MAX 3,530 MIN 254 AC-FT 541,200
WTR YR 1973 TOTAL 269,338 MEAN 738 MAX 3,530 MIN 119 AC-FT 534,200

PEAK DISCHARGE (BASE, 1,000 FT³/S)

| DATE | TIME | G. Ht | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-23 | 1730 | 10.67 | 3,580 | 7-20 | 2030 | 7.40 | 1,430 |
| 6-15 | 1430 | 9.95 | 3,040 | 8-20 | 2030 | 7.93 | 1,700 |

## 08264500 RED RIVER BELOW ZWERGLE DAMSITE, NEAR RED RIVER, N. MEX.

LOCATION.--Lat 36°40'25", long 105°22'45", in NE¼SW¼ sec.7, T.28 N., R.15 E. (projected), Taos County, in Carson National Forest, on right bank 2,000 ft (610 m) upstream from Goose Creek, 1.9 mi (3.1 km) downstream from Bear Canyon, 2.6 mi (4.2 km) southeast of Red River, and at mile 24.1 (38.8 km).

DRAINAGE AREA.--25.7 $mi^2$ (66.6 $km^2$).

PERIOD OF RECORD.--April 1963 to December 1973 (discontinued).

GAGE.--Water-stage recorder. Concrete control since July 23, 1963. Datum of gage is 8,871.88 ft (2,704.149 m) above mean sea level (levels by Bureau of Reclamation).

AVERAGE DISCHARGE.--10 calendar years, 17.7 $ft^3/s$ (0.501 $m^3/s$), 12,820 acre-ft/yr (15.8 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 193 $ft^3/s$ (5.47 $m^3/s$) June 14 (gage height, 3.21 ft or 0.978 m); minimum, 1.9 $ft^3/s$ (0.054 $m^3/s$) Mar. 16, result of freezeup.
Period of record: Maximum discharge, 216 $ft^3/s$ (6.12 $m^3/s$) June 19, 1965 (gage height, 3.38 ft or 1.030 m); maximum gage height, 3.63 ft (1.106 m) Apr. 3, 1970 (backwater from ice); minimum discharge recorded, 0.7 $ft^3/s$ (0.02 $m^3/s$) Feb. 8, 1965, but may have been less during periods of ice effect.

REMARKS.--Records good except those for winter periods, which are poor. No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.3 | 4.3 | 4.4 | 5.0 | 17 | 97 | 117 | 27 | 13 | 9.5 | 7.4 | 6.9 |
| 2 | 4.3 | 4.0 | 4.4 | 5.1 | 15 | 95 | 115 | 26 | 13 | 9.2 | 7.1 | 6.9 |
| 3 | 4.3 | 4.0 | 4.4 | 5.0 | 16 | 90 | 108 | 26 | 12 | 8.9 | 7.1 | 6.7 |
| 4 | 4.4 | 4.1 | 4.4 | 4.5 | 20 | 88 | 101 | 27 | 12 | 8.9 | 7.4 | 6.5 |
| 5 | 4.6 | 4.2 | 4.4 | 4.6 | 22 | 88 | 97 | 26 | 12 | 8.9 | 7.4 | 5.5 |
| 6 | 4.3 | 4.2 | 4.3 | 5.0 | 20 | 92 | 90 | 23 | 11 | 8.9 | 7.4 | 4.5 |
| 7 | 4.2 | 4.2 | 4.4 | 4.9 | 18 | 101 | 82 | 22 | 11 | 8.9 | 7.4 | 5.5 |
| 8 | 4.1 | 4.2 | 4.6 | 4.5 | 20 | 110 | 80 | 21 | 11 | 8.9 | 7.4 | 7.0 |
| 9 | 4.2 | 4.0 | 4.4 | 5.0 | 28 | 121 | 78 | 20 | 11 | 8.9 | 7.4 | 7.0 |
| 10 | 4.5 | 4.3 | 4.4 | 5.5 | 40 | 134 | 70 | 20 | 15 | 9.5 | 7.4 | 6.5 |
| 11 | 4.0 | 4.5 | 4.3 | 6.0 | 54 | 142 | 66 | 19 | 17 | 8.3 | 7.1 | 6.7 |
| 12 | 4.2 | 4.5 | 4.5 | 6.2 | 60 | 157 | 64 | 20 | 15 | 9.5 | 7.1 | 6.4 |
| 13 | 4.5 | 4.3 | 3.6 | 6.7 | 58 | 164 | 63 | 19 | 13 | 10 | 7.1 | 6.4 |
| 14 | 4.5 | 4.3 | 4.5 | 7.7 | 50 | 182 | 60 | 18 | 12 | 10 | 6.9 | 6.4 |
| 15 | 4.5 | 4.0 | 4.3 | 8.3 | 42 | 157 | 57 | 17 | 12 | 9.8 | 5.8 | 6.0 |
| 16 | 4.5 | 4.0 | 4.3 | 7.7 | 43 | 142 | 50 | 17 | 11 | 9.8 | 6.2 | 5.8 |
| 17 | 4.7 | 4.2 | 4.4 | 8.0 | 47 | 128 | 47 | 16 | 11 | 9.8 | 6.2 | 6.7 |
| 18 | 4.6 | 4.5 | 4.4 | 8.0 | 63 | 124 | 47 | 15 | 11 | 9.5 | 6.2 | 6.5 |
| 19 | 4.5 | 4.6 | 4.6 | 6.2 | 82 | 117 | 47 | 15 | 10 | 9.2 | 6.4 | 6.0 |
| 20 | 4.5 | 4.8 | 4.6 | 7.0 | 94 | 111 | 42 | 16 | 10 | 8.9 | 6.4 | 5.0 |
| 21 | 4.5 | 4.6 | 4.6 | 7.5 | 102 | 110 | 41 | 16 | 10 | 8.3 | 6.2 | 5.3 |
| 22 | 4.4 | 4.4 | 4.6 | 8.0 | 97 | 111 | 38 | 15 | 10 | 8.3 | 6.9 | 5.6 |
| 23 | 4.0 | 4.4 | 4.6 | 8.6 | 88 | 111 | 35 | 15 | 9.8 | 8.3 | 6.8 | 6.0 |
| 24 | 4.5 | 4.4 | 4.5 | 9.5 | 94 | 108 | 33 | 15 | 10 | 8.0 | 6.5 | 6.0 |
| 25 | 4.5 | 4.4 | 4.0 | 10 | 97 | 110 | 34 | 15 | 10 | 7.7 | 6.2 | 5.6 |
| 26 | 4.5 | 4.4 | 4.5 | 10 | 97 | 117 | 35 | 15 | 11 | 7.7 | 6.7 | 5.3 |
| 27 | 4.7 | 4.4 | 4.9 | 12 | 83 | 123 | 34 | 14 | 10 | 7.4 | 6.7 | 4.9 |
| 28 | 4.5 | 4.4 | 4.9 | 16 | 74 | 132 | 33 | 14 | 10 | 7.4 | 6.0 | 6.4 |
| 29 | 4.3 | ------ | 4.9 | 18 | 72 | 130 | 31 | 15 | 9.8 | 7.4 | 6.5 | 6.2 |
| 30 | 4.3 | ------ | 4.8 | 19 | 78 | 124 | 29 | 15 | 9.5 | 7.4 | 7.1 | 6.0 |
| 31 | 4.5 | ------ | 4.8 | ------ | 92 | ------ | 28 | 15 | ------ | 7.4 | ------ | 5.6 |
| TOTAL | 136.4 | 120.6 | 138.7 | 239.5 | 1,783 | 3,616 | 1,852 | 574 | 343.1 | 270.6 | 204.4 | 187.8 |
| MEAN | 4.40 | 4.31 | 4.47 | 7.98 | 57.5 | 121 | 59.7 | 18.5 | 11.4 | 8.73 | 6.81 | 6.06 |
| MAX | 4.7 | 4.8 | 4.9 | 19 | 102 | 182 | 117 | 27 | 17 | 10 | 7.4 | 7.0 |
| MIN | 4.0 | 4.0 | 3.6 | 4.5 | 15 | 88 | 28 | 14 | 9.5 | 7.4 | 5.8 | 4.5 |
| AC-FT | 271 | 239 | 275 | 475 | 3,540 | 7,170 | 3,670 | 1,140 | 681 | 537 | 405 | 373 |

CAL YR 1973 TOTAL 9,466.1 MEAN 25.9 MAX 182 MIN 3.6 AC-FT 18,780
WTR YR 1973 TOTAL 9,331.7 MEAN 25.6 MAX 182 MIN 3.6 AC-FT 18,510

PEAK DISCHARGE (BASE, 65 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-21 | 2000 | 2.83 | 111 | 6-28 | 2300 | 2.95 | 136 |
| 6-14 | 0300 | 3.21 | 193 | | | | |

NOTE.--No gage-height record Jan. 10 to Feb. 18.

## 08265000 RED RIVER NEAR QUESTA, N. MEX.

LOCATION.--Lat 36°42'12", long 105°34'04", in NE¼SE¼ sec.32, T.29 N., R.13 E. (projected), Taos County, in Carson National Forest, on left bank 1.3 mi (2.1 km) upstream from Cabresto Creek, 1.5 mi (2.4 km) east of Questa, and at mile 9.0 (14.5 km).

DRAINAGE AREA.--113 mi² (293 km²).

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

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

AVERAGE DISCHARGE.--59 calendar years (1913-24, 1927-73), 52.8 ft³/s (1.495 m³/s), 38,250 acre-ft/yr (47.2 hm³/yr); 20 calendar years (1954-73), 36.9 ft³/s (1.045 m³/s), 26,730 acre-ft/yr (33.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 346 ft³/s (9.80 m³/s) June 14 (gage height, 4.47 ft or 1.362 m); minimum, 2.5 ft³/s (0.071 m³/s) Feb. 16, but may have been less during periods of ice effect.
1930-73: Maximum discharge, 886 ft³/s (25.1 m³/s) May 25, 1942, from rating curve extended above 450 ft³/s (12.7 m³/s); maximum gage height, 4.47 ft or 1.362 m June 14, 1973; minimum discharge, 1.5 ft³/s (0.042 m³/s) Nov. 23, 1957.
The peak of June 15, 1921, may have equaled or exceeded the peak of May 25, 1942.

REMARKS.--Records good except those for winter periods, which are poor. Diversions for irrigation of a few hundred acres above station. Figures of discharge do not include flow in South ditch which diverts from left bank 1,500 ft (460 m) upstream and bypasses gage for irrigation and stock water below.
Tailings pipelines from Molybdenum Corp. of America (Molycorp) refinery 5.5 mi (8.8 km) upstream also bypass gage on left bank and discharge into settling pond 3 mi (5 km) downstream. Effluent from this pond enters Red River as surface water and is included in discharge at Red River at mouth near Questa (see sta 08267000). See tabulation below for monthly discharge through tailings pipelines (records furnished by Molycorp).

REVISIONS (WATER YEARS).--WSP 808: 1935. WSP 1392: 1913, 1932, 1941, 1947-48. WSP 1712: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.3 | 5.0 | 6.3 | 7.3 | 54 | 206 | 203 | 54 | 25 | 19 | 15 | 6.8 |
| 2 | 3.0 | 4.5 | 6.5 | 7.0 | 42 | 204 | 193 | 51 | 24 | 18 | 14 | 8.5 |
| 3 | 3.0 | 5.0 | 7.0 | 6.5 | 42 | 195 | 184 | 50 | 22 | 18 | 14 | 8.6 |
| 4 | 3.2 | 6.0 | 5.8 | 6.5 | 58 | 187 | 172 | 52 | 22 | 16 | 15 | 7.4 |
| 5 | 3.5 | 6.5 | 7.0 | 6.5 | 77 | 185 | 166 | 53 | 21 | 17 | 16 | 5.3 |
| 6 | 3.2 | 6.0 | 6.5 | 7.0 | 72 | 185 | 157 | 48 | 20 | 17 | 15 | 4.2 |
| 7 | 3.0 | 6.4 | 7.4 | 7.0 | 62 | 198 | 149 | 48 | 20 | 16 | 15 | 4.6 |
| 8 | 2.6 | 6.0 | 7.5 | 6.0 | 70 | 211 | 144 | 46 | 20 | 16 | 14 | 4.7 |
| 9 | 3.0 | 5.9 | 6.6 | 7.2 | 101 | 229 | 142 | 42 | 20 | 17 | 14 | 5.3 |
| 10 | 3.5 | 5.6 | 6.2 | 8.9 | 143 | 259 | 133 | 42 | 24 | 18 | 14 | 5.4 |
| 11 | 3.0 | 6.8 | 6.0 | 9.8 | 187 | 266 | 125 | 40 | 28 | 19 | 14 | 5.7 |
| 12 | 3.5 | 6.4 | 7.3 | 11 | 190 | 291 | 123 | 39 | 27 | 20 | 14 | 5.7 |
| 13 | 4.0 | 5.7 | 6.5 | 12 | 193 | 287 | 128 | 39 | 24 | 21 | 15 | 5.9 |
| 14 | 4.5 | 5.9 | 6.0 | 15 | 156 | 314 | 121 | 37 | 22 | 21 | 14 | 6.9 |
| 15 | 5.0 | 5.5 | 6.0 | 18 | 134 | 306 | 117 | 37 | 21 | 21 | 12 | 6.9 |
| 16 | 5.0 | 5.3 | 6.5 | 16 | 145 | 291 | 107 | 35 | 21 | 20 | 12 | 6.3 |
| 17 | 5.5 | 5.5 | 7.0 | 18 | 158 | 275 | 103 | 33 | 20 | 20 | 12 | 7.2 |
| 18 | 5.0 | 5.3 | 6.9 | 21 | 198 | 252 | 101 | 30 | 19 | 19 | 11 | 7.9 |
| 19 | 4.5 | 5.5 | 7.0 | 19 | 240 | 241 | 100 | 29 | 18 | 19 | 12 | 7.1 |
| 20 | 4.5 | 5.5 | 6.9 | 15 | 266 | 234 | 93 | 30 | 18 | 19 | 12 | 5.5 |
| 21 | 4.0 | 5.7 | 6.7 | 17 | 289 | 223 | 91 | 30 | 18 | 18 | 10 | 6.0 |
| 22 | 3.5 | 5.9 | 6.6 | 17 | 266 | 219 | 87 | 28 | 18 | 18 | 12 | 6.9 |
| 23 | 3.0 | 5.4 | 7.1 | 19 | 214 | 207 | 80 | 27 | 18 | 18 | 12 | 6.6 |
| 24 | 3.5 | 5.5 | 6.6 | 23 | 221 | 202 | 74 | 27 | 18 | 18 | 8.3 | 6.7 |
| 25 | 4.0 | 6.0 | 5.5 | 27 | 231 | 196 | 73 | 27 | 19 | 17 | 7.7 | 6.0 |
| 26 | 4.0 | 5.5 | 6.5 | 27 | 240 | 201 | 77 | 27 | 21 | 18 | 7.9 | 5.5 |
| 27 | 4.5 | 6.4 | 8.0 | 31 | 206 | 209 | 70 | 25 | 19 | 18 | 7.0 | 5.0 |
| 28 | 4.0 | 7.1 | 7.7 | 43 | 180 | 217 | 66 | 25 | 20 | 17 | 6.0 | 6.0 |
| 29 | 4.5 | ------ | 7.5 | 54 | 167 | 223 | 64 | 27 | 20 | 18 | 6.2 | 6.8 |
| 30 | 5.0 | ------ | 6.2 | 63 | 178 | 213 | 59 | 28 | 20 | 16 | 6.3 | 7.1 |
| 31 | 5.5 | ------ | 7.0 | ------ | 192 | ------ | 56 | 28 | ------ | 15 | ------ | 7.0 |
| TOTAL | 121.3 | 161.8 | 208.3 | 545.7 | 4,972 | 6,926 | 3,558 | 1,134 | 627 | 562 | 357.4 | 195.5 |
| MEAN | 3.91 | 5.78 | 6.72 | 18.2 | 160 | 231 | 115 | 36.6 | 20.9 | 18.1 | 11.9 | 6.31 |
| MAX | 5.5 | 7.1 | 8.0 | 63 | 289 | 314 | 203 | 54 | 28 | 21 | 16 | 8.6 |
| MIN | 2.6 | 4.5 | 5.5 | 6.0 | 42 | 185 | 56 | 25 | 18 | 15 | 6.0 | 4.2 |
| AC-FT | 241 | 321 | 413 | 1,080 | 9,860 | 13,740 | 7,060 | 2,250 | 1,240 | 1,110 | 709 | 388 |
| (†) | 546 | 498 | 491 | 455 | 504 | 534 | 698 | 545 | 640 | 655 | 611 | 676 |

CAL YR 1973 TOTAL 19,369.0 MEAN 53.1 MAX 314 MIN 2.6 AC-FT 38,420 † 6,850
WTR YR 1973 TOTAL 18,867.8 MEAN 51.7 MAX 314 MIN 2.6 AC-FT 37,420 † 6,550

PEAK DISCHARGE (BASE, 160 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-10 | 2100 | 3.94 | 238 | 6-14 | 1545 | 4.47 | 346 |
| 5-21 | 2300 | 4.46 | 344 | | | | |

† Diversion, in acre-ft, through Molycorp tailings pipelines.

## 08266000 CABRESTO CREEK NEAR QUESTA, N. MEX.

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

DRAINAGE AREA.--36.7 mi² (95.1 km²).

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

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

AVERAGE DISCHARGE.--30 calendar years, 9.59 ft³/s (0.272 m³/s), 6,950 acre-ft/yr (8.57 hm³/yr); 20 calendar years (1954-73), 9.08 ft³/s (0.257 m³/s), 6,580 acre-ft/yr (8.11 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 142 ft³/s (4.02 m³/s) May 21 (gage height, 4.43 ft or 1.350 m); minimum, 0.78 ft³/s (0.022 m³/s) Apr. 4, result of freezeup.
Period of record: Maximum discharge, 176 ft³/s (4.98 m³/s) June 8, 1957 (gage height, 4.44 ft or 1.353 m); minimum, 0.44 ft³/s (0.012 m³/s) Dec. 2, 1950, result of freezeup.
The flood of May 25, 1942, may have exceeded the maximum of record.

REMARKS.--Records good. Llano ditch, the only diversion above station, diverts from right bank 900 ft (270 m) above gage for irrigation of about 800 acres (3.24 km²) below. See tabulation below for monthly diversion of Llano ditch (records of daily discharge available in District files). Flow regulated by Cabresto Reservoir(capacity, 732 acre-feet or 903,000 m³, after reconstruction in 1928)on Lake Fork 1 mi (2 km) above mouth.

REVISIONS.--WSP 1712: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.5 | 3.4 | 3.7 | 4.0 | 17 | 105 | 24 | 15 | 8.0 | 4.8 | 6.2 | 5.7 |
| 2 | 3.4 | 3.3 | 3.6 | 4.1 | 14 | 107 | 22 | 14 | 7.5 | 4.1 | 6.2 | 5.7 |
| 3 | 3.5 | 3.4 | 3.6 | 3.4 | 14 | 100 | 23 | 13 | 7.4 | 4.0 | 6.1 | 5.3 |
| 4 | 3.6 | 3.5 | 3.6 | 3.3 | 16 | 91 | 23 | 13 | 7.2 | 3.9 | 6.3 | 5.2 |
| 5 | 3.7 | 3.6 | 3.7 | 3.6 | 18 | 84 | 22 | 13 | 7.0 | 4.1 | 6.1 | 3.6 |
| 6 | 3.6 | 3.5 | 3.6 | 4.1 | 18 | 83 | 20 | 13 | 7.0 | 4.1 | 6.2 | 3.2 |
| 7 | 3.6 | 3.6 | 3.7 | 3.5 | 17 | 85 | 19 | 12 | 6.7 | 4.0 | 6.0 | 4.2 |
| 8 | 3.5 | 3.5 | 3.7 | 2.9 | 17 | 89 | 16 | 12 | 6.6 | 3.9 | 5.8 | 5.3 |
| 9 | 3.6 | 3.4 | 3.7 | 4.1 | 21 | 94 | 16 | 12 | 6.5 | 4.0 | 5.9 | 5.0 |
| 10 | 3.8 | 3.5 | 3.7 | 4.3 | 31 | 96 | 17 | 11 | 6.9 | 4.8 | 5.9 | 4.7 |
| 11 | 3.6 | 3.5 | 3.6 | 4.4 | 46 | 96 | 17 | 11 | 7.7 | 5.5 | 5.9 | 4.8 |
| 12 | 3.7 | 3.6 | 3.7 | 4.6 | 52 | 99 | 17 | 12 | 7.5 | 5.7 | 5.9 | 4.6 |
| 13 | 3.9 | 3.5 | 4.0 | 4.8 | 56 | 97 | 17 | 12 | 7.0 | 5.6 | 6.1 | 4.6 |
| 14 | 3.9 | 3.4 | 3.7 | 5.5 | 49 | 98 | 16 | 11 | 6.9 | 5.9 | 6.0 | 4.5 |
| 15 | 4.0 | 3.4 | 3.6 | 6.7 | 51 | 89 | 16 | 11 | 6.8 | 6.1 | 5.5 | 4.5 |
| 16 | 4.0 | 3.3 | 3.8 | 6.2 | 55 | 80 | 14 | 11 | 6.7 | 6.1 | 5.4 | 4.3 |
| 17 | 4.2 | 3.5 | 3.9 | 6.2 | 60 | 68 | 14 | 12 | 9.8 | 6.2 | 5.4 | 4.8 |
| 18 | 4.0 | 3.4 | 4.2 | 7.4 | 76 | 60 | 13 | 11 | 13 | 6.1 | 5.4 | 4.8 |
| 19 | 3.9 | 3.4 | 4.3 | 6.2 | 88 | 55 | 13 | 12 | 13 | 5.9 | 5.4 | 4.1 |
| 20 | 3.9 | 3.4 | 4.3 | 5.3 | 101 | 48 | 13 | 11 | 13 | 6.0 | 5.3 | 3.5 |
| 21 | 3.9 | 3.5 | 4.8 | 6.7 | 130 | 41 | 13 | 11 | 12 | 6.0 | 5.0 | 4.1 |
| 22 | 3.7 | 3.6 | 4.3 | 6.6 | 123 | 38 | 13 | 12 | 12 | 5.9 | 5.8 | 4.7 |
| 23 | 3.5 | 3.4 | 4.5 | 7.4 | 115 | 36 | 13 | 11 | 11 | 5.7 | 5.8 | 5.2 |
| 24 | 3.8 | 3.1 | 4.3 | 8.1 | 109 | 36 | 12 | 11 | 11 | 5.7 | 5.3 | 5.2 |
| 25 | 3.8 | 3.3 | 3.6 | 9.4 | 105 | 35 | 12 | 11 | 11 | 5.7 | 5.0 | 4.4 |
| 26 | 3.8 | 3.4 | 4.1 | 9.1 | 110 | 33 | 13 | 11 | 11 | 5.7 | 5.6 | 4.1 |
| 27 | 3.9 | 3.6 | 4.4 | 10 | 100 | 33 | 16 | 11 | 11 | 5.7 | 5.4 | 3.8 |
| 28 | 3.5 | 3.6 | 4.3 | 13 | 93 | 32 | 16 | 11 | 11 | 5.7 | 4.5 | 5.2 |
| 29 | 3.5 | ------ | 4.1 | 16 | 90 | 30 | 15 | 10 | 9.0 | 5.6 | 5.7 | 4.7 |
| 30 | 3.5 | ------ | 4.1 | 20 | 96 | 27 | 15 | 10 | 5.4 | 5.9 | 5.8 | 4.6 |
| 31 | 3.5 | ------ | 4.1 | ------ | 98 | ------ | 15 | 10 | ------ | 6.3 | ------ | 4.6 |
| TOTAL | 115.3 | 96.6 | 122.3 | 200.9 | 1,986 | 2,065 | 505 | 361 | 266.6 | 164.3 | 170.9 | 143.0 |
| MEAN | 3.72 | 3.45 | 3.95 | 6.70 | 64.1 | 68.8 | 16.3 | 11.6 | 8.89 | 5.30 | 5.70 | 4.61 |
| MAX | 4.2 | 3.6 | 4.8 | 20 | 130 | 107 | 24 | 15 | 13 | 6.3 | 6.3 | 5.7 |
| MIN | 3.4 | 3.1 | 3.6 | 2.9 | 14 | 27 | 12 | 10 | 5.4 | 3.9 | 4.5 | 3.2 |
| AC-FT | 229 | 192 | 243 | 398 | 3,940 | 4,100 | 1,000 | 716 | 529 | 326 | 339 | 284 |
| (†) | - | - | - | 0 | 163 | 1,110 | 650 | 282 | 1.1 | 0 | - | - |

CAL YR 1973 TOTAL 6,196.9 MEAN 17.0 MAX 130 MIN 2.9 AC-FT 12,290
WTR YR 1973 TOTAL 6,049.1 MEAN 16.6 MAX 130 MIN 1.2 AC-FT 12,000

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

## 08267000 RED RIVER AT MOUTH, NEAR QUESTA, N. MEX.

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

DRAINAGE AREA.--190 mi² (492 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 6,600 ft (2,012 m) from topographic map.

AVERAGE DISCHARGE.--23 calendar years, 77.6 ft³/s (2.198 m³/s), 56,220 acre-ft/yr (69.3 hm³/yr); 20 calendar years (1954-73), 76.5 ft³/s (2.166 m³/s), 55,420 acre-ft/yr (68.3 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 511 ft³/s (14.5 m³/s) May 22 (gage height, 5.31 ft or 1.618 m); minimum, 34 ft³/s (0.96 m³/s) Feb. 2.

Period of record: Maximum discharge, 730 ft³/s (20.7 m³/s) Aug. 12, 1964 (gage height, 6.05 ft or 1.844 m); minimum, 29 ft³/s (0.82 m³/s) Feb. 13, 1965.

REMARKS.--Records good. Diversions for irrigation of about 3,000 acres (12.1 km²) above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 41 | 41 | 55 | 51 | 102 | 347 | 240 | 107 | 61 | 59 | 58 | 50 |
| 2 | 42 | 37 | 58 | 51 | 95 | 355 | 235 | 105 | 60 | 58 | 53 | 52 |
| 3 | 41 | 37 | 53 | 48 | 93 | 331 | 233 | 103 | 59 | 52 | 50 | 55 |
| 4 | 45 | 40 | 52 | 47 | 106 | 309 | 224 | 103 | 59 | 51 | 51 | 54 |
| 5 | 45 | 40 | 51 | 47 | 118 | 295 | 217 | 95 | 58 | 51 | 58 | 49 |
| 6 | 44 | 40 | 48 | 48 | 125 | 291 | 206 | 84 | 61 | 51 | 59 | 44 |
| 7 | 43 | 45 | 51 | 49 | 117 | 298 | 193 | 77 | 58 | 50 | 59 | 46 |
| 8 | 43 | 47 | 51 | 45 | 122 | 313 | 181 | 76 | 57 | 50 | 56 | 43 |
| 9 | 43 | 45 | 51 | 48 | 137 | 335 | 180 | 75 | 56 | 50 | 56 | 44 |
| 10 | 43 | 46 | 51 | 51 | 182 | 356 | 168 | 75 | 60 | 52 | 55 | 44 |
| 11 | 40 | 47 | 52 | 50 | 254 | 380 | 159 | 74 | 89 | 61 | 55 | 44 |
| 12 | 40 | 46 | 55 | 48 | 300 | 407 | 155 | 73 | 75 | 61 | 55 | 44 |
| 13 | 42 | 44 | 51 | 49 | 304 | 409 | 157 | 73 | 68 | 63 | 53 | 43 |
| 14 | 45 | 43 | 48 | 51 | 270 | 432 | 150 | 73 | 65 | 63 | 51 | 44 |
| 15 | 45 | 43 | 43 | 55 | 246 | 397 | 149 | 73 | 64 | 64 | 49 | 49 |
| 16 | 43 | 41 | 43 | 51 | 256 | 368 | 138 | 73 | 62 | 62 | 49 | 49 |
| 17 | 43 | 41 | 45 | 52 | 262 | 335 | 133 | 72 | 62 | 62 | 49 | 52 |
| 18 | 42 | 40 | 45 | 58 | 307 | 312 | 133 | 70 | 62 | 64 | 47 | 54 |
| 19 | 42 | 39 | 45 | 58 | 387 | 300 | 135 | 66 | 59 | 63 | 54 | 51 |
| 20 | 43 | 41 | 45 | 53 | 450 | 288 | 129 | 65 | 58 | 63 | 55 | 48 |
| 21 | 42 | 43 | 47 | 56 | 472 | 270 | 126 | 63 | 57 | 62 | 59 | 47 |
| 22 | 39 | 41 | 47 | 57 | 455 | 256 | 128 | 61 | 59 | 62 | 57 | 49 |
| 23 | 39 | 41 | 47 | 60 | 387 | 251 | 130 | 61 | 58 | 63 | 57 | 50 |
| 24 | 38 | 42 | 47 | 63 | 388 | 240 | 121 | 61 | 60 | 61 | 52 | 50 |
| 25 | 40 | 41 | 45 | 66 | 397 | 237 | 122 | 64 | 61 | 61 | 49 | 46 |
| 26 | 41 | 47 | 47 | 66 | 410 | 245 | 131 | 65 | 62 | 63 | 49 | 51 |
| 27 | 41 | 48 | 49 | 68 | 371 | 248 | 123 | 64 | 61 | 65 | 49 | 45 |
| 28 | 40 | 51 | 49 | 81 | 317 | 257 | 116 | 63 | 61 | 60 | 45 | 52 |
| 29 | 39 | ------ | 50 | 94 | 298 | 256 | 115 | 63 | 59 | 55 | 46 | 55 |
| 30 | 41 | ------ | 48 | 105 | 300 | 248 | 113 | 65 | 59 | 57 | 47 | 55 |
| 31 | 42 | ------ | 50 | ------ | 328 | ------ | 111 | 64 | ------ | 58 | ------ | 53 |
| TOTAL | 1,297 | 1,197 | 1,519 | 1,726 | 8,356 | 9,366 | 4,851 | 2,306 | 1,850 | 1,817 | 1,582 | 1,512 |
| MEAN | 41.8 | 42.8 | 49.0 | 57.5 | 270 | 312 | 156 | 74.4 | 61.7 | 58.6 | 52.7 | 48.8 |
| MAX | 45 | 51 | 58 | 105 | 472 | 432 | 240 | 107 | 89 | 65 | 59 | 55 |
| MIN | 38 | 37 | 43 | 45 | 93 | 237 | 111 | 61 | 56 | 50 | 45 | 43 |
| AC-FT | 2,570 | 2,370 | 3,010 | 3,420 | 16,570 | 18,580 | 9,620 | 4,570 | 3,670 | 3,600 | 3,140 | 3,000 |

CAL YR 1973 TOTAL 37,379 MEAN 102 MAX 472 MIN 37 AC-FT 74,140
WTR YR 1973 TOTAL 36,811 MEAN 101 MAX 472 MIN 37 AC-FT 73,010

PEAK DISCHARGE (BASE, 175 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-12 | 2300 | 4.30 | 322 | 6- 2 | 0200 | 4.68 | 380 |
| 5-22 | 0100 | 5.31 | 511 | 6-14 | 1100 | 5.05 | 450 |

## 08267500 RIO HONDO NEAR VALDEZ, N. MEX.

LOCATION.--Lat 36°32'30", long 105°33'21", Taos County, in Carson National Forest, on right bank 500 ft (150 m) upstream from first diversion, 1.6 mi (2.6 km) east of Valdez, 3.8 mi (6.1 km) downstream from South Fork, and at mile 9.2 (14.8 km).

DRAINAGE AREA.--36.2 mi² (93.8 km²).

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

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

AVERAGE DISCHARGE.--39 calendar years, 35.4 ft³/s (1.003 m³/s), 25,650 acre-ft/yr (31.6 hm³/yr); 20 calendar years (1954-73), 31.3 ft³/s (0.886 m³/s), 22,680 acre-ft/yr (28.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 288 ft³/s (8.16 m³/s) June 14 (gage height, 3.95 ft or 1.204 m); minimum, 5.4 ft³/s (0.15 m³/s), result of freezeup.
Period of record: Maximum discharge, 541 ft³/s (15.3 m³/s) May 13, 1941; maximum gage height, 4.81 ft (1.466 m) Jan. 5, 1970 (ice jam); minimum discharge, about 1 ft³/s (0.03 m³/s) Jan. 27, 1942, result of freezeup.

REMARKS.--Records good except those for winter periods, which are fair. No diversions above station.

REVISIONS (WATER YEARS).--WSP 1342: 1935. WSP 1712: Drainage area. WSP 1732: 1942(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9.0 | 8.9 | 9.7 | 10 | 39 | 179 | 181 | 47 | 23 | 16 | 13 | 11 |
| 2 | 9.5 | 8.8 | 10 | 9.9 | 33 | 177 | 174 | 44 | 22 | 16 | 13 | 11 |
| 3 | 9.5 | 9.2 | 10 | 10 | 31 | 162 | 175 | 46 | 21 | 15 | 13 | 11 |
| 4 | 9.2 | 9.3 | 10 | 11 | 38 | 151 | 164 | 45 | 21 | 15 | 13 | 11 |
| 5 | 9.0 | 8.8 | 10 | 11 | 47 | 152 | 151 | 45 | 20 | 16 | 13 | 10 |
| 6 | 8.6 | 8.8 | 9.7 | 12 | 47 | 153 | 130 | 42 | 20 | 15 | 13 | 10 |
| 7 | 9.4 | 8.6 | 9.6 | 12 | 42 | 157 | 115 | 39 | 19 | 15 | 12 | 11 |
| 8 | 8.5 | 8.5 | 9.5 | 11 | 43 | 181 | 105 | 38 | 18 | 15 | 12 | 12 |
| 9 | 9.0 | 8.4 | 9.3 | 12 | 52 | 208 | 100 | 37 | 18 | 15 | 12 | 12 |
| 10 | 9.9 | 8.5 | 9.3 | 13 | 82 | 232 | 96 | 36 | 21 | 16 | 12 | 11 |
| 11 | 9.0 | 8.2 | 9.3 | 13 | 122 | 254 | 93 | 36 | 25 | 17 | 12 | 11 |
| 12 | 9.5 | 8.1 | 9.8 | 14 | 147 | 258 | 88 | 35 | 21 | 17 | 12 | 11 |
| 13 | 9.5 | 8.1 | 10 | 14 | 173 | 280 | 84 | 34 | 20 | 17 | 12 | 11 |
| 14 | 9.9 | 7.9 | 10 | 18 | 152 | 274 | 82 | 33 | 19 | 16 | 12 | 11 |
| 15 | 9.5 | 7.8 | 10 | 21 | 123 | 248 | 75 | 32 | 18 | 16 | 11 | 11 |
| 16 | 9.3 | 8.0 | 11 | 19 | 119 | 240 | 72 | 31 | 18 | 16 | 11 | 10 |
| 17 | 9.1 | 8.6 | 11 | 19 | 120 | 232 | 69 | 29 | 18 | 16 | 11 | 11 |
| 18 | 9.0 | 8.6 | 11 | 21 | 151 | 217 | 71 | 29 | 17 | 15 | 11 | 11 |
| 19 | 8.8 | 9.5 | 12 | 19 | 194 | 202 | 77 | 28 | 17 | 15 | 11 | 10 |
| 20 | 8.7 | 9.5 | 12 | 20 | 205 | 190 | 68 | 29 | 17 | 15 | 11 | 9.5 |
| 21 | 8.0 | 9.0 | 13 | 17 | 203 | 192 | 67 | 27 | 17 | 14 | 11 | 10 |
| 22 | 8.5 | 8.5 | 12 | 17 | 171 | 191 | 64 | 27 | 17 | 14 | 12 | 10 |
| 23 | 8.8 | 8.4 | 12 | 19 | 146 | 186 | 60 | 26 | 17 | 14 | 12 | 10 |
| 24 | 9.2 | 8.3 | 12 | 21 | 155 | 183 | 58 | 26 | 17 | 14 | 11 | 10 |
| 25 | 9.6 | 8.4 | 11 | 23 | 152 | 182 | 54 | 25 | 17 | 14 | 12 | 10 |
| 26 | 10 | 8.6 | 11 | 23 | 168 | 180 | 55 | 25 | 18 | 14 | 12 | 10 |
| 27 | 10 | 8.9 | 12 | 27 | 153 | 184 | 53 | 24 | 17 | 14 | 12 | 10 |
| 28 | 9.0 | 9.3 | 11 | 33 | 130 | 193 | 51 | 24 | 17 | 14 | 11 | 10 |
| 29 | 9.5 | ------ | 11 | 38 | 124 | 187 | 51 | 23 | 17 | 14 | 12 | 10 |
| 30 | 9.5 | ------ | 10 | 43 | 131 | 185 | 50 | 24 | 16 | 13 | 12 | 10 |
| 31 | 9.5 | ------ | 10 | ------ | 156 | ------ | 49 | 24 | ------ | 13 | ------ | 10 |
| TOTAL | 285.5 | 241.5 | 328.2 | 550.9 | 3,649 | 6,010 | 2,782 | 1,010 | 563 | 466 | 357 | 326.5 |
| MEAN | 9.21 | 8.63 | 10.6 | 18.4 | 118 | 200 | 89.7 | 32.6 | 18.8 | 15.0 | 11.9 | 10.5 |
| MAX | 10 | 9.5 | 13 | 43 | 205 | 280 | 181 | 47 | 25 | 17 | 13 | 12 |
| MIN | 8.0 | 7.8 | 9.3 | 9.9 | 31 | 151 | 49 | 23 | 16 | 13 | 11 | 9.5 |
| AC-FT | 566 | 479 | 651 | 1,090 | 7,240 | 11,920 | 5,520 | 2,000 | 1,120 | 924 | 708 | 648 |

CAL YR 1973 TOTAL 16,569.6 MEAN 45.4 MAX 280 MIN 7.8 AC-FT 32,870
WTR YR 1973 TOTAL 16,424.6 MEAN 45.0 MAX 280 MIN 7.0 AC-FT 32,580

PEAK DISCHARGE (BASE, 80 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-13 | 0030 | 3.27 | 186 | 6- 1 | 1830 | 3.39 | 204 |
| 5-21 | 0130 | 3.51 | 222 | 6-14 | 1215 | 3.95 | 288 |

## 08268500 ARROYO HONDO AT ARROYO HONDO, N. MEX.

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

DRAINAGE AREA.--65.6 mi² (169.9 km²).

PERIOD OF RECORD.--April 1910 to June 1912 (discharge measurements and fragmentary gage-height record), July 1912 to December 1928 (fragmentary), and January 1932 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as Rio Hondo near Arroyo Hondo prior to 1928, and as Rio Hondo at Arroyo Hondo 1928-65.

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

AVERAGE DISCHARGE.--58 calendar years (1913-28, 1932-73), 27.6 ft³/s (0.782 m³/s), 20,000 acre-ft/yr (24.7 hm³/yr); 20 calendar years (1954-73), 19.9 ft³/s (0.564 m³/s), 14,420 acre-ft/yr (17.8 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 301 ft³/s (8.52 m³/s) June 15 (gage height, 3.90 ft or 1.189 m); minimum, 5.0 ft³/s (0.14 m³/s) Sept. 16, 19, 20, 21, 22, 23.

1938-73: Maximum discharge, 1,060 ft³/s (30.0 m³/s) July 19, 1948 (gage height, 3.75 ft or 1.143 m), from rating curve extended above 200 ft³/s (5.66 m³/s); maximum gage height, 3.90 ft (1.189 m) June 15, 1973; minimum discharge, 3.8 ft³/s (0.11 m³/s) Aug. 1, 6, 1963.

Maximum gage height observed, 5.45 ft (1.661 m), site and datum then in use, Aug. 23, 1935; discharge uncertain, but probably exceeded 1,200 ft³/s (34.0 m³/s). A minimum daily discharge of 3 ft³/s (0.08 m³/s) occurred Oct. 19, 1912 (statement in WSP 328 that there was no flow in January and much of February 1912 is believed erroneous). Discharge not determined for the major floods of Oct. 6, 1911, Sept. 1, 1932, and July 22, 1934.

REMARKS.--Records good except those for May and June, which are fair. Diversions above station for irrigation of about 2,500 acres (10.1 km²).

REVISIONS (WATER YEARS).--WSP 1342: 1915, 1932(M), 1934-38(M). WSP 1712: Drainage area. WSP 1732: 1926.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15 | 17 | 19 | 16 | 40 | 122 | 131 | 14 | 7.2 | 6.8 | 7.1 | 16 |
| 2 | 16 | 13 | 19 | 16 | 38 | 132 | 127 | 13 | 7.2 | 6.8 | 6.8 | 18 |
| 3 | 15 | 14 | 19 | 16 | 34 | 108 | 114 | 12 | 7.2 | 6.8 | 7.1 | 18 |
| 4 | 15 | 21 | 18 | 15 | 33 | 109 | 103 | 11 | 6.8 | 6.4 | 7.4 | 18 |
| 5 | 16 | 18 | 18 | 16 | 38 | 110 | 99 | 10 | 6.8 | 6.8 | 7.5 | 15 |
| 6 | 13 | 18 | 18 | 17 | 39 | 112 | 92 | 9.8 | 6.8 | 6.8 | 8.0 | 13 |
| 7 | 16 | 18 | 17 | 19 | 38 | 122 | 86 | 9.3 | 6.6 | 6.4 | 9.5 | 16 |
| 8 | 12 | 17 | 18 | 16 | 39 | 142 | 70 | 7.9 | 6.3 | 6.4 | 9.3 | 18 |
| 9 | 14 | 14 | 17 | 16 | 43 | 160 | 64 | 6.5 | 6.3 | 6.4 | 9.3 | 18 |
| 10 | 18 | 17 | 16 | 18 | 68 | 170 | 61 | 6.7 | 6.4 | 8.6 | 9.3 | 17 |
| 11 | 13 | 17 | 16 | 18 | 104 | 201 | 57 | 6.6 | 8.0 | 9.0 | 9.1 | 18 |
| 12 | 11 | 16 | 16 | 18 | 120 | 201 | 54 | 6.4 | 6.9 | 7.2 | 8.9 | 17 |
| 13 | 15 | 16 | 16 | 16 | 144 | 217 | 54 | 6.7 | 6.8 | 6.8 | 9.0 | 17 |
| 14 | 17 | 16 | 16 | 16 | 112 | 251 | 54 | 7.0 | 6.6 | 6.4 | 8.7 | 17 |
| 15 | 17 | 15 | 15 | 19 | 94 | 251 | 50 | 8.0 | 6.0 | 6.4 | 7.7 | 17 |
| 16 | 17 | 13 | 16 | 18 | 94 | 221 | 44 | 7.4 | 6.0 | 6.8 | 6.4 | 16 |
| 17 | 18 | 17 | 16 | 17 | 93 | 209 | 40 | 7.2 | 6.0 | 7.2 | 6.4 | 18 |
| 18 | 17 | 15 | 16 | 19 | 122 | 174 | 38 | 7.8 | 6.1 | 7.2 | 6.4 | 17 |
| 19 | 17 | 15 | 17 | 18 | 167 | 164 | 31 | 7.8 | 5.9 | 6.8 | 6.8 | 16 |
| 20 | 17 | 15 | 17 | 18 | 166 | 174 | 25 | 7.6 | 5.9 | 6.8 | 7.7 | 13 |
| 21 | 16 | 17 | 18 | 16 | 186 | 166 | 25 | 7.4 | 5.8 | 6.8 | 7.2 | 13 |
| 22 | 11 | 16 | 17 | 15 | 161 | 135 | 23 | 7.7 | 5.8 | 6.8 | 7.7 | 15 |
| 23 | 12 | 16 | 18 | 15 | 150 | 137 | 21 | 7.3 | 5.9 | 6.8 | 8.2 | 14 |
| 24 | 14 | 16 | 17 | 16 | 140 | 130 | 20 | 7.3 | 6.0 | 7.2 | 12 | 15 |
| 25 | 17 | 16 | 16 | 16 | 133 | 137 | 19 | 7.6 | 6.7 | 7.7 | 13 | 12 |
| 26 | 18 | 16 | 16 | 16 | 134 | 136 | 18 | 7.4 | 6.9 | 7.7 | 15 | 12 |
| 27 | 18 | 18 | 17 | 21 | 110 | 141 | 18 | 7.2 | 7.0 | 8.2 | 15 | 10 |
| 28 | 13 | 18 | 17 | 31 | 92 | 153 | 16 | 7.6 | 6.8 | 8.2 | 15 | 16 |
| 29 | 15 | ------ | 18 | 36 | 89 | 148 | 15 | 7.7 | 6.4 | 8.2 | 18 | 18 |
| 30 | 17 | ------ | 17 | 44 | 91 | 135 | 15 | 8.2 | 6.8 | 7.2 | 18 | 18 |
| 31 | 19 | ------ | 16 | ------ | 113 | ------ | 15 | 7.7 | ------ | 7.1 | ------ | 16 |
| TOTAL | 479 | 455 | 527 | 568 | 3,025 | 4,768 | 1,599 | 255.8 | 195.9 | 220.7 | 287.5 | 494 |
| MEAN | 15.5 | 16.3 | 17.0 | 18.9 | 97.6 | 159 | 51.6 | 8.25 | 6.53 | 7.12 | 9.58 | 15.9 |
| MAX | 19 | 21 | 19 | 44 | 186 | 251 | 131 | 14 | 8.0 | 9.0 | 18 | 18 |
| MIN | 11 | 13 | 15 | 15 | 33 | 108 | 15 | 6.4 | 5.8 | 6.4 | 6.4 | 10 |
| AC-FT | 950 | 902 | 1,050 | 1,130 | 6,000 | 9,460 | 3,170 | 507 | 389 | 438 | 570 | 980 |

CAL YR 1973 TOTAL 12,874.9 MEAN 35.3 MAX 251 MIN 5.8 AC-FT 25,540
WTR YR 1973 TOTAL 12,982.9 MEAN 35.6 MAX 251 MIN 5.8 AC-FT 25,750

PEAK DISCHARGE (BASE, 75 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-13 | 0400 | 3.61 | 205 | 6- 2 | 0715 | 3.58 | 164 |
| 5-21 | 0430 | 3.63 | 209 | 6-15 | 0630 | 3.90 | 301 |

## 08268700 RIO GRANDE NEAR ARROYO HONDO, N. MEX.

LOCATION.--Lat 36°32'04", long 105°42'34", in NW¼ sec.31, T.27 N., R.12 E., Taos County, on right bank 350 ft (110 m) downstream from Arroyo Hondo, 400 ft (120 m) downstream from bridge on county road, 2.2 mi (3.5 km) west of Arroyo Hondo, 11.6 mi (18.7 km) northwest of Taos, and at mile 1,677.4 (2,698.9 km).

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

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

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

AVERAGE DISCHARGE.--10 calendar years, 579 ft³/s (16.40 m³/s), 419,500 acre-ft/yr (517 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 4,290 ft³/s (121 m³/s) May 23 (gage height, 5.82 ft or 1.774 m); minimum, 307 ft³/s (8.69 m³/s) Dec. 8.
Period of record: Maximum discharge, 4,400 ft³/s (125 m³/s) June 22, 1965 (gage height, 5.81 ft or 1.771 m); maximum gage height, 5.82 ft (1.774 m) May 23, 1973; minimum discharge, 136 ft³/s (3.85 m³/s) Aug. 2, 1963.

REMARKS.--Records excellent. Diversions above station for irrigation of about 620,000 acres (2,510 km²) in Colorado and 15,000 acres (60.7 km²) in New Mexico.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 425 | 415 | 485 | 728 | 1,000 | 2,850 | 2,230 | 1,000 | 398 | 397 | 615 | 453 |
| 2 | 421 | 409 | 537 | 706 | 1,010 | 3,130 | 2,070 | 983 | 431 | 391 | 602 | 510 |
| 3 | 416 | 409 | 571 | 687 | 823 | 3,380 | 1,960 | 923 | 537 | 390 | 591 | 538 |
| 4 | 417 | 412 | 567 | 661 | 682 | 3,390 | 1,830 | 823 | 581 | 380 | 581 | 528 |
| 5 | 419 | 409 | 574 | 639 | 620 | 2,980 | 1,640 | 769 | 516 | 369 | 586 | 516 |
| 6 | 408 | 421 | 575 | 618 | 699 | 2,660 | 1,510 | 715 | 463 | 360 | 580 | 428 |
| 7 | 408 | 439 | 616 | 609 | 884 | 2,480 | 1,590 | 672 | 444 | 360 | 577 | 395 |
| 8 | 405 | 440 | 620 | 588 | 799 | 2,390 | 1,530 | 648 | 427 | 385 | 556 | 403 |
| 9 | 410 | 433 | 631 | 583 | 693 | 2,510 | 1,380 | 610 | 406 | 434 | 531 | 410 |
| 10 | 416 | 435 | 626 | 614 | 778 | 2,720 | 1,290 | 596 | 408 | 474 | 507 | 437 |
| 11 | 401 | 438 | 640 | 600 | 1,060 | 2,970 | 1,310 | 536 | 457 | 522 | 479 | 421 |
| 12 | 393 | 445 | 689 | 602 | 1,480 | 3,330 | 1,420 | 489 | 429 | 558 | 467 | 431 |
| 13 | 399 | 447 | 746 | 655 | 2,020 | 3,360 | 1,480 | 459 | 455 | 580 | 457 | 470 |
| 14 | 402 | 453 | 730 | 675 | 2,160 | 3,580 | 1,350 | 431 | 508 | 568 | 446 | 491 |
| 15 | 403 | 448 | 725 | 720 | 2,230 | 3,570 | 1,340 | 407 | 555 | 580 | 440 | 518 |
| 16 | 406 | 441 | 786 | 786 | 2,190 | 3,440 | 1,280 | 398 | 540 | 592 | 457 | 502 |
| 17 | 412 | 455 | 793 | 845 | 2,250 | 3,210 | 1,390 | 396 | 510 | 585 | 463 | 428 |
| 18 | 415 | 450 | 776 | 818 | 2,280 | 3,310 | 1,390 | 418 | 488 | 632 | 453 | 469 |
| 19 | 422 | 448 | 815 | 717 | 2,540 | 3,100 | 1,380 | 432 | 462 | 688 | 447 | 463 |
| 20 | 421 | 445 | 836 | 647 | 2,800 | 2,620 | 1,530 | 470 | 457 | 700 | 453 | 381 |
| 21 | 424 | 444 | 796 | 622 | 3,350 | 2,450 | 1,640 | 638 | 443 | 699 | 451 | 369 |
| 22 | 416 | 438 | 787 | 545 | 3,810 | 2,400 | 1,650 | 452 | 424 | 697 | 465 | 424 |
| 23 | 414 | 439 | 795 | 507 | 4,200 | 2,390 | 1,500 | 435 | 407 | 695 | 513 | 442 |
| 24 | 414 | 444 | 771 | 493 | 3,980 | 2,490 | 1,270 | 398 | 398 | 681 | 466 | 411 |
| 25 | 417 | 444 | 749 | 500 | 3,400 | 2,450 | 1,200 | 400 | 388 | 681 | 454 | 390 |
| 26 | 419 | 455 | 712 | 528 | 3,080 | 2,480 | 1,220 | 398 | 383 | 671 | 470 | 390 |
| 27 | 416 | 458 | 698 | 610 | 3,330 | 2,510 | 1,210 | 387 | 379 | 666 | 403 | 373 |
| 28 | 409 | 468 | 708 | 692 | 3,570 | 2,530 | 1,180 | 377 | 389 | 657 | 423 | 377 |
| 29 | 406 | ------ | 746 | 752 | 3,170 | 2,350 | 1,210 | 383 | 401 | 645 | 376 | 390 |
| 30 | 410 | ------ | 749 | 857 | 2,590 | 2,220 | 1,200 | 402 | 401 | 641 | 445 | 411 |
| 31 | 418 | ------ | 738 | ------ | 2,590 | ------ | 1,080 | 377 | ------ | 625 | ------ | 407 |
| TOTAL | 12,782 | 12,282 | 21,585 | 19,584 | 66,068 | 85,250 | 45,260 | 16,802 | 13,485 | 17,303 | 14,749 | 13,576 |
| MEAN | 412 | 439 | 696 | 653 | 2,131 | 2,842 | 1,460 | 542 | 450 | 558 | 492 | 438 |
| MAX | 425 | 468 | 836 | 857 | 4,200 | 3,580 | 2,230 | 1,000 | 581 | 700 | 615 | 538 |
| MIN | 393 | 409 | 485 | 493 | 620 | 2,220 | 1,080 | 377 | 379 | 360 | 376 | 369 |
| AC-FT | 25,350 | 24,360 | 42,810 | 38,840 | 131,000 | 169,100 | 89,770 | 33,330 | 26,750 | 34,320 | 29,250 | 26,930 |

CAL YR 1973 TOTAL 338,726 MEAN 928 MAX 4,200 MIN 360 AC-FT 671,900
WTR YR 1974 TOTAL 334,698 MEAN 917 MAX 4,200 MIN 211 AC-FT 663,900

PEAK DISCHARGE (BASE, 1,400 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-23 | 2245 | 5.82 | 4,290 | 7-20 | 2300 | 3.63 | 1,680 |
| 6-14 | 1815 | 5.37 | 3,660 | 8-20 | 2345 | 3.72 | 1,780 |

## 08269000 RIO PUEBLO DE TAOS NEAR TAOS, N. MEX.

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

DRAINAGE AREA.--66.6 mi² (172.5 km²).

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

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

AVERAGE DISCHARGE.--29 calendar years (1911-16, 1940-51, 1963-73), 28.4 ft³/s (0.804 m³/s), 20,580 acre-ft/yr (25.4 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 515 ft³/s (14.6 m³/s) May 20 (gage height, 2.36 ft or 0.719 m), from rating curve extended above 200 ft³/s (5.66 m³/s); maximum gage height, 2.43 ft (0.741 m) May 19 (backwater from debris); minimum discharge, 2.8 ft³/s (0.079 m³/s) Feb. 26, result of freezeup.
Period of record: Maximum discharge, 970 ft³/s (27.5 m³/s) May 14, 1941 (gage height, 3.90 ft or 1.189 m, from floodmark, site and datum then in use), from rating curve extended above 290 ft³/s (8.21 m³/s); minimum, about 0.9 ft³/s (0.025 m³/s) Jan. 9, 1964, result of freezeup.

REMARKS.--Records good except those for winter periods and those for May, which are fair. No diversions above station.

REVISIONS (WATER YEARS).--WSP 1312: 1911-12, 1914. WSP 1732: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.1 | 4.6 | 6.9 | 7.4 | 78 | 191 | 84 | 19 | 11 | 9.1 | 8.0 | 7.6 |
| 2 | 4.8 | 4.5 | 6.4 | 7.5 | 64 | 180 | 78 | 19 | 9.7 | 8.9 | 7.6 | 7.7 |
| 3 | 4.7 | 4.5 | 7.6 | 7.0 | 57 | 155 | 70 | 19 | 9.4 | 8.7 | 7.7 | 7.6 |
| 4 | 4.5 | 5.1 | 7.6 | 7.0 | 69 | 146 | 62 | 20 | 9.3 | 8.7 | 8.1 | 7.4 |
| 5 | 4.7 | 4.8 | 7.1 | 7.4 | 94 | 148 | 57 | 19 | 9.2 | 8.9 | 8.2 | 5.6 |
| 6 | 4.6 | 4.7 | 6.5 | 8.8 | 91 | 142 | 52 | 18 | 9.0 | 9.1 | 8.0 | 7.4 |
| 7 | 4.8 | 4.9 | 6.4 | 9.7 | 79 | 149 | 47 | 17 | 8.8 | 8.8 | 7.8 | 9.9 |
| 8 | 4.5 | 4.7 | 6.5 | 8.2 | 90 | 145 | 46 | 16 | 8.7 | 8.6 | 7.7 | 9.4 |
| 9 | 4.6 | 4.5 | 6.3 | 9.6 | 123 | 163 | 44 | 16 | 8.5 | 8.6 | 7.6 | 7.4 |
| 10 | 4.5 | 4.7 | 5.8 | 11 | 193 | 177 | 40 | 15 | 13 | 9.1 | 7.4 | 6.9 |
| 11 | 4.5 | 4.9 | 5.8 | 12 | 287 | 175 | 37 | 15 | 17 | 10 | 7.4 | 6.8 |
| 12 | 5.0 | 4.7 | 6.2 | 15 | 354 | 190 | 35 | 16 | 13 | 11 | 7.4 | 7.0 |
| 13 | 4.9 | 4.3 | 7.2 | 19 | 333 | 214 | 36 | 15 | 11 | 10 | 7.4 | 6.8 |
| 14 | 4.5 | 5.0 | 6.5 | 29 | 258 | 236 | 35 | 16 | 10 | 10 | 7.4 | 7.0 |
| 15 | 4.4 | 4.6 | 6.4 | 40 | 199 | 211 | 34 | 15 | 10 | 10 | 6.6 | 6.6 |
| 16 | 4.5 | 4.5 | 6.8 | 32 | 188 | 186 | 30 | 14 | 9.7 | 10 | 6.7 | 6.5 |
| 17 | 4.6 | 5.4 | 6.7 | 29 | 225 | 161 | 29 | 13 | 9.5 | 10 | 7.2 | 6.8 |
| 18 | 4.5 | 5.5 | 7.5 | 36 | 310 | 147 | 29 | 13 | 9.3 | 9.8 | 7.0 | 6.8 |
| 19 | 4.4 | 5.3 | 8.7 | 32 | 400 | 141 | 32 | 12 | 9.0 | 9.4 | 7.3 | 6.6 |
| 20 | 4.6 | 5.8 | 9.8 | 27 | 470 | 121 | 27 | 13 | 8.7 | 9.2 | 6.9 | 5.8 |
| 21 | 4.5 | 5.3 | 12 | 25 | 400 | 114 | 26 | 13 | 8.5 | 8.9 | 6.8 | 6.9 |
| 22 | 4.5 | 5.1 | 11 | 24 | 380 | 111 | 25 | 12 | 8.4 | 8.8 | 7.8 | 7.7 |
| 23 | 4.9 | 4.7 | 9.2 | 30 | 350 | 107 | 24 | 12 | 8.4 | 8.5 | 7.4 | 9.6 |
| 24 | 5.0 | 4.9 | 9.6 | 39 | 291 | 100 | 22 | 11 | 8.9 | 8.4 | 5.9 | 7.9 |
| 25 | 5.0 | 4.8 | 7.9 | 48 | 288 | 96 | 21 | 12 | 8.5 | 8.2 | 6.8 | 7.5 |
| 26 | 4.7 | 4.5 | 8.3 | 47 | 280 | 96 | 23 | 12 | 9.8 | 8.3 | 7.9 | 8.0 |
| 27 | 4.8 | 5.3 | 9.0 | 52 | 228 | 99 | 23 | 11 | 10 | 8.1 | 7.3 | 7.5 |
| 28 | 5.0 | 6.4 | 8.0 | 69 | 182 | 101 | 21 | 10 | 9.9 | 8.1 | 6.4 | 8.1 |
| 29 | 5.2 | ------ | 8.3 | 78 | 157 | 100 | 23 | 10 | 9.6 | 8.1 | 7.7 | 6.4 |
| 30 | 5.0 | ------ | 7.3 | 87 | 163 | 92 | 23 | 11 | 9.3 | 8.1 | 7.8 | 6.3 |
| 31 | 4.8 | ------ | 8.1 | ------ | 180 | ------ | 21 | 11 | ------ | 8.1 | ------ | 6.2 |
| TOTAL | 146.1 | 138.0 | 237.4 | 853.6 | 6,861 | 4,394 | 1,156 | 445 | 295.1 | 279.5 | 221.2 | 225.7 |
| MEAN | 4.71 | 4.93 | 7.66 | 28.5 | 221 | 146 | 37.3 | 14.4 | 9.84 | 9.02 | 7.37 | 7.28 |
| MAX | 5.2 | 6.4 | 12 | 87 | 470 | 236 | 84 | 20 | 17 | 11 | 8.2 | 9.9 |
| MIN | 4.4 | 4.3 | 5.8 | 7.0 | 57 | 92 | 21 | 10 | 8.4 | 8.1 | 5.9 | 5.6 |
| AC-FT | 290 | 274 | 471 | 1,690 | 13,610 | 8,720 | 2,290 | 883 | 585 | 554 | 439 | 448 |

CAL YR 1973 TOTAL 15,252.6 MEAN 41.8 MAX 470 MIN 4.3 AC-FT 30,250
WTR YR 1973 TOTAL 15,019.6 MEAN 41.1 MAX 470 MIN 3.0 AC-FT 29,790

PEAK DISCHARGE (BASE, 60 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-30 | 0100 | 1.62 | 94 | 5-20 | 2100 | 2.36 | 515 |
| 5-12 | 0430 | 2.40 | 449 | 6-14 | 0530 | 1.79 | 255 |

## 08271000 RIO LUCERO NEAR ARROYO SECO, N. MEX.

LOCATION.--Lat 36°30'30", long 105°31'49", Taos County, in Tract C Taos Pueblo Grant, on right bank 200 ft (61 m) upstream from diversion dam for Tenorio and Indian ditches, 2.2 mi (3.5 km) east of Arroyo Seco, 7.4 mi (11.9 km) northeast of Taos, and at mile 8.1 (13.0 km).

DRAINAGE AREA.--16.6 mi² (43.0 km²).

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

GAGE.--Water-stage recorder. Concrete control since Nov. 21, 1962. Datum of gage is 8,051.44 ft (2,454.079 m) above mean sea level. See WSP 1923 for history of changes prior to Nov. 21, 1962.

AVERAGE DISCHARGE.--34 calendar years (1911-15, 1934-51, 1963-73), 22.2 ft³/s (0.629 m³/s), 16,080 acre-ft/yr (19.8 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 326 ft³/s (9.23 m³/s) June 14 (gage height, 2.09 ft or 0.637 m), from rating curve extended above 150 ft³/s (4.25 m³/s); maximum gage height, 2.17 ft (0.661 m) June 14 (backwater from debris); minimum discharge, 3.3 ft³/s (0.093 m³/s) Nov. 24, result of freezeup.
Period of record: Maximum discharge, 326 ft³/s (9.23 m³/s) June 14, 1973 (gage height, 2.09 ft or 0.637 m), from rating curve extended above 150 ft³/s (4.25 m³/s); maximum gage height, 2.17 ft (0.661 m) June 14, 1973 (backwater from debris); minimum discharge, about 1.4 ft³/s (0.040 m³/s) Nov. 2, 1951, result of freezeup.

REMARKS.--Records good except those for winter periods and those for June, which are fair. No diversions above station.

REVISIONS (WATER YEARS).--WSP 1512: 1912, 1916, 1949. WSP 1732: Drainage area. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.0 | 5.4 | 5.9 | 6.4 | 34 | 129 | 155 | 25 | 13 | 8.8 | 6.5 | 6.5 |
| 2 | 5.0 | 5.4 | 6.6 | 6.2 | 28 | 117 | 148 | 24 | 12 | 8.7 | 6.6 | 6.3 |
| 3 | 4.9 | 5.4 | 7.3 | 6.2 | 26 | 96 | 142 | 24 | 11 | 8.6 | 6.6 | 6.0 |
| 4 | 4.8 | 5.3 | 7.3 | 6.4 | 31 | 87 | 128 | 23 | 11 | 8.5 | 6.8 | 5.9 |
| 5 | 4.8 | 5.3 | 7.1 | 6.5 | 38 | 86 | 115 | 22 | 10 | 8.5 | 6.8 | 5.8 |
| 6 | 4.7 | 5.3 | 6.3 | 6.8 | 37 | 96 | 104 | 22 | 11 | 8.4 | 6.6 | 5.8 |
| 7 | 4.8 | 5.3 | 5.9 | 8.1 | 34 | 121 | 94 | 21 | 11 | 8.3 | 6.6 | 6.0 |
| 8 | 4.4 | 5.3 | 5.9 | 7.9 | 39 | 139 | 88 | 20 | 11 | 8.1 | 6.6 | 6.5 |
| 9 | 4.6 | 5.3 | 5.6 | 8.0 | 46 | 169 | 80 | 19 | 11 | 8.1 | 6.5 | 6.6 |
| 10 | 4.6 | 5.3 | 5.6 | 7.4 | 59 | 175 | 72 | 19 | 13 | 8.2 | 6.4 | 6.3 |
| 11 | 4.7 | 5.6 | 5.5 | 8.3 | 82 | 169 | 67 | 18 | 15 | 8.9 | 6.2 | 6.1 |
| 12 | 4.8 | 5.6 | 5.9 | 9.8 | 88 | 234 | 64 | 18 | 12 | 8.9 | 6.1 | 5.6 |
| 13 | 4.7 | 5.6 | 6.3 | 12 | 88 | 232 | 60 | 18 | 11 | 8.9 | 6.1 | 5.4 |
| 14 | 4.7 | 5.3 | 6.5 | 15 | 74 | 281 | 57 | 18 | 10 | 8.9 | 6.0 | 5.5 |
| 15 | 5.0 | 5.4 | 6.8 | 19 | 61 | 241 | 53 | 18 | 10 | 8.6 | 5.3 | 5.3 |
| 16 | 5.3 | 5.4 | 6.8 | 16 | 59 | 220 | 49 | 17 | 10 | 8.7 | 5.5 | 5.2 |
| 17 | 5.5 | 5.4 | 6.6 | 16 | 64 | 187 | 46 | 16 | 9.9 | 8.6 | 5.7 | 5.3 |
| 18 | 5.3 | 5.4 | 6.6 | 18 | 85 | 176 | 45 | 16 | 9.8 | 8.4 | 5.6 | 5.3 |
| 19 | 5.4 | 5.4 | 7.2 | 16 | 122 | 162 | 46 | 15 | 9.6 | 8.1 | 5.6 | 5.1 |
| 20 | 5.3 | 5.3 | 8.3 | 15 | 129 | 146 | 41 | 16 | 9.4 | 8.1 | 5.6 | 4.8 |
| 21 | 5.3 | 4.6 | 9.3 | 13 | 137 | 149 | 39 | 15 | 9.3 | 7.8 | 5.7 | 5.0 |
| 22 | 5.5 | 4.6 | 9.1 | 13 | 127 | 142 | 37 | 15 | 9.1 | 7.7 | 6.0 | 5.2 |
| 23 | 5.8 | 4.6 | 8.6 | 15 | 96 | 133 | 36 | 14 | 9.1 | 7.7 | 5.7 | 5.0 |
| 24 | 6.0 | 4.6 | 7.9 | 18 | 104 | 124 | 34 | 14 | 9.4 | 7.5 | 5.4 | 5.1 |
| 25 | 6.0 | 4.6 | 7.8 | 22 | 111 | 122 | 32 | 14 | 9.4 | 7.0 | 6.0 | 5.0 |
| 26 | 6.4 | 4.7 | 7.5 | 22 | 109 | 138 | 31 | 14 | 9.7 | 7.0 | 6.0 | 4.9 |
| 27 | 6.2 | 4.9 | 7.6 | 25 | 90 | 165 | 30 | 13 | 9.5 | 6.8 | 6.0 | 4.7 |
| 28 | 5.8 | 5.4 | 7.4 | 34 | 73 | 187 | 29 | 13 | 9.3 | 6.8 | 5.5 | 4.8 |
| 29 | 6.0 | ------ | 7.0 | 39 | 74 | 185 | 29 | 13 | 9.2 | 6.8 | 6.0 | 4.8 |
| 30 | 6.0 | ------ | 6.6 | 42 | 91 | 164 | 28 | 14 | 9.1 | 6.7 | 6.5 | 4.8 |
| 31 | 5.6 | ------ | 6.6 | ------ | 119 | ------ | 26 | 14 | ------ | 6.4 | ------ | 4.6 |
| TOTAL | 162.9 | 145.7 | 215.4 | 458.0 | 2,355 | 4,772 | 2,005 | 542 | 313.8 | 248.5 | 182.5 | 169.2 |
| MEAN | 5.25 | 5.20 | 6.95 | 15.3 | 76.0 | 159 | 64.7 | 17.5 | 10.5 | 8.02 | 6.08 | 5.46 |
| MAX | 6.4 | 5.6 | 9.3 | 42 | 137 | 281 | 155 | 25 | 15 | 8.9 | 6.8 | 6.6 |
| MIN | 4.4 | 4.6 | 5.5 | 6.2 | 26 | 86 | 26 | 13 | 9.1 | 6.4 | 5.3 | 4.6 |
| AC-FT | 323 | 289 | 427 | 908 | 4,670 | 9,470 | 3,980 | 1,080 | 622 | 493 | 362 | 336 |

CAL YR 1973 TOTAL 11,570.0 MEAN 31.7 MAX 281 MIN 4.4 AC-FT 22,950
WTR YR 1973 TOTAL 11,565.8 MEAN 31.7 MAX 281 MIN 4.4 AC-FT 22,940

PEAK DISCHARGE (BASE, 70 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-12 | 1530 | 1.56 | 98 | 6-14 | 1000 | 2.09 | 326 |
| 5-21 | 2030 | 1.72 | 149 | | | | |

## 08275000 RIO FERNANDO DE TAOS NEAR TAOS, N. MEX.

LOCATION.--Lat 36°22'32", long 105°32'55", in NW¼NW¼ sec.27, T.25 N., R.13 E., Taos County, in Carson National Forest, on right bank 175 ft (53 m) upstream from Acequia Madre del Norte del Canon, 2.5 mi (4.0 km) southeast of Taos, and at mile 5.0 (8.0 km).

DRAINAGE AREA.--71.7 mi² (185.7 km²).

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

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

AVERAGE DISCHARGE.--16 calendar years (1913-16, 1928, 1963-73), 6.60 ft³/s (0.187 m³/s), 4,780 acre-ft/yr (5.89 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 219 ft³/s (6.20 m³/s) May 13 (gage height, 2.38 ft or 0.725 m); minimum 0.04 ft³/s (0.001 m³/s) Jan. 1-16.
1962-73: Maximum discharge, 219 ft³/s (6.20 m³/s) May 13, 1973 (gage height, 2.38 ft or 0.725 m); minimum, 0.02 ft³/s (0.001 m³/s) Jan. 14-18, 1967, Sept. 15, 16-17, 18-19, 1972.
A flood of undetermined magnitude occurred July 21, 1921.

REMARKS.--Records good. A few very small diversions above station for irrigation.

REVISIONS (WATER YEARS).--WSP 1512: 1914-15. WSP 1923: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .04 | .05 | 2.2 | 3.2 | 64 | 52 | 10 | 3.7 | 2.0 | 1.9 | 2.3 | 2.9 |
| 2 | .04 | .05 | 2.2 | 3.5 | 57 | 50 | 9.7 | 3.5 | 1.8 | 1.8 | 2.2 | 2.9 |
| 3 | .04 | .05 | 2.3 | 3.1 | 54 | 46 | 8.8 | 4.2 | 1.7 | 1.8 | 2.2 | 3.0 |
| 4 | .04 | .06 | 2.3 | 2.8 | 60 | 39 | 8.7 | 3.9 | 1.5 | 1.8 | 2.2 | 3.0 |
| 5 | .04 | .07 | 2.4 | 3.1 | 70 | 35 | 8.1 | 3.4 | 1.4 | 1.9 | 2.2 | 2.0 |
| 6 | .04 | .07 | 2.3 | 3.4 | 69 | 33 | 7.3 | 3.2 | 1.3 | 2.0 | 2.2 | 1.7 |
| 7 | .04 | .07 | 2.3 | 3.6 | 65 | 29 | 6.9 | 2.9 | 1.2 | 2.0 | 2.2 | 1.8 |
| 8 | .04 | .08 | 2.3 | 2.5 | 71 | 27 | 6.8 | 2.7 | 1.2 | 1.9 | 2.2 | 2.2 |
| 9 | .04 | .09 | 2.3 | 3.4 | 78 | 23 | 7.3 | 2.5 | 1.1 | 1.9 | 2.2 | 2.4 |
| 10 | .04 | .37 | 2.2 | 4.7 | 109 | 23 | 6.9 | 2.3 | 2.0 | 2.1 | 2.2 | 2.5 |
| 11 | .04 | .98 | 2.0 | 4.8 | 140 | 21 | 6.4 | 2.5 | 5.0 | 2.8 | 2.0 | 2.4 |
| 12 | .04 | 1.0 | 2.1 | 5.2 | 158 | 20 | 5.6 | 2.6 | 4.0 | 2.9 | 2.2 | 2.5 |
| 13 | .04 | 1.2 | 2.4 | 6.0 | 190 | 26 | 6.3 | 2.8 | 2.8 | 2.8 | 2.7 | 2.5 |
| 14 | .04 | 1.2 | 2.2 | 9.0 | 192 | 29 | 7.9 | 2.8 | 2.3 | 2.7 | 2.5 | 2.5 |
| 15 | .04 | 1.2 | 2.1 | 14 | 163 | 22 | 8.7 | 2.8 | 2.3 | 2.6 | 2.5 | 2.5 |
| 16 | .04 | 1.2 | 2.5 | 13 | 168 | 19 | 7.1 | 2.7 | 2.1 | 2.6 | 2.2 | 2.1 |
| 17 | .05 | 1.6 | 2.8 | 14 | 160 | 18 | 6.3 | 2.5 | 2.0 | 2.6 | 2.3 | 2.5 |
| 18 | .05 | 1.5 | 3.0 | 19 | 160 | 17 | 6.7 | 2.2 | 1.9 | 2.5 | 2.5 | 2.5 |
| 19 | .05 | 1.6 | 2.9 | 15 | 164 | 16 | 6.8 | 2.0 | 1.8 | 2.5 | 2.5 | 2.5 |
| 20 | .05 | 1.5 | 2.8 | 15 | 165 | 15 | 5.8 | 1.9 | 1.7 | 2.5 | 2.5 | 1.9 |
| 21 | .05 | 1.9 | 3.1 | 15 | 162 | 14 | 5.6 | 1.9 | 1.6 | 2.5 | 2.3 | 2.0 |
| 22 | .05 | 1.8 | 3.0 | 15 | 154 | 13 | 6.3 | 1.8 | 1.6 | 2.5 | 2.7 | 2.1 |
| 23 | .05 | 1.8 | 2.8 | 18 | 137 | 12 | 5.2 | 1.6 | 1.6 | 2.5 | 2.5 | 2.1 |
| 24 | .05 | 1.8 | 2.4 | 23 | 125 | 12 | 4.7 | 1.5 | 1.6 | 2.4 | 2.3 | 2.3 |
| 25 | .05 | 1.8 | 3.2 | 32 | 114 | 11 | 4.3 | 1.6 | 1.6 | 2.4 | 2.3 | 1.9 |
| 26 | .05 | 1.9 | 3.1 | 34 | 119 | 10 | 4.4 | 1.7 | 1.8 | 2.4 | 2.7 | 2.1 |
| 27 | .05 | 2.1 | 3.3 | 41 | 107 | 9.4 | 4.2 | 1.5 | 2.0 | 2.4 | 2.5 | 1.9 |
| 28 | .05 | 2.3 | 3.4 | 50 | 89 | 9.3 | 4.0 | 1.5 | 2.0 | 2.4 | 1.7 | 2.5 |
| 29 | .05 | ------- | 3.3 | 61 | 77 | 9.0 | 4.0 | 1.5 | 1.9 | 2.4 | 2.6 | 2.3 |
| 30 | .05 | ------- | 2.9 | 64 | 61 | 10 | 4.1 | 2.0 | 1.9 | 2.4 | 2.8 | 2.3 |
| 31 | .05 | ------- | 3.2 | ------- | 55 | ------- | 4.0 | 2.2 | ------- | 2.4 | ------- | 2.2 |
| TOTAL | 1.39 | 29.34 | 81.3 | 501.5 | 3,557 | 669.7 | 198.9 | 75.9 | 58.7 | 72.3 | 70.4 | 72.0 |
| MEAN | .045 | 1.05 | 2.62 | 16.7 | 115 | 22.3 | 6.42 | 2.45 | 1.96 | 2.33 | 2.35 | 2.32 |
| MAX | .05 | 2.3 | 3.4 | 64 | 192 | 52 | 10 | 4.2 | 5.0 | 2.9 | 2.8 | 3.0 |
| MIN | .04 | .05 | 2.0 | 2.5 | 54 | 9.0 | 4.0 | 1.5 | 1.1 | 1.8 | 1.7 | 1.7 |
| AC-FT | 2.8 | 58 | 161 | 995 | 7,060 | 1,330 | 395 | 151 | 116 | 143 | 140 | 143 |

CAL YR 1973 TOTAL 5,388.43 MEAN 14.8 MAX 192 MIN .04 AC-FT 10,690
WTR YR 1973 TOTAL 5,180.93 MEAN 14.2 MAX 192 MIN .03 AC-FT 10,280

PEAK DISCHARGE (BASE, 25 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-13 | 2045 | 2.38 | 219 | 6-14 | 0845 | 1.37 | 34 |

## 08275300 RIO PUEBLO DE TAOS NEAR RANCHITO, N. MEX.

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

DRAINAGE AREA.--199 mi² (515 km²).

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

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

AVERAGE DISCHARGE.--16 calendar years, 27.7 ft³/s (0.784 m³/s), 20,070 acre-ft/yr (24.7 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 702 ft³/s (19.9 m³/s) May 21 (gage height, 4.24 ft or 1.292 m); minimum, 3.6 ft³/s (0.10 m³/s) Aug. 13.
Period of record: Maximum discharge, 702 ft³/s (19.9 m³/s) May 21, 1973 (gage height, 4.24 ft or 1.292 m); maximum gage height, 4.35 ft (1.326 m) Dec. 29, 1966 (ice jam); minimum discharge, 0.21 ft³/s (0.006 m³/s) Aug. 24, 1972.

REMARKS.--Records fair. Diversions for irrigation of about 9,000 acres (36.4 km²) above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.5 | 11 | 29 | 17 | 168 | 240 | 121 | 17 | 8.0 | 6.7 | 16 | 17 |
| 2 | 7.0 | 10 | 32 | 17 | 138 | 238 | 110 | 16 | 7.1 | 7.7 | 16 | 17 |
| 3 | 7.0 | 9.0 | 33 | 15 | 115 | 205 | 102 | 14 | 6.9 | 5.9 | 15 | 19 |
| 4 | 7.0 | 11 | 31 | 14 | 129 | 176 | 95 | 15 | 6.7 | 5.9 | 16 | 19 |
| 5 | 7.5 | 13 | 24 | 14 | 171 | 149 | 88 | 16 | 6.3 | 6.3 | 16 | 16 |
| 6 | 7.0 | 13 | 21 | 15 | 182 | 138 | 81 | 16 | 5.5 | 6.8 | 16 | 14 |
| 7 | 8.0 | 13 | 24 | 16 | 158 | 147 | 71 | 16 | 5.9 | 6.8 | 16 | 15 |
| 8 | 8.0 | 14 | 26 | 15 | 163 | 160 | 64 | 13 | 6.7 | 6.7 | 16 | 17 |
| 9 | 9.0 | 12 | 26 | 16 | 212 | 185 | 60 | 11 | 6.8 | 8.4 | 15 | 17 |
| 10 | 11 | 13 | 24 | 18 | 325 | 204 | 52 | 9.2 | 8.5 | 12 | 15 | 16 |
| 11 | 10 | 13 | 20 | 18 | 439 | 212 | 46 | 7.7 | 16 | 22 | 14 | 16 |
| 12 | 12 | 13 | 20 | 19 | 472 | 238 | 39 | 8.1 | 16 | 20 | 14 | 17 |
| 13 | 11 | 12 | 19 | 21 | 428 | 290 | 37 | 4.5 | 14 | 18 | 14 | 16 |
| 14 | 10 | 13 | 20 | 30 | 405 | 366 | 89 | 4.9 | 10 | 18 | 14 | 17 |
| 15 | 10 | 12 | 18 | 47 | 347 | 313 | 68 | 9.6 | 8.7 | 18 | 13 | 16 |
| 16 | 10 | 12 | 17 | 43 | 368 | 263 | 49 | 10 | 8.0 | 18 | 13 | 13 |
| 17 | 10 | 13 | 16 | 38 | 381 | 225 | 51 | 8.6 | 6.7 | 19 | 14 | 16 |
| 18 | 10 | 13 | 17 | 44 | 434 | 204 | 49 | 9.5 | 7.3 | 18 | 14 | 16 |
| 19 | 10 | 13 | 19 | 43 | 475 | 183 | 68 | 7.9 | 6.8 | 17 | 14 | 15 |
| 20 | 11 | 13 | 17 | 36 | 563 | 166 | 44 | 6.7 | 6.4 | 17 | 15 | 13 |
| 21 | 10 | 13 | 20 | 35 | 620 | 159 | 39 | 7.5 | 6.3 | 16 | 14 | 13 |
| 22 | 10 | 13 | 18 | 31 | 492 | 152 | 40 | 7.5 | 6.2 | 16 | 15 | 14 |
| 23 | 10 | 13 | 20 | 33 | 394 | 146 | 38 | 7.1 | 6.3 | 17 | 15 | 14 |
| 24 | 11 | 14 | 23 | 44 | 342 | 139 | 32 | 7.2 | 5.9 | 17 | 14 | 13 |
| 25 | 10 | 14 | 24 | 68 | 351 | 130 | 28 | 6.9 | 5.7 | 16 | 14 | 12 |
| 26 | 9.5 | 16 | 22 | 70 | 363 | 130 | 25 | 6.0 | 6.9 | 16 | 17 | 12 |
| 27 | 10 | 19 | 21 | 76 | 313 | 132 | 20 | 7.5 | 7.0 | 16 | 17 | 12 |
| 28 | 9.5 | 23 | 20 | 95 | 241 | 144 | 19 | 7.3 | 6.9 | 17 | 15 | 13 |
| 29 | 9.5 | ------ | 19 | 125 | 203 | 146 | 19 | 7.1 | 6.2 | 16 | 18 | 16 |
| 30 | 10 | ------ | 18 | 170 | 198 | 137 | 19 | 9.1 | 6.5 | 16 | 18 | 16 |
| 31 | 12 | ------ | 19 | ------ | 223 | ------ | 18 | 8.9 | ------ | 16 | ------ | 14 |
| TOTAL | 294.5 | 371.0 | 677 | 1,243 | 9,813 | 5,717 | 1,681 | 302.8 | 232.2 | 437.2 | 453 | 471 |
| MEAN | 9.50 | 13.3 | 21.8 | 41.4 | 317 | 191 | 54.2 | 9.77 | 7.74 | 14.1 | 15.1 | 15.2 |
| MAX | 12 | 23 | 33 | 170 | 620 | 366 | 121 | 17 | 16 | 22 | 18 | 19 |
| MIN | 7.0 | 9.0 | 16 | 14 | 115 | 130 | 18 | 4.5 | 5.5 | 5.9 | 13 | 12 |
| AC-FT | 584 | 736 | 1,340 | 2,470 | 19,460 | 11,340 | 3,330 | 601 | 461 | 867 | 899 | 934 |

CAL YR 1973 TOTAL 21,692.7 MEAN 59.4 MAX 620 MIN 4.5 AC-FT 43,030
WTR YR 1973 TOTAL 21,149.7 MEAN 57.9 MAX 620 MIN 3.5 AC-FT 41,950

PEAK DISCHARGE (BASE, 100 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-30 | 0815 | 3.02 | 191 | 6-14 | 0945 | 3.60 | 395 |
| 5-12 | 0315 | 4.04 | 526 | 7-14 | 1745 | 3.30 | 290 |
| 5-21 | 0330 | 4.24 | 702 | | | | |

## 08275500 RIO GRANDE DEL RANCHO NEAR TALPA, N. MEX.

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

DRAINAGE AREA.--83 mi² (210 km²), approximately.

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

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

AVERAGE DISCHARGE.--21 calendar years, 19.7 ft³/s (0.558 m³/s), 14,270 acre-ft/yr (17.6 hm³/yr); 20 calendar years (1954-73), 20.1 ft³/s (0.569 m³/s), 14,560 acre-ft/yr (18.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 497 ft³/s (14.1 m³/s) May 21 (gage height, 3.87 ft or 1.180 m); minimum, 0.80 ft³/s (0.023 m³/s) Feb. 15, 16, 20, result of freezeup.
Period of record: Maximum discharge, 497 ft³/s (14.1 m³/s) May 21, 1973 (gage height, 3.87 ft or 1.180 m); maximum gage height, 4.01 ft (1.222 m) Sept. 10, 1964, site and datum then in use; minimum discharge, 0.2 ft³/s (0.01 m³/s) Jan. 5, 1955, result of freezeup.

REMARKS.--Records good. Minor diversions for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.8 | 3.3 | 5.0 | 6.5 | 68 | 260 | 47 | 14 | 8.1 | 7.0 | 6.1 | 7.5 |
| 2 | 3.7 | 2.6 | 5.1 | 7.0 | 52 | 244 | 43 | 13 | 7.3 | 6.8 | 6.4 | 7.6 |
| 3 | 3.4 | 3.6 | 5.3 | 6.1 | 45 | 205 | 40 | 14 | 7.0 | 6.7 | 6.4 | 7.3 |
| 4 | 3.4 | 3.8 | 5.3 | 5.2 | 59 | 189 | 37 | 15 | 6.7 | 6.7 | 7.5 | 7.1 |
| 5 | 3.6 | 3.0 | 5.5 | 5.7 | 94 | 189 | 34 | 13 | 6.5 | 7.0 | 7.3 | 4.6 |
| 6 | 3.4 | 2.6 | 4.5 | 6.8 | 87 | 184 | 32 | 12 | 6.4 | 7.6 | 7.1 | 4.6 |
| 7 | 3.4 | 2.6 | 5.0 | 7.8 | 67 | 186 | 31 | 12 | 6.2 | 7.3 | 6.9 | 5.8 |
| 8 | 3.2 | 2.5 | 5.0 | 6.4 | 69 | 191 | 30 | 11 | 6.1 | 7.0 | 7.4 | 7.2 |
| 9 | 3.7 | 2.2 | 5.0 | 7.2 | 92 | 202 | 29 | 11 | 6.0 | 6.9 | 7.8 | 6.5 |
| 10 | 3.6 | 2.5 | 4.9 | 8.8 | 156 | 211 | 28 | 10 | 8.6 | 7.3 | 7.8 | 6.3 |
| 11 | 2.7 | 3.1 | 5.1 | 10 | 240 | 210 | 26 | 10 | 16 | 7.7 | 7.7 | 6.5 |
| 12 | 3.5 | 2.9 | 5.5 | 13 | 296 | 207 | 24 | 11 | 12 | 7.4 | 7.7 | 6.4 |
| 13 | 3.7 | 2.9 | 5.8 | 17 | 348 | 202 | 25 | 10 | 9.2 | 7.1 | 7.7 | 6.3 |
| 14 | 3.6 | 2.9 | 4.7 | 25 | 288 | 212 | 27 | 10 | 8.0 | 7.3 | 7.6 | 6.0 |
| 15 | 3.4 | 2.5 | 3.8 | 30 | 259 | 191 | 26 | 9.9 | 7.4 | 7.1 | 7.3 | 5.3 |
| 16 | 3.1 | 2.6 | 4.7 | 26 | 257 | 163 | 23 | 9.7 | 7.1 | 7.0 | 6.7 | 5.1 |
| 17 | 2.7 | 3.8 | 5.4 | 25 | 260 | 139 | 23 | 9.6 | 6.8 | 6.9 | 6.3 | 6.2 |
| 18 | 2.3 | 3.1 | 6.6 | 30 | 312 | 119 | 24 | 8.7 | 6.6 | 6.9 | 6.3 | 6.2 |
| 19 | 2.3 | 2.8 | 7.0 | 29 | 396 | 106 | 23 | 8.2 | 6.4 | 6.9 | 6.8 | 5.7 |
| 20 | 2.5 | 3.1 | 7.2 | 23 | 441 | 94 | 21 | 8.1 | 6.3 | 6.6 | 6.6 | 4.1 |
| 21 | 2.5 | 4.0 | 8.0 | 21 | 475 | 85 | 20 | 8.3 | 6.2 | 6.4 | 6.3 | 5.1 |
| 22 | 2.3 | 3.7 | 7.7 | 21 | 440 | 77 | 20 | 8.5 | 6.2 | 6.3 | 7.4 | 6.0 |
| 23 | 3.2 | 3.5 | 7.8 | 25 | 377 | 72 | 17 | 8.0 | 6.1 | 6.3 | 7.3 | 6.1 |
| 24 | 3.5 | 3.9 | 6.6 | 30 | 354 | 68 | 16 | 7.8 | 6.7 | 6.5 | 6.7 | 6.0 |
| 25 | 3.4 | 3.7 | 6.5 | 38 | 339 | 64 | 16 | 7.9 | 6.9 | 6.5 | 6.5 | 5.1 |
| 26 | 3.6 | 3.7 | 7.1 | 36 | 324 | 60 | 16 | 8.0 | 7.7 | 6.6 | 7.2 | 5.1 |
| 27 | 3.4 | 4.2 | 8.0 | 40 | 275 | 59 | 15 | 7.3 | 7.8 | 6.6 | 6.5 | 4.6 |
| 28 | 2.7 | 4.7 | 7.4 | 57 | 222 | 58 | 15 | 7.5 | 7.5 | 6.5 | 4.7 | 6.9 |
| 29 | 3.7 | ------ | 7.0 | 69 | 197 | 55 | 15 | 8.0 | 7.2 | 6.6 | 7.5 | 5.8 |
| 30 | 3.8 | ------ | 6.4 | 75 | 207 | 51 | 15 | 8.9 | 7.3 | 6.5 | 7.6 | 5.4 |
| 31 | 3.8 | ------ | 6.4 | ------ | 241 | ------ | 15 | 8.8 | ------ | 6.3 | ------ | 4.8 |
| TOTAL | 100.9 | 89.8 | 185.3 | 707.5 | 7,337 | 4,353 | 773 | 309.2 | 224.3 | 212.3 | 209.1 | 183.2 |
| MEAN | 3.25 | 3.21 | 5.98 | 23.6 | 237 | 145 | 24.9 | 9.97 | 7.48 | 6.85 | 6.97 | 5.91 |
| MAX | 3.8 | 4.7 | 8.0 | 75 | 475 | 260 | 47 | 15 | 16 | 7.7 | 7.8 | 7.6 |
| MIN | 2.3 | 2.2 | 3.8 | 5.2 | 45 | 51 | 15 | 7.3 | 6.0 | 6.3 | 4.7 | 4.1 |
| AC-FT | 200 | 178 | 368 | 1,400 | 14,550 | 8,630 | 1,530 | 613 | 445 | 421 | 415 | 363 |

CAL YR 1973 TOTAL 14,684.6 MEAN 40.2 MAX 475 MIN 2.2 AC-FT 29,130
WTR YR 1973 TOTAL 14,380.7 MEAN 39.4 MAX 475 MIN 1.4 AC-FT 28,520

PEAK DISCHARGE (BASE, 60 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-30 | 2200 | 2.10 | 81 | 5-21 | 0500 | 3.87 | 497 |
| 5- 5 | 1930 | 2.28 | 99 | 6- 1 | 1500 | 3.02 | 272 |
| 5-13 | 1615 | 3.63 | 366 | | | | |

## 08275600 RIO CHIQUITO NEAR TALPA, N. MEX.

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

DRAINAGE AREA.--37.0 mi² (95.8 km²).

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

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

AVERAGE DISCHARGE.--16 calendar years, 8.07 ft³/s (0.229 m³/s), 5,850 acre-ft/yr (7.21 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 248 ft³/s (7.02 m³/s) May 21 (gage height, 2.68 ft or 0.817 m); maximum gage height, 3.50 ft (1.067 m) May 20 (backwater from debris); minimum discharge, 0.56 ft³/s (0.016 m³/s) Feb. 15, Apr. 4, result of freezeup.
Period of record: Maximum discharge, 248 ft³/s (7.02 m³/s) May 21, 1973 (gage height, 2.68 ft or 0.817 m); maximum gage height, 3.50 ft (1.067 m) May 20, 1973 (backwater from debris); minimum discharge, 0.16 ft³/s (0.005 m³/s) Jan. 31, 1972, result of freezeup.

REMARKS.--Records good except those for May, which are poor. No diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.1 | 1.9 | 2.2 | 2.9 | 30 | 73 | 18 | 7.6 | 4.9 | 3.9 | 3.8 | 3.6 |
| 2 | 2.0 | 1.5 | 2.2 | 3.1 | 28 | 74 | 17 | 7.5 | 4.5 | 3.7 | 3.8 | 3.6 |
| 3 | 2.1 | 2.3 | 2.2 | 2.7 | 27 | 71 | 17 | 8.5 | 4.4 | 3.6 | 3.7 | 3.7 |
| 4 | 2.1 | 2.3 | 2.2 | 2.5 | 33 | 68 | 16 | 7.8 | 4.3 | 3.6 | 4.0 | 3.7 |
| 5 | 2.1 | 1.9 | 2.4 | 2.8 | 41 | 65 | 15 | 7.3 | 4.0 | 3.8 | 4.0 | 2.4 |
| 6 | 2.0 | 1.7 | 2.3 | 3.2 | 40 | 65 | 14 | 6.9 | 3.8 | 4.0 | 3.9 | 2.2 |
| 7 | 2.1 | 1.6 | 2.3 | 3.2 | 35 | 62 | 14 | 6.6 | 3.7 | 3.9 | 3.7 | 3.0 |
| 8 | 2.1 | 1.5 | 2.2 | 2.7 | 36 | 60 | 14 | 6.5 | 3.6 | 3.7 | 3.7 | 3.8 |
| 9 | 2.1 | 1.4 | 2.2 | 3.8 | 43 | 58 | 14 | 6.4 | 3.5 | 3.8 | 3.7 | 3.7 |
| 10 | 2.1 | 1.6 | 2.1 | 3.9 | 48 | 57 | 14 | 6.1 | 5.3 | 4.1 | 3.6 | 3.5 |
| 11 | 1.9 | 1.8 | 2.0 | 4.0 | 70 | 54 | 13 | 6.1 | 8.9 | 4.7 | 3.6 | 3.4 |
| 12 | 2.4 | 1.7 | 2.0 | 4.2 | 90 | 51 | 13 | 6.1 | 6.6 | 4.5 | 3.4 | 3.3 |
| 13 | 2.5 | 1.7 | 2.2 | 4.7 | 130 | 52 | 14 | 6.2 | 5.4 | 4.6 | 3.5 | 3.3 |
| 14 | 2.3 | 1.7 | 1.6 | 6.5 | 110 | 54 | 16 | 5.9 | 4.8 | 4.6 | 3.4 | 3.5 |
| 15 | 2.1 | 1.6 | 1.8 | 8.3 | 100 | 47 | 15 | 5.9 | 4.5 | 4.6 | 3.1 | 3.5 |
| 16 | 1.8 | 1.5 | 2.1 | 9.1 | 100 | 41 | 13 | 5.6 | 4.3 | 4.4 | 2.9 | 3.1 |
| 17 | 1.7 | 2.2 | 2.1 | 9.4 | 100 | 38 | 13 | 5.5 | 4.1 | 4.4 | 3.0 | 3.6 |
| 18 | 1.5 | 1.8 | 2.4 | 11 | 120 | 34 | 13 | 5.1 | 4.0 | 4.2 | 3.0 | 3.5 |
| 19 | 1.5 | 1.7 | 2.6 | 9.8 | 150 | 31 | 12 | 5.2 | 3.8 | 4.2 | 3.2 | 3.5 |
| 20 | 1.6 | 1.9 | 2.7 | 9.1 | 170 | 29 | 11 | 5.2 | 3.8 | 4.0 | 3.1 | 2.6 |
| 21 | 1.6 | 2.2 | 3.1 | 8.7 | 181 | 28 | 11 | 5.4 | 3.8 | 4.0 | 3.0 | 3.0 |
| 22 | 1.6 | 2.1 | 2.9 | 8.7 | 143 | 27 | 11 | 5.5 | 3.7 | 3.9 | 3.4 | 3.5 |
| 23 | 2.4 | 2.0 | 2.8 | 10 | 111 | 26 | 10 | 5.0 | 3.7 | 3.9 | 3.3 | 3.6 |
| 24 | 3.1 | 2.0 | 2.6 | 12 | 101 | 25 | 9.3 | 4.9 | 3.8 | 3.8 | 2.9 | 3.3 |
| 25 | 3.2 | 2.0 | 3.2 | 15 | 115 | 24 | 8.9 | 4.9 | 3.8 | 3.8 | 3.1 | 2.9 |
| 26 | 3.2 | 2.0 | 3.0 | 15 | 120 | 22 | 9.3 | 4.9 | 4.3 | 3.8 | 3.3 | 2.6 |
| 27 | 2.6 | 2.1 | 3.3 | 18 | 96 | 21 | 8.7 | 4.7 | 4.4 | 3.8 | 3.0 | 2.6 |
| 28 | 1.8 | 2.2 | 3.1 | 25 | 76 | 21 | 8.1 | 4.7 | 4.2 | 3.8 | 1.9 | 3.5 |
| 29 | 2.4 | ------- | 3.0 | 29 | 74 | 20 | 8.1 | 4.7 | 4.1 | 3.8 | 3.4 | 3.1 |
| 30 | 2.4 | ------- | 2.8 | 33 | 73 | 19 | 7.8 | 5.2 | 4.0 | 3.8 | 3.7 | 3.1 |
| 31 | 2.2 | ------- | 3.0 | ------- | 75 | ------- | 8.0 | 5.3 | ------- | 3.8 | ------- | 3.1 |
| TOTAL | 66.6 | 51.9 | 76.6 | 281.3 | 2,666 | 1,317 | 386.2 | 183.2 | 132.0 | 124.5 | 101.1 | 100.8 |
| MEAN | 2.15 | 1.85 | 2.47 | 9.38 | 86.0 | 43.9 | 12.5 | 5.91 | 4.40 | 4.02 | 3.37 | 3.25 |
| MAX | 3.2 | 2.3 | 3.3 | 33 | 181 | 74 | 18 | 8.5 | 8.9 | 4.7 | 4.0 | 3.8 |
| MIN | 1.5 | 1.4 | 1.6 | 2.5 | 27 | 19 | 7.8 | 4.7 | 3.5 | 3.6 | 1.9 | 2.2 |
| AC-FT | 132 | 103 | 152 | 558 | 5,290 | 2,610 | 766 | 363 | 262 | 247 | 201 | 200 |

CAL YR 1973 TOTAL 5,487.20 MEAN 15.0 MAX 181 MIN 1.4 AC-FT 10,880
WTR YR 1973 TOTAL 5,340.44 MEAN 14.6 MAX 181 MIN .70 AC-FT 10,590

PEAK DISCHARGE (BASE, 25 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-13 | Unknown | - | about 150 | 5-21 | 1045 | 2.68 | 248 |

## 08276300 RIO PUEBLO DE TAOS BELOW LOS CORDOVAS, N. MEX.

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

DRAINAGE AREA.--380 mi² (984 km²).

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

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

AVERAGE DISCHARGE.--16 calendar years, 48.2 ft³/s (1.365 m³/s), 34,920 acre-ft/yr (43.1 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,680 ft³/s (47.6 m³/s) Aug. 12 (gage height, 5.37 ft or 1.637 m), from rating curve extended above 410 ft³/s (11.6 m³/s); minimum, 8.1 ft³/s (0.23 m³/s ) Jan. 22, result of freezeup.
Period of record: Maximum discharge, 2,380 ft³/s (67.4 m³/s) Aug. 24, 1957 (gage height, 5.80 ft or 1.768 m), from rating curve extended above 900 ft³/s (25.5 m³/s); minimum, 1.9 ft³/s (0.054 m³/s) July 31, Aug. 1, 1972.

REMARKS.--Records fair except those for winter periods and those for May, which are poor. Diversions for irrigation of about 12,000 acres (48.6 km²) above station.

REVISIONS (WATER YEARS).--WSP 1732: 1957(M). WSP 1923: 1957(P), 1958.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10 | 19 | 41 | 31 | 220 | 520 | 148 | 20 | 12 | 11 | 22 | 31 |
| 2 | 10 | 17 | 49 | 30 | 175 | 505 | 132 | 18 | 11 | 13 | 22 | 32 |
| 3 | 10 | 15 | 49 | 27 | 146 | 434 | 119 | 40 | 11 | 12 | 22 | 33 |
| 4 | 10 | 17 | 46 | 25 | 162 | 380 | 104 | 20 | 12 | 12 | 22 | 34 |
| 5 | 11 | 19 | 40 | 24 | 234 | 335 | 96 | 19 | 12 | 12 | 22 | 30 |
| 6 | 10 | 21 | 35 | 26 | 271 | 316 | 86 | 19 | 11 | 13 | 22 | 28 |
| 7 | 11 | 21 | 38 | 29 | 223 | 312 | 75 | 19 | 11 | 13 | 21 | 29 |
| 8 | 12 | 21 | 38 | 27 | 220 | 312 | 69 | 17 | 11 | 12 | 21 | 30 |
| 9 | 13 | 20 | 39 | 30 | 290 | 334 | 68 | 15 | 11 | 13 | 19 | 31 |
| 10 | 15 | 21 | 37 | 36 | 436 | 369 | 61 | 14 | 13 | 18 | 19 | 31 |
| 11 | 14 | 22 | 35 | 37 | 640 | 380 | 54 | 12 | 46 | 27 | 19 | 32 |
| 12 | 17 | 21 | 34 | 39 | 835 | 403 | 48 | 81 | 19 | 26 | 19 | 32 |
| 13 | 16 | 21 | 32 | 44 | 917 | 431 | 46 | 14 | 16 | 23 | 19 | 31 |
| 14 | 15 | 21 | 32 | 58 | 878 | 519 | 110 | 13 | 13 | 24 | 18 | 32 |
| 15 | 15 | 21 | 30 | 79 | 675 | 444 | 76 | 16 | 12 | 24 | 18 | 30 |
| 16 | 15 | 20 | 29 | 79 | 651 | 391 | 54 | 17 | 12 | 25 | 18 | 28 |
| 17 | 15 | 22 | 28 | 74 | 637 | 348 | 54 | 12 | 10 | 26 | 19 | 31 |
| 18 | 15 | 21 | 27 | 82 | 736 | 313 | 54 | 14 | 11 | 24 | 20 | 31 |
| 19 | 15 | 21 | 30 | 82 | 990 | 280 | 74 | 12 | 11 | 25 | 20 | 29 |
| 20 | 16 | 20 | 28 | 70 | 1,200 | 247 | 50 | 11 | 10 | 24 | 23 | 27 |
| 21 | 15 | 21 | 28 | 63 | 1,300 | 226 | 46 | 12 | 9.8 | 23 | 25 | 27 |
| 22 | 15 | 22 | 28 | 57 | 1,130 | 213 | 48 | 12 | 9.8 | 23 | 26 | 28 |
| 23 | 15 | 21 | 29 | 62 | 892 | 201 | 44 | 11 | 9.7 | 24 | 26 | 28 |
| 24 | 16 | 22 | 33 | 73 | 797 | 181 | 38 | 11 | 9.5 | 24 | 24 | 26 |
| 25 | 15 | 24 | 34 | 110 | 787 | 167 | 34 | 11 | 9.4 | 23 | 23 | 23 |
| 26 | 14 | 25 | 32 | 114 | 788 | 159 | 33 | 11 | 11 | 23 | 27 | 23 |
| 27 | 15 | 29 | 31 | 120 | 689 | 158 | 26 | 9.6 | 11 | 23 | 27 | 23 |
| 28 | 14 | 36 | 31 | 161 | 546 | 170 | 21 | 9.8 | 11 | 24 | 25 | 27 |
| 29 | 14 | ------ | 31 | 186 | 447 | 172 | 22 | 11 | 11 | 23 | 28 | 34 |
| 30 | 16 | ------ | 31 | 225 | 430 | 167 | 20 | 14 | 11 | 22 | 31 | 33 |
| 31 | 20 | ------ | 32 | ------ | 481 | ------ | 20 | 13 | ------ | 22 | ------ | 31 |
| TOTAL | 434 | 601 | 1,057 | 2,100 | 18,823 | 9,387 | 1,930 | 528.4 | 378.2 | 631 | 667 | 915 |
| MEAN | 14.0 | 21.5 | 34.1 | 70.0 | 607 | 313 | 62.3 | 17.0 | 12.6 | 20.4 | 22.2 | 29.5 |
| MAX | 20 | 36 | 49 | 225 | 1,300 | 520 | 148 | 81 | 46 | 27 | 31 | 34 |
| MIN | 10 | 15 | 27 | 24 | 146 | 158 | 20 | 9.6 | 9.4 | 11 | 18 | 23 |
| AC-FT | 861 | 1,190 | 2,100 | 4,170 | 37,340 | 18,620 | 3,830 | 1,050 | 750 | 1,250 | 1,320 | 1,810 |

CAL YR 1973 TOTAL 37,451.6 MEAN 103 MAX 1,300 MIN 9.4 AC-FT 74,290
WTR YR 1973 TOTAL 36,347.4 MEAN 99.6 MAX 1,300 MIN 9.5 AC-FT 72,100

PEAK DISCHARGE (BASE, 230 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5- 1 | 0345 | 3.07 | 240 | 8- 3 | 1845 | 3.64 | 566 |
| 5-14 | 0430 | 4.82 | 990 | 8-12 | 1515 | 5.37 | 1,680 |
| 5-21 | unknown | - | about 1,350 | 9-11 | 0345 | 3.04 | 264 |
| 6-14 | 1030 | 3.57 | 546 | 9-11 | 1430 | 3.30 | 355 |
| 7-14 | 1615 | 3.42 | 487 | | | | |

## 08276500 RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, N. MEX.

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

DRAINAGE AREA.--9,730 mi² (25,200 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

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

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

AVERAGE DISCHARGE.--48 calendar years, 728 ft³/s (20.62 m³/s), 527,400 acre-ft/yr (650 hm³/yr); 20 calendar years (1954-73), 594 ft³/s (16.82 m³/s), 430,400 acre-ft/yr (531 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 5,480 ft³/s (155 m³/s) May 23 (gage height, 7.55 ft or 2.301 m); minimum, 370 ft³/s (10.5 m³/s) Dec. 21.

Period of record: Maximum discharge, 9,730 ft³/s (276 m³/s) June 7, 1948 (gage height, 9.18 ft or 2.798 m), and June 22, 1949 (gage height, 9.23 ft or 2.813 m); minimum, 155 ft³/s (4.39 m³/s) Sept. 21, 1956.

Maximum flood since at least 1888, about 14,000 ft³/s (396 m³/s) June 19, 1903, from records for Rio Grande at Embudo and estimated inflow. Other floods exceeding 10,000 ft³/s (283 m³/s) occurred June 9, 1905, May 28, 1920, and June 16, 1921, from comparison of records for stations near Lobatos and at Embudo.

REMARKS.--Records good. Diversions above station for irrigation of about 620,000 acres (2,510 km²) in Colorado and 30,000 acres (121 km²) in New Mexico.

REVISIONS (WATER YEARS).--WSP 788: 1934(M). WSP 828: Drainage area. WSP 1392: 1931-32, 1935, 1937, 1945, 1950.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 472 | 458 | 628 | 790 | 1,350 | 3,460 | 2,560 | 1,050 | 412 | 435 | 660 | 516 |
| 2 | 472 | 443 | 715 | 770 | 1,550 | 3,670 | 2,400 | 1,020 | 444 | 426 | 649 | 549 |
| 3 | 469 | 442 | 840 | 748 | 1,130 | 3,890 | 2,240 | 995 | 523 | 428 | 638 | 606 |
| 4 | 466 | 452 | 741 | 723 | 952 | 3,910 | 2,090 | 888 | 603 | 419 | 627 | 586 |
| 5 | 474 | 450 | 710 | 703 | 943 | 3,520 | 1,870 | 816 | 554 | 409 | 632 | 586 |
| 6 | 462 | 453 | 685 | 677 | 1,020 | 3,200 | 1,690 | 767 | 506 | 402 | 628 | 499 |
| 7 | 458 | 473 | 718 | 672 | 1,210 | 3,000 | 1,720 | 721 | 478 | 399 | 623 | 451 |
| 8 | 454 | 478 | 740 | 653 | 1,150 | 2,870 | 1,720 | 697 | 462 | 413 | 603 | 461 |
| 9 | 463 | 470 | 748 | 629 | 1,070 | 2,980 | 1,540 | 658 | 442 | 462 | 581 | 473 |
| 10 | 472 | 469 | 742 | 687 | 1,260 | 3,260 | 1,430 | 642 | 440 | 507 | 558 | 499 |
| 11 | 452 | 476 | 747 | 666 | 1,790 | 3,490 | 1,400 | 596 | 542 | 565 | 529 | 490 |
| 12 | 438 | 481 | 790 | 672 | 2,380 | 3,890 | 1,490 | 605 | 482 | 599 | 512 | 504 |
| 13 | 447 | 482 | 851 | 702 | 3,140 | 3,960 | 1,590 | 511 | 482 | 622 | 503 | 540 |
| 14 | 452 | 488 | 843 | 764 | 3,240 | 4,230 | 1,570 | 474 | 526 | 615 | 491 | 555 |
| 15 | 452 | 488 | 811 | 836 | 3,100 | 4,230 | 1,490 | 449 | 577 | 620 | 486 | 582 |
| 16 | 450 | 476 | 871 | 899 | 3,050 | 4,100 | 1,360 | 439 | 573 | 635 | 501 | 586 |
| 17 | 457 | 491 | 864 | 969 | 3,070 | 3,710 | 1,470 | 431 | 542 | 630 | 512 | 500 |
| 18 | 459 | 488 | 846 | 972 | 3,200 | 3,740 | 1,500 | 440 | 520 | 661 | 506 | 531 |
| 19 | 463 | 486 | 888 | 893 | 3,640 | 3,560 | 1,520 | 460 | 494 | 718 | 499 | 542 |
| 20 | 468 | 484 | 893 | 770 | 4,040 | 3,050 | 1,570 | 454 | 486 | 739 | 506 | 459 |
| 21 | 465 | 488 | 865 | 755 | 4,640 | 2,860 | 1,760 | 693 | 473 | 734 | 507 | 425 |
| 22 | 456 | 479 | 838 | 670 | 5,160 | 2,740 | 1,770 | 462 | 454 | 733 | 513 | 486 |
| 23 | 456 | 472 | 861 | 625 | 5,390 | 2,730 | 1,640 | 461 | 440 | 731 | 559 | 517 |
| 24 | 455 | 486 | 843 | 616 | 5,090 | 2,810 | 1,370 | 434 | 429 | 720 | 529 | 487 |
| 25 | 457 | 484 | 820 | 657 | 4,500 | 2,760 | 1,240 | 423 | 420 | 720 | 509 | 453 |
| 26 | 454 | 501 | 786 | 694 | 4,020 | 2,780 | 1,280 | 425 | 416 | 711 | 522 | 452 |
| 27 | 462 | 518 | 766 | 775 | 4,140 | 2,810 | 1,250 | 416 | 412 | 709 | 461 | 437 |
| 28 | 441 | 549 | 762 | 901 | 4,290 | 2,860 | 1,220 | 404 | 418 | 700 | 476 | 456 |
| 29 | 444 | ------ | 803 | 1,020 | 3,800 | 2,730 | 1,240 | 410 | 430 | 688 | 456 | 460 |
| 30 | 447 | ------ | 816 | 1,160 | 3,240 | 2,560 | 1,240 | 425 | 435 | 680 | 493 | 482 |
| 31 | 464 | ------ | 800 | ------ | 3,220 | ------ | 1,130 | 415 | ------ | 672 | ------ | 473 |
| TOTAL | 14,201 | 13,405 | 24,631 | 23,068 | 89,575 | 99,360 | 49,360 | 18,081 | 14,415 | 18,502 | 16,269 | 15,643 |
| MEAN | 458 | 479 | 795 | 769 | 2,890 | 3,312 | 1,592 | 583 | 481 | 597 | 542 | 505 |
| MAX | 474 | 549 | 893 | 1,160 | 5,390 | 4,230 | 2,560 | 1,050 | 603 | 739 | 660 | 606 |
| MIN | 438 | 442 | 628 | 616 | 943 | 2,560 | 1,130 | 404 | 412 | 399 | 456 | 425 |
| AC-FT | 28,170 | 26,590 | 48,860 | 45,760 | 177,700 | 197,100 | 97,910 | 35,860 | 28,590 | 36,700 | 32,270 | 31,030 |

CAL YR 1973 TOTAL 396,510 MEAN 1,086 MAX 5,390 MIN 399 AC-FT 786,500
WTR YR 1973 TOTAL 391,423 MEAN 1,072 MAX 5,390 MIN 242 AC-FT 776,400

PEAK DISCHARGE (BASE, 1,600 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-23 | 0415 | 7.55 | 5,480 | 7-14 | 1815 | 5.60 | 2,070 |
| 6-14 | 2400 | 7.02 | 4,330 | 8-21 | 0430 | 5.24 | 1,610 |

## 08279000 EMBUDO CREEK AT DIXON, N. MEX.

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

DRAINAGE AREA.--305 mi² (790 km²).

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

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

AVERAGE DISCHARGE.--41 calendar years (1924-25, 1927-54, 1963-73), 78.8 ft³/s (2.232 m³/s), 57,090 acre-ft/yr (70.4 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,730 ft³/s (49.0 m³/s) May 22 (gage height, 5.30 ft or 1.615 m); minimum, 12 ft³/s (0.340 m³/s) Feb. 20, Nov. 28, result of freezeup.
Period of record: Maximum discharge determined, 2,280 ft³/s (64.6 m³/s) Aug. 4, 1967 (gage height, 7.6 ft or 2.32m), from rating curve extended above 410 ft³/s (11.6 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.06 ft³/s (0.002 m³/s) June 26, 27, 1950.

REMARKS.--Records good except those for May, which are fair. Diversions above station for irrigation of about 6,500 acres (26.3 km²), a small part of which is below gage. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1512: 1931-32, 1941, 1947(M). See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35 | 34 | 44 | 59 | 498 | 692 | 314 | 58 | 19 | 23 | 28 | 37 |
| 2 | 34 | 28 | 43 | 63 | 393 | 710 | 296 | 54 | 17 | 23 | 27 | 40 |
| 3 | 29 | 31 | 50 | 53 | 347 | 640 | 289 | 48 | 17 | 22 | 28 | 39 |
| 4 | 30 | 38 | 46 | 50 | 410 | 620 | 274 | 49 | 15 | 22 | 32 | 39 |
| 5 | 37 | 36 | 47 | 53 | 597 | 578 | 242 | 47 | 15 | 24 | 33 | 28 |
| 6 | 30 | 34 | 40 | 65 | 588 | 550 | 225 | 44 | 14 | 27 | 33 | 24 |
| 7 | 32 | 36 | 42 | 79 | 473 | 560 | 210 | 42 | 16 | 27 | 32 | 28 |
| 8 | 28 | 34 | 43 | 66 | 488 | 565 | 195 | 37 | 16 | 24 | 32 | 35 |
| 9 | 32 | 32 | 44 | 65 | 609 | 605 | 180 | 33 | 16 | 27 | 32 | 35 |
| 10 | 36 | 30 | 42 | 73 | 784 | 640 | 170 | 29 | 23 | 32 | 32 | 33 |
| 11 | 32 | 33 | 42 | 90 | 962 | 680 | 164 | 28 | 80 | 36 | 31 | 33 |
| 12 | 27 | 33 | 49 | 116 | 1,030 | 716 | 137 | 29 | 50 | 34 | 32 | 36 |
| 13 | 31 | 31 | 52 | 155 | 1,220 | 716 | 137 | 32 | 40 | 32 | 31 | 38 |
| 14 | 33 | 32 | 39 | 237 | 1,080 | 770 | 154 | 30 | 36 | 31 | 30 | 41 |
| 15 | 34 | 28 | 39 | 293 | 928 | 692 | 150 | 30 | 34 | 31 | 30 | 32 |
| 16 | 34 | 27 | 46 | 230 | 870 | 620 | 129 | 28 | 32 | 30 | 29 | 28 |
| 17 | 36 | 35 | 46 | 214 | 855 | 550 | 129 | 25 | 30 | 30 | 28 | 35 |
| 18 | 36 | 31 | 52 | 265 | 973 | 492 | 142 | 23 | 28 | 30 | 28 | 37 |
| 19 | 34 | 29 | 60 | 233 | 1,170 | 469 | 190 | 21 | 26 | 30 | 29 | 28 |
| 20 | 36 | 28 | 60 | 188 | 1,380 | 436 | 145 | 20 | 25 | 29 | 30 | 25 |
| 21 | 34 | 33 | 69 | 168 | 1,510 | 404 | 138 | 17 | 24 | 30 | 27 | 22 |
| 22 | 22 | 32 | 65 | 165 | 1,470 | 396 | 136 | 16 | 21 | 30 | 30 | 25 |
| 23 | 29 | 30 | 69 | 194 | 1,070 | 366 | 123 | 16 | 19 | 30 | 31 | 29 |
| 24 | 29 | 32 | 62 | 244 | 934 | 352 | 106 | 15 | 20 | 29 | 31 | 29 |
| 25 | 31 | 31 | 59 | 306 | 952 | 331 | 107 | 16 | 22 | 29 | 28 | 25 |
| 26 | 33 | 32 | 61 | 294 | 990 | 320 | 103 | 15 | 25 | 29 | 33 | 27 |
| 27 | 35 | 35 | 69 | 308 | 812 | 334 | 96 | 15 | 27 | 27 | 31 | 25 |
| 28 | 26 | 41 | 65 | 419 | 662 | 342 | 78 | 14 | 25 | 26 | 24 | 31 |
| 29 | 25 | ------ | 62 | 523 | 600 | 342 | 74 | 15 | 23 | 27 | 31 | 37 |
| 30 | 28 | ------ | 53 | 576 | 600 | 320 | 68 | 18 | 23 | 29 | 34 | 39 |
| 31 | 38 | ------ | 59 | ------ | 640 | ------ | 63 | 23 | ------ | 28 | ------ | 29 |
| TOTAL | 986 | 906 | 1,619 | 5,844 | 25,895 | 15,808 | 4,964 | 887 | 778 | 878 | 907 | 989 |
| MEAN | 31.8 | 32.4 | 52.2 | 195 | 835 | 527 | 160 | 28.6 | 25.9 | 28.3 | 30.2 | 31.9 |
| MAX | 38 | 41 | 69 | 576 | 1,510 | 770 | 314 | 58 | 80 | 36 | 34 | 41 |
| MIN | 22 | 27 | 39 | 50 | 347 | 320 | 63 | 14 | 14 | 22 | 24 | 22 |
| AC-FT | 1,960 | 1,800 | 3,210 | 11,590 | 51,360 | 31,360 | 9,850 | 1,760 | 1,540 | 1,740 | 1,800 | 1,960 |

CAL YR 1973 TOTAL 60,461 MEAN 166 MAX 1,510 MIN 14 AC-FT 119,900
WTR YR 1973 TOTAL 61,081 MEAN 167 MAX 1,510 MIN 11 AC-FT 121,200

PEAK DISCHARGE (BASE, 800 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-13 | 2330 | 4.95 | 1,330 | 6-14 | 0800 | 4.50 | 840 |
| 5-22 | 0400 | 5.30 | 1,730 | | | | |

## 08279500 RIO GRANDE AT EMBUDO, N. MEX.

LOCATION.--Lat 36°12'20", long 105°57'49", in SW¼SW¼ sec.23, T.23 N., R.9 E., Rio Arriba County, on right bank 0.2 mi (0.3 km) downstream from bridge at Embudo, 2.8 mi (4.5 km) downstream from Embudo Creek, and at mile 1,643.1 (2,643.7 km).

DRAINAGE AREA.--10,400 mi² (26,940 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--January 1889 to current year. Monthly discharge only for some periods, published in WSP 1312. Figures of daily discharge for Oct. 4 to Nov. 30, 1896, published in WSP 358, are unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 5,789.14 ft (1,764.530 m) above mean sea level. Jan. 1 to Feb. 28, 1889, non-recording gage 1.2 mi (1.9 km) upstream at different datum. March 1889 to December 1903, nonrecording gage 1,300 ft (400 m) upstream at different datum. September 1912 to June 1914, water-stage recorder on downstream end of bridge pier at site 200 ft (61 m) upstream at present datum.

AVERAGE DISCHARGE.--85 calendar years, 1,005 ft³/s (28.46 m³/s), 728,100 acre-ft/yr (898 hm³/yr); 20 calendar years (1954-73), 662 ft³/s (18.75 m³/s), 479,600 acre-ft/yr (591 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 6,620 ft³/s (187 m³/s) May 22 (gage height, 9.99 ft or 3.045 m); minimum, 366 ft³/s (10.4 m³/s) Dec. 21.
1889-1903, 1912-73: Maximum discharge, 16,200 ft³/s (459 m³/s) June 19, 1903 (gage height, about 15.9 ft or 4.85 m); minimum daily, 130 ft³/s (3.68 m³/s) June 30, 1902.
A flood of about 14,000 ft³/s (396 m³/s) occurred between May 20 and June 10, 1905, from a comparison of records for Lobatos and Otowi Bridge. Another major flood occurred Sept. 29 or 30, 1904.

REMARKS.--Records good. Diversions above station for irrigation of about 620,000 acres (2,510 km²) in Colorado and 40,000 acres (162 km²) in New Mexico.

REVISIONS (WATER YEARS).--WSP 358: 1900-1902. WSP 828: Drainage area. WSP 878: 1915-16. WSP 1512: 1892-99, 1904, 1916, 1931-32, 1939, 1944-45, 1950. WSP 1712: 1903(M). See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 491 | 478 | 671 | 841 | 1,780 | 4,060 | 2,700 | 1,120 | 408 | 440 | 673 | 535 |
| 2 | 494 | 457 | 764 | 831 | 1,720 | 4,320 | 2,580 | 1,050 | 447 | 429 | 662 | 565 |
| 3 | 486 | 454 | 866 | 801 | 1,510 | 4,460 | 2,410 | 1,020 | 504 | 428 | 652 | 634 |
| 4 | 478 | 466 | 747 | 772 | 1,410 | 4,440 | 2,280 | 964 | 610 | 422 | 646 | 611 |
| 5 | 491 | 470 | 715 | 761 | 1,540 | 4,030 | 2,060 | 862 | 569 | 413 | 651 | 602 |
| 6 | 476 | 469 | 672 | 744 | 1,610 | 3,680 | 1,860 | 814 | 514 | 408 | 649 | 515 |
| 7 | 469 | 493 | 688 | 752 | 1,670 | 3,490 | 1,820 | 760 | 477 | 404 | 640 | 466 |
| 8 | 465 | 499 | 714 | 720 | 1,660 | 3,360 | 1,840 | 730 | 462 | 410 | 620 | 462 |
| 9 | 475 | 487 | 722 | 688 | 1,670 | 3,450 | 1,680 | 682 | 443 | 458 | 590 | 496 |
| 10 | 490 | 482 | 721 | 768 | 2,040 | 3,730 | 1,580 | 658 | 443 | 514 | 560 | 504 |
| 11 | 488 | 494 | 713 | 758 | 2,750 | 3,990 | 1,520 | 613 | 633 | 575 | 525 | 507 |
| 12 | 447 | 498 | 755 | 811 | 3,410 | 4,410 | 1,570 | 599 | 531 | 613 | 510 | 513 |
| 13 | 453 | 494 | 827 | 874 | 4,380 | 4,520 | 1,680 | 550 | 492 | 635 | 500 | 547 |
| 14 | 464 | 506 | 817 | 1,040 | 4,620 | 4,800 | 1,670 | 493 | 531 | 630 | 490 | 568 |
| 15 | 462 | 498 | 763 | 1,170 | 4,150 | 4,760 | 1,630 | 465 | 581 | 631 | 490 | 591 |
| 16 | 463 | 489 | 869 | 1,140 | 3,930 | 4,540 | 1,470 | 449 | 589 | 643 | 505 | 585 |
| 17 | 471 | 505 | 870 | 1,190 | 3,820 | 4,100 | 1,550 | 440 | 559 | 643 | 515 | 518 |
| 18 | 474 | 508 | 874 | 1,250 | 4,060 | 4,010 | 1,600 | 433 | 535 | 662 | 510 | 536 |
| 19 | 473 | 504 | 917 | 1,180 | 4,740 | 3,900 | 1,690 | 463 | 504 | 722 | 505 | 551 |
| 20 | 483 | 501 | 931 | 997 | 5,360 | 3,420 | 1,630 | 458 | 489 | 750 | 510 | 495 |
| 21 | 477 | 511 | 938 | 952 | 6,060 | 3,160 | 1,840 | 677 | 480 | 748 | 515 | 435 |
| 22 | 462 | 503 | 893 | 874 | 6,480 | 3,030 | 1,830 | 471 | 460 | 748 | 530 | 469 |
| 23 | 463 | 491 | 923 | 848 | 6,410 | 2,980 | 1,740 | 461 | 442 | 747 | 568 | 518 |
| 24 | 462 | 507 | 910 | 900 | 6,160 | 3,020 | 1,480 | 446 | 429 | 737 | 558 | 499 |
| 25 | 466 | 501 | 876 | 984 | 5,630 | 2,970 | 1,350 | 421 | 420 | 734 | 530 | 461 |
| 26 | 464 | 519 | 849 | 1,020 | 5,070 | 2,940 | 1,380 | 423 | 421 | 726 | 530 | 453 |
| 27 | 478 | 539 | 831 | 1,100 | 5,060 | 2,980 | 1,320 | 418 | 419 | 721 | 505 | 441 |
| 28 | 447 | 574 | 816 | 1,310 | 5,010 | 3,010 | 1,290 | 403 | 416 | 711 | 490 | 450 |
| 29 | 452 | ------ | 844 | 1,500 | 4,560 | 2,950 | 1,290 | 405 | 430 | 700 | 480 | 469 |
| 30 | 453 | ------ | 859 | 1,660 | 3,890 | 2,740 | 1,300 | 425 | 437 | 694 | 497 | 499 |
| 31 | 475 | ------ | 849 | ------ | 3,780 | ------ | 1,200 | 437 | ------ | 687 | ------ | 477 |
| TOTAL | 14,572 | 13,897 | 25,204 | 29,236 | 115,940 | 111,250 | 52,840 | 18,610 | 14,675 | 18,783 | 16,606 | 15,972 |
| MEAN | 470 | 496 | 813 | 975 | 3,740 | 3,708 | 1,705 | 600 | 489 | 606 | 554 | 515 |
| MAX | 494 | 574 | 938 | 1,660 | 6,480 | 4,800 | 2,700 | 1,120 | 633 | 750 | 673 | 634 |
| MIN | 447 | 454 | 671 | 688 | 1,410 | 2,740 | 1,200 | 403 | 408 | 404 | 480 | 435 |
| AC-FT | 28,900 | 27,560 | 49,990 | 57,990 | 230,000 | 220,700 | 104,800 | 36,910 | 29,110 | 37,260 | 32,940 | 31,680 |

CAL YR 1973 TOTAL 447,585 MEAN 1,226 MAX 6,480 MIN 403 AC-FT 887,800
WTR YR 1973 TOTAL 443,527 MEAN 1,215 MAX 6,480 MIN 245 AC-FT 879,700

PEAK DISCHARGE (BASE, 2,000 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-14 | 0630 | 8.09 | 4,790 | 6-15 | 0130 | 8.41 | 4,880 |
| 5-22 | 1030 | 9.99 | 6,620 | 7-14 | 2200 | 5.27 | 2,000 |

## 08281100 RIO GRANDE ABOVE SAN JUAN PUEBLO, N. MEX.

LOCATION.--Lat 36°03'58", long 106°04'34", in NE¼SE¼ sec.10, T.21 N., R.8 E., Rio Arriba County, in San Juan Pueblo Grant, on left bank 0.8 mi (1.3 km) upstream from bridge on State Highway 74, 1.0 mi (1.6 km) northwest of San Juan Pueblo, 1.8 mi (2.9 km) upstream from Rio Chama, 5.1 mi (8.2 km) north of Espanola, and at mile 1,630.1 (2,622.8 km).

DRAINAGE AREA.--10,550 mi² (27,320 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

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

GAGE.--Water-stage recorder. Altitude of gage is 5,630 ft (1,716 m) from topographic map.

AVERAGE DISCHARGE.--10 calendar years, 708 ft³/s (20.05 m³/s), 512,900 acre-ft/yr (632 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 6,310 ft³/s (179 m³/s) May 22 (gage height, 5.86 ft or 1.786 m); minimum, 325 ft³/s (9.20 m³/s ) Aug. 27.
Period of record: Maximum discharge, 6,310 ft³/s (179 m³/s) May 22, 1973 (gage heigt, 5.86 ft or 1.786 m); minimum, 96 ft³/s (2.72 m³/s) Aug. 1, 1963.
For years of outstanding floods see records for Rio Grande at Embudo (sta 08279500).

REMARKS.--Records good. Diversions above station for irrigation of about 620,000 acres (2,510 km²) in Colorado and 42,000 acres (170 km²) in New Mexico. San Juan lateral and San Juan Pueblo ditch, both on left bank, and Guique ditch, on right bank, bypass gage for irrigation of several hundred acres below station. See tabulation below for monthly and yearly diversion, as furnished by Bureau of Reclamation.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 515 | 496 | 647 | 837 | 1,700 | 4,110 | 2,780 | 1,130 | 388 | 423 | 636 | 504 |
| 2 | 509 | 479 | 765 | 829 | 1,660 | 4,470 | 2,700 | 1,070 | 418 | 416 | 631 | 530 |
| 3 | 510 | 477 | 888 | 787 | 1,460 | 4,570 | 2,470 | 1,030 | 453 | 414 | 600 | 600 |
| 4 | 500 | 483 | 784 | 749 | 1,300 | 4,620 | 2,330 | 951 | 545 | 402 | 607 | 600 |
| 5 | 503 | 489 | 746 | 734 | 1,440 | 4,240 | 2,090 | 865 | 521 | 380 | 625 | 586 |
| 6 | 489 | 485 | 694 | 712 | 1,510 | 3,870 | 1,870 | 798 | 472 | 382 | 628 | 524 |
| 7 | 481 | 503 | 707 | 722 | 1,580 | 3,590 | 1,800 | 727 | 434 | 393 | 624 | 472 |
| 8 | 480 | 511 | 738 | 686 | 1,550 | 3,470 | 1,850 | 694 | 418 | 392 | 610 | 459 |
| 9 | 476 | 500 | 748 | 647 | 1,550 | 3,540 | 1,690 | 652 | 406 | 410 | 584 | 491 |
| 10 | 497 | 494 | 750 | 721 | 1,860 | 3,900 | 1,580 | 615 | 433 | 468 | 550 | 478 |
| 11 | 484 | 508 | 739 | 718 | 2,560 | 4,170 | 1,500 | 588 | 600 | 544 | 524 | 498 |
| 12 | 466 | 512 | 763 | 748 | 3,250 | 4,580 | 1,540 | 532 | 567 | 589 | 500 | 498 |
| 13 | 483 | 505 | 837 | 814 | 4,090 | 4,800 | 1,640 | 560 | 486 | 607 | 488 | 504 |
| 14 | 483 | 520 | 834 | 950 | 4,500 | 5,080 | 1,630 | 470 | 517 | 613 | 479 | 537 |
| 15 | 476 | 513 | 777 | 1,140 | 4,120 | 5,100 | 1,680 | 435 | 548 | 601 | 475 | 572 |
| 16 | 476 | 504 | 877 | 1,110 | 3,960 | 4,890 | 1,490 | 411 | 563 | 606 | 461 | 572 |
| 17 | 486 | 522 | 889 | 1,130 | 3,910 | 4,450 | 1,530 | 396 | 532 | 611 | 484 | 524 |
| 18 | 490 | 516 | 892 | 1,210 | 4,010 | 4,280 | 1,610 | 378 | 509 | 617 | 484 | 510 |
| 19 | 489 | 514 | 927 | 1,140 | 4,510 | 4,210 | 1,720 | 402 | 486 | 683 | 491 | 524 |
| 20 | 501 | 510 | 938 | 951 | 5,140 | 3,690 | 1,640 | 393 | 458 | 721 | 498 | 504 |
| 21 | 500 | 522 | 968 | 903 | 5,740 | 3,360 | 1,830 | 594 | 454 | 720 | 498 | 435 |
| 22 | 493 | 517 | 917 | 827 | 6,190 | 3,170 | 1,840 | 444 | 439 | 714 | 498 | 464 |
| 23 | 488 | 505 | 946 | 783 | 6,190 | 3,080 | 1,780 | 412 | 425 | 706 | 517 | 504 |
| 24 | 496 | 518 | 940 | 826 | 5,990 | 3,100 | 1,520 | 414 | 420 | 701 | 530 | 498 |
| 25 | 492 | 512 | 902 | 909 | 5,500 | 3,060 | 1,350 | 382 | 398 | 690 | 498 | 460 |
| 26 | 484 | 526 | 871 | 944 | 4,930 | 3,020 | 1,440 | 394 | 398 | 685 | 498 | 459 |
| 27 | 497 | 541 | 854 | 1,010 | 4,940 | 3,090 | 1,320 | 378 | 397 | 684 | 491 | 465 |
| 28 | 472 | 567 | 820 | 1,220 | 4,820 | 3,110 | 1,300 | 365 | 393 | 680 | 459 | 437 |
| 29 | 479 | ------ | 854 | 1,440 | 4,460 | 3,080 | 1,300 | 363 | 409 | 667 | 472 | 460 |
| 30 | 484 | ------ | 867 | 1,580 | 3,870 | 2,820 | 1,300 | 397 | 421 | 664 | 465 | 486 |
| 31 | 497 | ------ | 854 | ------ | 3,750 | ------ | 1,230 | 418 | ------ | 655 | ------ | 472 |
| TOTAL | 15,176 | 14,249 | 25,733 | 27,777 | 112,040 | 116,520 | 53,350 | 17,658 | 13,908 | 17,838 | 15,925 | 15,627 |
| MEAN | 490 | 509 | 830 | 926 | 3,614 | 3,884 | 1,721 | 570 | 464 | 575 | 531 | 504 |
| MAX | 515 | 567 | 968 | 1,580 | 6,190 | 5,100 | 2,780 | 1,130 | 600 | 721 | 636 | 600 |
| MIN | 466 | 477 | 647 | 647 | 1,300 | 2,820 | 1,230 | 363 | 388 | 380 | 459 | 435 |
| AC-FT | 30,100 | 28,260 | 51,040 | 55,100 | 222,200 | 231,100 | 105,800 | 35,020 | 27,590 | 35,380 | 31,590 | 31,000 |
| (†) | 0 | 0 | 0 | 0 | 87 | 119 | 84 | 75 | 142 | 51 | 0 | 0 |
| (††) | 0 | 0 | 0 | 2.2 | 327 | 420 | 418 | 359 | 385 | 529 | 0 | 0 |
| (‡) | 0 | 0 | 0 | 0 | 182 | 534 | 350 | 177 | 382 | 489 | 0 | 0 |

CAL YR 1973 TOTAL 445,801 MEAN 1,221 MAX 6,190 MIN 363 AC-FT 884,200 † 558 †† 2,440 ‡ 2,110
WTR YR 1973 TOTAL 443,398 MEAN 1,215 MAX 6,190 MIN 225 AC-FT 879,500 † 770 †† 2,120 ‡ 1,890

PEAK DISCHARGE (BASE, 2,000 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-14 | 1100 | 4.81 | 4,640 | 6-14 | 1245 | 5.21 | 5,190 |
| 5-22 | 1430 | 5.86 | 6,310 | 7-26 | 0030 | 3.20 | 2,020 |
| 6- 4 | 0800 | 4.93 | 4,710 | | | | |

† Diversion, in acre-ft, by San Juan lateral.
†† Diversion, in acre-ft, by San Juan Pueblo ditch.
‡ Diversion, in acre-ft, by Guique ditch.

## 08284100 RIO CHAMA NEAR LA PUENTE, N. MEX.

LOCATION.--Lat 36°39'45", long 106°37'57", Rio Arriba County, in Tierra Amarilla Grant, on right bank 0.7 mi (1.1 km) downstream from Rito de Tierra Amarilla, 3.1 mi (5.0 km) southwest of La Puente, 6.7 mi (10.8 km) upstream from flow line of El Vado Reservoir, and at mile 91.4 (147.1 km).

DRAINAGE AREA.--480 mi² (1,200 km²) approximately.

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

GAGE.--Water-stage recorder. Concrete control since Nov. 9, 1965. Altitude of gage is 7,083 ft (2,159 m) from river-profile map.

AVERAGE DISCHARGE.--18 calendar years, 313 ft³/s (8.864 m³/s), 226,800 acre-ft/yr (280 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 9,540 ft³/s (270 m³/s) May 19 (gage height, 6.12 ft or 1.865 m); minimum, 18 ft³/s (0.510 m³/s) Dec. 5, but may have been less during periods of ice effect.
Period of record: Maximum discharge, 9,540 ft³/s (270 m³/s) May 19, 1973 (gage height, 6.12 ft or 1.865 m); minimum, 4.0 ft³/s (0.11 m³/s) Sept. 19, 1956.
A discharge of about 9,000 ft³/s (255 m³/s) occurred Apr. 16, 1937, based on flow of Rio Chama at Park View with allowance for tributary inflow. A peak on May 21 or 22, 1926, may have exceeded 10,000 ft³/s (283 m³/s).

REMARKS.--Records good except those for winter periods, which are poor. Diversions for irrigation of about 10,300 acres (41.7 km²) above station (1962 determination).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 80 | 80 | 129 | 186 | 1,460 | 3,090 | 547 | 121 | 88 | 52 | 51 | 38 |
| 2 | 80 | 80 | 129 | 187 | 1,180 | 2,810 | 511 | 121 | 70 | 47 | 50 | 38 |
| 3 | 85 | 75 | 140 | 162 | 1,280 | 2,510 | 478 | 113 | 58 | 44 | 49 | 38 |
| 4 | 85 | 80 | 141 | 162 | 1,650 | 2,620 | 445 | 119 | 53 | 45 | 50 | 38 |
| 5 | 85 | 85 | 142 | 168 | 1,830 | 2,290 | 409 | 119 | 51 | 44 | 51 | 37 |
| 6 | 80 | 90 | 135 | 212 | 1,730 | 2,280 | 376 | 114 | 49 | 49 | 50 | 36 |
| 7 | 80 | 85 | 132 | 276 | 1,360 | 2,330 | 333 | 102 | 48 | 51 | 51 | 36 |
| 8 | 80 | 85 | 139 | 210 | 1,590 | 2,310 | 317 | 101 | 45 | 49 | 53 | 36 |
| 9 | 85 | 80 | 140 | 213 | 2,180 | 2,320 | 312 | 94 | 39 | 50 | 49 | 36 |
| 10 | 85 | 85 | 133 | 254 | 2,970 | 2,350 | 308 | 87 | 80 | 62 | 45 | 36 |
| 11 | 80 | 85 | 140 | 370 | 4,190 | 2,210 | 256 | 82 | 152 | 78 | 44 | 36 |
| 12 | 75 | 90 | 143 | 528 | 4,390 | 2,120 | 232 | 79 | 106 | 75 | 45 | 35 |
| 13 | 75 | 85 | 161 | 664 | 4,220 | 1,970 | 241 | 78 | 77 | 73 | 49 | 35 |
| 14 | 75 | 80 | 142 | 908 | 4,060 | 2,080 | 224 | 75 | 66 | 84 | 50 | 35 |
| 15 | 80 | 75 | 137 | 905 | 4,230 | 1,680 | 206 | 75 | 58 | 93 | 47 | 34 |
| 16 | 80 | 70 | 147 | 645 | 4,700 | 1,420 | 198 | 68 | 53 | 96 | 36 | 34 |
| 17 | 85 | 75 | 163 | 749 | 5,210 | 1,270 | 206 | 61 | 50 | 88 | 40 | 34 |
| 18 | 85 | 80 | 181 | 940 | 5,230 | 1,160 | 223 | 59 | 46 | 79 | 42 | 37 |
| 19 | 80 | 75 | 187 | 663 | 6,690 | 1,090 | 445 | 56 | 42 | 72 | 53 | 40 |
| 20 | 85 | 70 | 214 | 520 | 6,570 | 1,010 | 278 | 58 | 40 | 66 | 51 | 43 |
| 21 | 80 | 75 | 279 | 490 | 6,380 | 896 | 242 | 113 | 39 | 60 | 45 | 45 |
| 22 | 75 | 80 | 224 | 529 | 4,810 | 875 | 213 | 100 | 39 | 56 | 52 | 45 |
| 23 | 75 | 80 | 209 | 709 | 4,250 | 813 | 198 | 66 | 39 | 56 | 54 | 45 |
| 24 | 75 | 90 | 197 | 867 | 4,110 | 786 | 173 | 54 | 40 | 53 | 44 | 45 |
| 25 | 75 | 90 | 183 | 1,060 | 4,040 | 761 | 145 | 62 | 44 | 51 | 40 | 45 |
| 26 | 80 | 90 | 205 | 1,240 | 4,050 | 722 | 137 | 85 | 60 | 51 | 40 | 44 |
| 27 | 85 | 100 | 232 | 1,490 | 2,980 | 693 | 137 | 69 | 60 | 50 | 40 | 43 |
| 28 | 80 | 120 | 213 | 1,810 | 2,650 | 658 | 122 | 57 | 59 | 49 | 40 | 40 |
| 29 | 75 | ------ | 204 | 1,920 | 2,840 | 628 | 124 | 55 | 57 | 50 | 39 | 38 |
| 30 | 70 | ------ | 186 | 1,950 | 3,090 | 584 | 128 | 82 | 56 | 51 | 38 | 38 |
| 31 | 70 | ------ | 175 | ------ | 3,170 | ------ | 124 | 108 | ------ | 51 | ------ | 38 |
| TOTAL | 2,465 | 2,335 | 5,282 | 20,987 | 109,090 | 48,336 | 8,288 | 2,633 | 1,764 | 1,875 | 1,388 | 1,198 |
| MEAN | 79.5 | 83.4 | 170 | 700 | 3,519 | 1,611 | 267 | 84.9 | 58.8 | 60.5 | 46.3 | 38.6 |
| MAX | 85 | 120 | 279 | 1,950 | 6,690 | 3,090 | 547 | 121 | 152 | 96 | 54 | 45 |
| MIN | 70 | 70 | 129 | 162 | 1,180 | 584 | 122 | 54 | 39 | 44 | 36 | 34 |
| AC-FT | 4,890 | 4,630 | 10,480 | 41,630 | 216,400 | 95,870 | 16,440 | 5,220 | 3,500 | 3,720 | 2,750 | 2,380 |

CAL YR 1973 TOTAL 205,641 MEAN 563 MAX 6,690 MIN 34 AC-FT 407,900
WTR YR 1973 TOTAL 215,605 MEAN 591 MAX 6,690 MIN 16 AC-FT 427,700

PEAK DISCHARGE (BASE, 2,000 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-30 | 0100 | 4.58 | 2,350 | 5-19 | 0100 | 6.12 | 9,540 |
| 5-5 | 0230 | 4.46 | 2,090 | | | | |

## 08284150 WILLOW CREEK ABOVE AZOTEA CREEK, NEAR PARK VIEW, N. MEX.

LOCATION.--Lat 36°48'15", long 106°39'30", Rio Arriba County, in Tierra Amarilla Grant, on right bank 200 ft (61 m) upstream from Azotea Creek, 7.1 mi (11.4 km) northwest of Park View, and 8.3 mi (13.4 km) southwest of Chama.

DRAINAGE AREA.--42 $mi^2$ (109 $km^2$), approximately.

PERIOD OF RECORD.--April 1971 to December 1972, March to December 1973 (discontinued).

GAGE.--Water-stage recorder and Parshall flume. Prior to Nov. 18, 1971, nonrecording gage. Datum of gage is 7,404.00 ft (2,256.739 m) above mean sea level (levels by Bureau of Reclamation).

EXTREMES.--Current year: Maximum discharge, about 250 $ft^3/s$ (7.1 $m^3/s$) Apr. 25 (gage height, 5.94 ft or 1.811 m), from rating curve extended above 81 $ft^3/s$ (2.29 $m^3/s$); no flow many days.
Period of record: Maximum discharge, about 250 $ft^3/s$ (7.1 $m^3/s$) Apr. 25, 1973 (gage height, 5.94 ft or 1.811 m), from rating curve extended above 81 $ft^3/s$ (2.29 $m^3/s$); no flow many days most years.

REMARKS.--Record represents natural runoff from the area.

COOPERATION.--Records furnished by Bureau of Reclamation.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 10 | 13 | 71 | 7.3 | .27 | 2.6 | .90 | .42 | | |
| 2 | | | 12 | 13 | 67 | 6.7 | .70 | 3.6 | .30 | .34 | | |
| 3 | | | 14 | 8.7 | 68 | 6.1 | .63 | 2.9 | .07 | .38 | | |
| 4 | | | 16 | 9.3 | 73 | 14 | 1.0 | 2.1 | .05 | .27 | | |
| 5 | | | 16 | 11 | 70 | 9.8 | 1.1 | 2.2 | .11 | .11 | | |
| 6 | | | 14 | 18 | 67 | 4.0 | 1.3 | 2.8 | .13 | .05 | | |
| 7 | | | 13 | 26 | 58 | 3.0 | 1.8 | 2.9 | .24 | .02 | | |
| 8 | | | 13 | 17 | 62 | 2.6 | 1.2 | 3.1 | .13 | .07 | | |
| 9 | | | 9.4 | 18 | 69 | 2.3 | 1.4 | 2.2 | .15 | .21 | | |
| 10 | | | 8.6 | 26 | 68 | 1.9 | 3.0 | 1.5 | .82 | .34 | | |
| 11 | | | 11 | 64 | 66 | 1.8 | 3.2 | 1.0 | 1.3 | .38 | | |
| 12 | | | 15 | 89 | 61 | 1.5 | 3.8 | .75 | 1.2 | .24 | | |
| 13 | | | 8.6 | 106 | 54 | 1.6 | 5.4 | .45 | .52 | .15 | | |
| 14 | | | 9.6 | 92 | 53 | 2.9 | 5.2 | .34 | .18 | .07 | | |
| 15 | | | 11 | 100 | 50 | 2.8 | 4.3 | .55 | .05 | .03 | | |
| 16 | | | 13 | 84 | 47 | 1.8 | 5.5 | .95 | .03 | .02 | | |
| 17 | | | 13 | 103 | 40 | 1.2 | 4.7 | 1.1 | 0 | 0 | | |
| 18 | | | 18 | 118 | 39 | 1.1 | 5.9 | 1.1 | 0 | 0 | | |
| 19 | | | 20 | 81 | 34 | .95 | 14 | 1.4 | 0 | 0 | | |
| 20 | | | 28 | 67 | 30 | .80 | 4.4 | 1.8 | .18 | 0 | | |
| 21 | | | 30 | 60 | 27 | .70 | 2.5 | 4.1 | .21 | 0 | | |
| 22 | | | 18 | 85 | 24 | .55 | 2.8 | 3.2 | .24 | 0 | | |
| 23 | | | 15 | 115 | 22 | .50 | 3.4 | 1.6 | .13 | 0 | | |
| 24 | | | 12 | 115 | 17 | .46 | 2.8 | .65 | .05 | 0 | | |
| 25 | | | 12 | 125 | 12 | .38 | 2.6 | .90 | .02 | 0 | | |
| 26 | | | 16 | 85 | 19 | .30 | 2.4 | 1.6 | .02 | 0 | | |
| 27 | | | 20 | 82 | 22 | .18 | 2.0 | 1.1 | .30 | 0 | | |
| 28 | | | 18 | 82 | 11 | .13 | 1.8 | .75 | .50 | 0 | | |
| 29 | | ------ | 17 | 85 | 9.5 | .13 | 1.5 | .46 | .50 | 0 | | |
| 30 | | ------ | 14 | 83 | 8.6 | .11 | 2.1 | 1.1 | .50 | 0 | | |
| 31 | | ------ | 12 | ------ | 8.0 | ------ | 2.6 | 1.9 | ------ | 0 | ------ | |
| TOTAL | - | - | 457.2 | 1,981.0 | 1,327.1 | 77.59 | 95.30 | 52.70 | 8.83 | 3.10 | 0 | 0 |
| MEAN | - | - | 14.7 | 66.0 | 42.8 | 2.59 | 3.07 | 1.70 | .29 | .10 | 0 | 0 |
| MAX | - | - | 30 | 125 | 73 | 14 | 14 | 4.1 | 1.3 | .42 | 0 | 0 |
| MIN | - | - | 8.6 | 8.7 | 8.0 | .11 | .27 | .34 | 0 | 0 | 0 | 0 |
| AC-FT | - | - | 907 | 3,930 | 2,630 | 154 | 189 | 105 | 18 | 6.1 | 0 | 0 |

NOTE.--No gage-height record Nov. 12 to Dec. 31.

## 08284160 AZOTEA TUNNEL AT OUTLET, NEAR CHAMA, N. MEX.

LOCATION.--Lat 36°51'12", long 106°40'18", Rio Arriba County, in Tierra Amarilla Grant, on left bank at south portal, 0.2 mi (0.3 km) upstream from Azotea Creek, and 6.2 mi (10.0 km) southwest of Chama.

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

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 7,519.87 ft (2,292.056 m) above mean sea level (levels by Bureau of Reclamation).

EXTREMES.--Current year: Maximum discharge, 1,070 ft³/s (30.3 m³/s) May 28 (gage height, 7.40 ft or 2.256 m); minimum daily, 0.33 ft³/s (0.009 m³/s) Nov. 21 to Dec. 31.
Period of record: Maximum discharge, 1,070 ft³/s (30.3 m³/s) May 28, 1973 (gage height, 7.40 ft or 2.256 m); no flow many days most years.

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

COOPERATION.--Records furnished by Bureau of Reclamation.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29 | 28 | 22 | 26 | 435 | 974 | 929 | 120 | 134 | 9.2 | .50 | .33 |
| 2 | 30 | 18 | 28 | 28 | 343 | 916 | 923 | 109 | 76 | 12 | .50 | .33 |
| 3 | 32 | 19 | 31 | 22 | 373 | 632 | 909 | 136 | 55 | 10 | .50 | .33 |
| 4 | 31 | 31 | 29 | 19 | 487 | 956 | 924 | 128 | 44 | 9.3 | .50 | .33 |
| 5 | 28 | 33 | 26 | 21 | 524 | 958 | 895 | 114 | 36 | 8.8 | .50 | .33 |
| 6 | 16 | 29 | 24 | 34 | 454 | 949 | 851 | 80 | 29 | 10 | .50 | .33 |
| 7 | 21 | 33 | 22 | 49 | 371 | 979 | 816 | 102 | 24 | 10 | .50 | .33 |
| 8 | 18 | 29 | 22 | 30 | 480 | 888 | 763 | 96 | 18 | 9.8 | .50 | .33 |
| 9 | 26 | 23 | 22 | 29 | 694 | 772 | 634 | 81 | 14 | 13 | .50 | .33 |
| 10 | 31 | 21 | 14 | 42 | 863 | 783 | 428 | 75 | 48 | 19 | .50 | .33 |
| 11 | 16 | 24 | 22 | 66 | 923 | 883 | 418 | 76 | 215 | 22 | .50 | .33 |
| 12 | 11 | 23 | 24 | 99 | 918 | 902 | 367 | 68 | 69 | 25 | .50 | .33 |
| 13 | 14 | 16 | 29 | 136 | 881 | 882 | 455 | 63 | 49 | 39 | .50 | .33 |
| 14 | 19 | 13 | 22 | 180 | 904 | 973 | 504 | 48 | 39 | 58 | .50 | .33 |
| 15 | 28 | 16 | 16 | 185 | 852 | 960 | 514 | 17 | 28 | 48 | .50 | .33 |
| 16 | 34 | 12 | 18 | 137 | 862 | 979 | 449 | 8.0 | 23 | 37 | .50 | .33 |
| 17 | 37 | 18 | 27 | 190 | 910 | 965 | 358 | 25 | 19 | 29 | .50 | .33 |
| 18 | 33 | 18 | 29 | 225 | 806 | 975 | 316 | 17 | 14 | 24 | .50 | .33 |
| 19 | 29 | 18 | 28 | 158 | 683 | 960 | 345 | 17 | 12 | 20 | .50 | .33 |
| 20 | 31 | 14 | 38 | 125 | 836 | 906 | 407 | 20 | 9.7 | 17 | .50 | .33 |
| 21 | 28 | 19 | 59 | 122 | 860 | 900 | 356 | 48 | 9.5 | 16 | .33 | .33 |
| 22 | 21 | 18 | 44 | 146 | 898 | 878 | 285 | 56 | 8.1 | 14 | .33 | .33 |
| 23 | 16 | 17 | 38 | 218 | 907 | 917 | 216 | 34 | 6.6 | 13 | .33 | .33 |
| 24 | 19 | 17 | 32 | 296 | 960 | 839 | 181 | 33 | 6.4 | 11 | .33 | .33 |
| 25 | 26 | 18 | 26 | 370 | 955 | 799 | 184 | 41 | 6.6 | 9.0 | .33 | .33 |
| 26 | 28 | 20 | 32 | 422 | 952 | 768 | 180 | 78 | 14 | 6.5 | .33 | .33 |
| 27 | 32 | 23 | 39 | 539 | 940 | 913 | 176 | 31 | 11 | 5.4 | .33 | .33 |
| 28 | 18 | 27 | 34 | 674 | 864 | 962 | 168 | 21 | 8.8 | 5.8 | .33 | .33 |
| 29 | 21 | ------ | 32 | 721 | 964 | 971 | 190 | 27 | 6.8 | 5.6 | .33 | .33 |
| 30 | 27 | ------ | 27 | 663 | 983 | 864 | 169 | 206 | 5.4 | 4.4 | .33 | .33 |
| 31 | 36 | ------ | 22 | ------ | 979 | ------ | 135 | 198 | ------ | 3.4 | ------ | .33 |
| TOTAL | 786 | 595 | 878 | 5,972 | 23,861 | 27,003 | 14,445 | 2,173.0 | 1,038.9 | 524.2 | 13.30 | 10.23 |
| MEAN | 25.4 | 21.3 | 28.3 | 199 | 770 | 900 | 466 | 70.1 | 34.6 | 16.9 | .44 | .33 |
| MAX | 37 | 33 | 59 | 721 | 983 | 979 | 929 | 206 | 215 | 58 | .50 | .33 |
| MIN | 11 | 12 | 14 | 19 | 343 | 632 | 135 | 8.0 | 5.4 | 3.4 | .33 | .33 |
| AC-FT | 1,560 | 1,180 | 1,740 | 11,850 | 47,330 | 53,560 | 28,650 | 4,310 | 2,060 | 1,040 | 26 | 20 |

CAL YR 1973 TOTAL 77,299.63 MEAN 212 MAX 983 MIN .33 AC-FT 153,300
WTR YR 1973 TOTAL 88,188.90 MEAN 242 MAX 983 MIN 0 AC-FT 174,900

## 08284200 WILLOW CREEK ABOVE HERON RESERVOIR, NEAR PARK VIEW, N. MEX.

LOCATION.--Lat 36°44'33", long 106°37'34", Rio Arriba County, in Tierra Amarilla Grant, on right bank 200 ft (61 m) downstream from bridge, 0.2 mi (0.3 km) downstream from Iron Spring Creek, 3.3 mi (5.3 km) west of Park View, and at mile 9.7 (15.6 km).

DRAINAGE AREA.--112 mi² (290 km²).

PERIOD OF RECORD.--October and November 1962 (monthly discharge only), December 1962 to current year.

GAGE.--Water-stage recorder. Concrete control since June 6, 1963. Datum of gage is 7,196.29 ft (2,193.429 m) above mean sea level (levels by Bureau of Reclamation). Prior to Apr. 1, 1971, at site 900 ft (270 m) downstream at lower datum.

AVERAGE DISCHARGE.--7 calendar years (1963-69), 11.5 ft³/s (0.326 m³/s), 8,330 acre-ft/yr (10.3 hm³/yr), prior to completion of Azotea tunnel.

EXTREMES.--Current year: Maximum discharge, 1,280 ft³/s (36.2 m³/s) Apr. 14 (gage height, 5.30 ft or 1.615 m); minimum daily, 0.19 ft³/s (0.005 m³/s) Dec. 1-31.
Period of record: Maximum discharge, 1,600 ft³/s (45.3 m³/s) Aug. 11, 1967 (gage height, 3.88 ft or 1.183 m, site and datum then in use), prior to completion of Azotea tunnel; no flow at times most years prior to 1971.

REMARKS.--Records represent inflow to Heron Reservoir and include San Juan River water imported through Azotea tunnel (see sta 08284160). See table below for inflow from a small tributary that enters Willow Creek from left bank just downstream from site in use subsequent to Mar. 31, 1971; records furnished by Bureau of Reclamation. Natural flow at new gage plus tributary inflow is equivalent to natural flow at former site.

COOPERATION.--Records furnished by Bureau of Reclamation.

### DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29 | 28 | 42 | 76 | 574 | 975 | 929 | 135 | 153 | 4.6 | 2.2 | .19 |
| 2 | 30 | 18 | 50 | 80 | 424 | 945 | 921 | 123 | 90 | 13 | 1.1 | .19 |
| 3 | 32 | 19 | 63 | 58 | 438 | 588 | 912 | 137 | 64 | 13 | .88 | .19 |
| 4 | 31 | 31 | 63 | 51 | 574 | 947 | 910 | 159 | 49 | 10 | .80 | .19 |
| 5 | 28 | 33 | 61 | 65 | 628 | 943 | 884 | 124 | 40 | 8.8 | .67 | .19 |
| 6 | 16 | 29 | 58 | 124 | 560 | 938 | 844 | 107 | 32 | 10 | .59 | .19 |
| 7 | 21 | 35 | 58 | 147 | 418 | 973 | 810 | 98 | 24 | 11 | .56 | .19 |
| 8 | 18 | 40 | 60 | 96 | 526 | 877 | 751 | 113 | 18 | 9.0 | .45 | .19 |
| 9 | 26 | 30 | 56 | 99 | 735 | 778 | 653 | 94 | 14 | 9.5 | .42 | .19 |
| 10 | 31 | 25 | 54 | 174 | 926 | 738 | 402 | 84 | 48 | 18 | .40 | .19 |
| 11 | 16 | 30 | 58 | 314 | 971 | 883 | 427 | 85 | 207 | 21 | .36 | .19 |
| 12 | 11 | 35 | 68 | 427 | 970 | 877 | 342 | 77 | 88 | 27 | .34 | .19 |
| 13 | 14 | 20 | 74 | 542 | 920 | 880 | 453 | 69 | 59 | 37 | .32 | .19 |
| 14 | 19 | 14 | 58 | 682 | 958 | 991 | 497 | 59 | 46 | 62 | .30 | .19 |
| 15 | 28 | 18 | 52 | 494 | 884 | 996 | 514 | 29 | 32 | 56 | .29 | .19 |
| 16 | 34 | 16 | 58 | 372 | 910 | 1,010 | 454 | 11 | 24 | 42 | .26 | .19 |
| 17 | 37 | 22 | 70 | 533 | 962 | 989 | 356 | 23 | 21 | 33 | .26 | .19 |
| 18 | 33 | 22 | 92 | 544 | 876 | 989 | 318 | 20 | 16 | 21 | .24 | .19 |
| 19 | 29 | 18 | 105 | 347 | 706 | 976 | 324 | 18 | 13 | 22 | .23 | .19 |
| 20 | 31 | 14 | 144 | 254 | 834 | 917 | 404 | 25 | 11 | 18 | .23 | .19 |
| 21 | 28 | 20 | 172 | 265 | 894 | 916 | 344 | 42 | 9.5 | 16 | .22 | .19 |
| 22 | 21 | 24 | 118 | 365 | 924 | 874 | 300 | 76 | 8.6 | 14 | .21 | .19 |
| 23 | 16 | 21 | 103 | 496 | 924 | 920 | 249 | 44 | 7.4 | 13 | .21 | .19 |
| 24 | 19 | 22 | 77 | 554 | 971 | 856 | 207 | 32 | 6.2 | 12 | .21 | .19 |
| 25 | 26 | 24 | 75 | 644 | 968 | 786 | 196 | 56 | 6.9 | 9.5 | .21 | .19 |
| 26 | 28 | 28 | 100 | 623 | 959 | 765 | 198 | 88 | 14 | 6.6 | .21 | .19 |
| 27 | 32 | 30 | 108 | 726 | 962 | 897 | 195 | 40 | 13 | 6.2 | .21 | .19 |
| 28 | 18 | 36 | 98 | 840 | 892 | 978 | 172 | 25 | 9.0 | 4.5 | .21 | .19 |
| 29 | 21 | ------ | 98 | 870 | 960 | 976 | 194 | 26 | 8.2 | 4.8 | .20 | .19 |
| 30 | 27 | ------ | 79 | 817 | 980 | 870 | 202 | 140 | 5.4 | 4.6 | .20 | .19 |
| 31 | 36 | ------ | 67 | ------ | 978 | ------ | 154 | 242 | ------ | 3.7 | ------ | .19 |
| TOTAL | 786 | 702 | 2,439 | 11,679 | 25,206 | 27,048 | 14,516 | 2,401 | 1,137.2 | 540.8 | 12.99 | 5.89 |
| MEAN | 25.4 | 25.1 | 78.7 | 389 | 813 | 902 | 468 | 77.5 | 37.9 | 17.4 | .43 | .19 |
| MAX | 37 | 40 | 172 | 870 | 980 | 1,010 | 929 | 242 | 207 | 62 | 2.2 | .19 |
| MIN | 11 | 14 | 42 | 51 | 418 | 588 | 154 | 11 | 5.4 | 3.7 | .20 | .19 |
| AC-FT | 1,560 | 1,390 | 4,840 | 23,170 | 50,000 | 53,650 | 28,790 | 4,760 | 2,260 | 1,070 | 26 | 12 |
| (†) | 0 | 0 | 0 | 0 | 12 | 12 | 22 | 0 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 86,473.88 MEAN 237 MAX 1,010 MIN .19 AC-FT 171,500 † 46
WTR YR 1973 TOTAL 97,628.27 MEAN 267 MAX 1,010 MIN .59 AC-FT 193,600 † 48

† Inflow, in acre-feet, from tributary on left bank.

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

## 08284300 HORSE LAKE CREEK ABOVE HERON RESERVOIR, NEAR PARK VIEW, N. MEX.

LOCATION.--Lat 36°42'24", long 106°44'42", Rio Arriba County, in Tierra Amarilla Grant, on right bank 3.7 mi (6.0 km) northwest of Heron Dam, 7.8 mi (12.6 km) downstream from Horse Lake, and 9.9 mi (15.9 km) west of Park View.

DRAINAGE AREA.--45 $mi^2$ (120 $km^2$), approximately.

PERIOD OF RECORD.--October and November 1962 (monthly discharge only), December 1962 to current year.

GAGE.--Water-stage recorder. Concrete control since June 10, 1963. Datum of gage is 7,188.85 ft (2,191.161 m) above mean sea level (levels by Bureau of Reclamation). Prior to July 1, 1971, at site 1,100 ft (340 m) upstream at higher datums.

AVERAGE DISCHARGE.--11 calendar years, 1.10 $ft^3/s$ (0.031 $m^3/s$), 797 acre-ft/yr (0.983 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, about 115 $ft^3/s$ (3.26 $m^3/s$) Apr. 14 (gage height, 2.58 ft or 0.786 m), from rating curve extended above 37 $ft^3/s$ (1.05 $m^3/s$); no flow most of time.
Period of record: Maximum discharge, 3,960 $ft^3/s$ (112 $m^3/s$) July 30, 1968 (gage height, 4.9 ft or 1.49 m, site and datum then in use), from rating curve extended above 37 $ft^3/s$ (1.05 $m^3/s$) on basis of slope-area measurements at gage heights 3.20 ft (0.975 m) and 4.9 ft (1.49 m); no flow most of time.

REMARKS.--Diversions above station for irrigation of meadows and for off-channel stock tanks.

COOPERATION.--Records furnished by Bureau of Reclamation.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 0 | 7.7 | 15 | .05 | | 0 | 1.8 | .36 | .02 | |
| 2 | | | 0 | 8.5 | 11 | .07 | | 0 | 1.6 | .23 | .02 | |
| 3 | | | 0 | 4.8 | 8.8 | .10 | | 0 | 1.6 | .09 | .02 | |
| 4 | | | 0 | 4.0 | 8.1 | .19 | | 0 | 1.6 | .05 | .02 | |
| 5 | | | 0 | 6.3 | 7.4 | .09 | | 0 | 1.7 | .04 | .02 | |
| 6 | | | 1.2 | 19 | 8.5 | .05 | | 0 | 1.7 | .04 | 0 | |
| 7 | | | 3.5 | 11 | 6.8 | 0 | | 0 | 1.7 | .04 | 0 | |
| 8 | | | 4.7 | 5.4 | 5.3 | 0 | | 0 | 1.7 | .04 | 0 | |
| 9 | | | 5.7 | 7.6 | 4.3 | 0 | | 0 | 1.7 | .04 | 0 | |
| 10 | | | 4.9 | 24 | 4.1 | 0 | | 0 | 3.6 | .14 | 0 | |
| 11 | | | 3.3 | 26 | 3.8 | 0 | | 0 | 5.2 | .30 | 0 | |
| 12 | | | 6.6 | 34 | 3.8 | 0 | | 0 | 2.6 | .18 | 0 | |
| 13 | | | 7.6 | 42 | 4.4 | 0 | | 0 | 2.2 | .16 | 0 | |
| 14 | | | 6.0 | 56 | 3.0 | .01 | | 0 | 2.2 | .06 | 0 | |
| 15 | | | 4.5 | 30 | 3.4 | .10 | | 0 | 2.1 | .04 | 0 | |
| 16 | | | 4.4 | 18 | 2.2 | 0 | | 0 | 2.1 | .04 | 0 | |
| 17 | | | 7.2 | 32 | 1.6 | 0 | | 0 | 2.0 | .04 | 0 | |
| 18 | | | 13 | 27 | 1.4 | 0 | | 0 | 2.1 | .04 | 0 | |
| 19 | | | 17 | 17 | 1.2 | 0 | | .48 | 1.9 | .03 | 0 | |
| 20 | | | 26 | 9.7 | .96 | 0 | | .61 | 1.5 | .03 | 0 | |
| 21 | | | 22 | 9.2 | .84 | 0 | | 1.0 | 2.0 | .03 | 0 | |
| 22 | | | 11 | 17 | .92 | 0 | | .52 | 2.3 | .03 | 0 | |
| 23 | | | 8.0 | 25 | .76 | 0 | | .12 | 2.3 | .03 | 0 | |
| 24 | | | 6.6 | 23 | .54 | 0 | | .81 | 1.2 | .02 | 0 | |
| 25 | | | 9.3 | 23 | .39 | 0 | | 1.2 | .86 | .02 | 0 | |
| 26 | | | 13 | 22 | .63 | 0 | | 1.5 | 2.3 | .02 | 0 | |
| 27 | | | 9.4 | 25 | .49 | 0 | | 1.2 | 1.4 | .02 | 0 | |
| 28 | | | 9.2 | 27 | .30 | 0 | | 1.0 | .80 | .02 | 0 | |
| 29 | | ------ | 10 | 23 | .19 | 0 | | 1.3 | .57 | .02 | 0 | |
| 30 | | ------ | 11 | 19 | .08 | 0 | | 2.2 | .45 | .02 | 0 | |
| 31 | | ------ | 10 | ------ | .06 | ------ | | 2.5 | ------ | .02 | ------ | |
| TOTAL | 0 | 0 | 235.1 | 603.2 | 110.26 | .66 | 0 | 14.44 | 56.78 | 2.24 | .10 | 0 |
| MEAN | 0 | 0 | 7.58 | 20.1 | 3.56 | .022 | 0 | .47 | 1.89 | .072 | .003 | 0 |
| MAX | 0 | 0 | 26 | 56 | 15 | .19 | 0 | 2.5 | 5.2 | .36 | .02 | 0 |
| MIN | 0 | 0 | 0 | 4.0 | .06 | 0 | 0 | 0 | .45 | .02 | 0 | 0 |
| AC-FT | 0 | 0 | 466 | 1,200 | 219 | 1.3 | 0 | 29 | 113 | 4.4 | .2 | 0 |

CAL YR 1973 TOTAL 1,022.78 MEAN 2.80 MAX 56 MIN 0 AC-FT 2,030
WTR YR 1973 TOTAL 1,074.77 MEAN 2.94 MAX 56 MIN 0 AC-FT 2,130

PEAK DISCHARGE (BASE, 100 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-14 | 1800 | 2.58 | about 115 | | | | |

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

## 08284510 HERON RESERVOIR NEAR PARK VIEW, N. MEX.

LOCATION.--Lat 36°39'56", long 106°42'13", Rio Arriba County, in Tierra Amarilla Grant, at Heron Dam on Willow Creek, 0.2 mi (0.3 km) upstream from Rio Chama, 5.1 mi (8.2 km) northeast of El Vado Dam, and 8.7 mi (14.0 km) southwest of Park View.

DRAINAGE AREA.--193 mi² (500 km²).

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Mar. 24, 1971, nonrecording gage.

EXTREMES.--Current year: Maximum contents, 199,300 acre-ft (246 hm³) Sept. 14-16 (elevation, 7,144.95 ft or 2,177.781 m); minimum, 53,880 acre-ft (66.4 hm³) Jan. 1 (elevation, 7,088.26 ft or 2,160.502 m).
Period of record: Maximum contents, 199,300 acre-ft (246 hm³) Sept. 14-16, 1973 (elevation, 7,144.95 ft or 2,177.781 m); no storage prior to Oct. 21, 1970.

REMARKS.--Reservoir is formed by earthfill dam; storage began Oct. 21, 1970. Total capacity 401,300 acre-ft (495 hm³) at elevation 7,186.1 ft (2,190.32 m), low point on crest of uncontrolled spillway, including 1,340 acre-ft (1.65 hm³) of dead storage at elevation 7,003.0 ft (2,134.51 m), invert of gate sill of outlet tunnel. Reservoir is used for storage of transmountain water from San Juan River basin and for recreation. Figures given herein represent total storage.

COOPERATION.--Records furnished by Bureau of Reclamation.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Bureau of Reclamation in 1971)

| | | | |
|---|---|---|---|
| 7,080 | 43,430 | 7,140 | 180,400 |
| 7,100 | 72,110 | 7,160 | 263,900 |
| 7,120 | 116,500 | | |

CONTENTS, IN ACRE-FEET, AT 2400, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 53,880 | 55,490 | 56,800 | 58,220 | 70,510 | 120,400 | 173,100 | 197,600 | 198,200 | 198,700 | 198,500 | 195,300 |
| 2 | 53,910 | 55,540 | 56,870 | 58,210 | 71,070 | 122,300 | 175,000 | 197,600 | 198,200 | 198,700 | 198,400 | 195,300 |
| 3 | 53,990 | 55,570 | 56,970 | 58,190 | 71,780 | 123,400 | 176,700 | 197,600 | 198,300 | 198,700 | 198,300 | 195,300 |
| 4 | 54,080 | 55,630 | 56,060 | 58,160 | 72,800 | 125,400 | 178,500 | 197,500 | 198,400 | 198,700 | 198,300 | 195,200 |
| 5 | 54,130 | 55,710 | 57,040 | 58,250 | 74,000 | 127,300 | 180,300 | 197,400 | 198,500 | 198,600 | 197,900 | 195,200 |
| 6 | 54,170 | 55,790 | 56,970 | 58,560 | 75,050 | 129,000 | 181,900 | 197,300 | 198,500 | 198,600 | 197,300 | 195,200 |
| 7 | 54,220 | 55,840 | 56,990 | 58,860 | 75,910 | 130,900 | 183,500 | 197,100 | 198,500 | 198,600 | 196,700 | 195,100 |
| 8 | 54,240 | 55,900 | 57,040 | 58,990 | 76,910 | 132,700 | 184,900 | 197,000 | 198,400 | 198,500 | 196,200 | 195,100 |
| 9 | 54,330 | 55,940 | 57,120 | 59,000 | 78,420 | 134,200 | 186,300 | 196,900 | 198,400 | 198,500 | 195,900 | 195,100 |
| 10 | 54,410 | 56,000 | 57,100 | 59,140 | 80,380 | 135,700 | 187,100 | 196,900 | 198,700 | 198,700 | 195,900 | 193,800 |
| 11 | 54,480 | 56,100 | 57,090 | 59,480 | 82,380 | 137,400 | 187,900 | 197,000 | 199,100 | 198,700 | 195,900 | 190,300 |
| 12 | 54,490 | 56,150 | 57,150 | 59,840 | 84,400 | 139,200 | 188,600 | 197,000 | 199,200 | 198,600 | 195,900 | 185,900 |
| 13 | 54,520 | 56,140 | 57,260 | 60,040 | 86,330 | 141,100 | 189,500 | 197,100 | 199,200 | 198,700 | 195,800 | 181,500 |
| 14 | 54,550 | 56,110 | 57,260 | 60,350 | 88,300 | 143,000 | 190,500 | 197,100 | 199,300 | 198,800 | 195,700 | 177,200 |
| 15 | 54,590 | 56,140 | 57,220 | 59,920 | 90,090 | 144,900 | 191,400 | 197,100 | 199,300 | 198,900 | 195,700 | 172,800 |
| 16 | 54,640 | 56,180 | 57,200 | 59,560 | 91,930 | 146,700 | 192,300 | 197,000 | 199,300 | 198,900 | 195,700 | 168,400 |
| 17 | 54,740 | 56,240 | 57,320 | 60,220 | 93,780 | 148,600 | 193,100 | 196,900 | 199,200 | 198,900 | 195,600 | 164,000 |
| 18 | 54,820 | 56,290 | 57,510 | 61,070 | 95,570 | 150,500 | 193,900 | 196,900 | 199,200 | 198,900 | 195,600 | 159,500 |
| 19 | 54,890 | 56,350 | 57,650 | 61,450 | 96,890 | 152,400 | 194,500 | 196,900 | 199,200 | 198,900 | 195,500 | 156,800 |
| 20 | 54,990 | 56,350 | 57,680 | 61,620 | 98,500 | 154,200 | 195,200 | 197,000 | 199,100 | 198,900 | 195,500 | 156,000 |
| 21 | 55,060 | 56,370 | 57,620 | 61,760 | 100,300 | 155,900 | 195,800 | 197,100 | 199,100 | 198,900 | 195,500 | 156,000 |
| 22 | 55,080 | 56,400 | 57,460 | 62,110 | 102,200 | 157,600 | 196,200 | 197,100 | 199,100 | 198,900 | 195,500 | 156,000 |
| 23 | 55,080 | 56,400 | 57,420 | 62,790 | 103,500 | 159,400 | 196,500 | 197,100 | 199,000 | 198,900 | 195,400 | 156,000 |
| 24 | 55,060 | 56,410 | 57,430 | 63,570 | 105,100 | 161,000 | 196,800 | 197,200 | 198,900 | 198,900 | 195,400 | 156,000 |
| 25 | 55,060 | 56,440 | 57,420 | 64,520 | 107,000 | 162,600 | 197,000 | 197,400 | 198,900 | 198,800 | 195,400 | 156,000 |
| 26 | 55,120 | 56,510 | 57,620 | 65,280 | 109,000 | 164,000 | 197,300 | 197,500 | 198,900 | 198,700 | 195,500 | 155,900 |
| 27 | 55,190 | 56,610 | 57,940 | 66,130 | 110,900 | 165,800 | 197,300 | 197,500 | 198,900 | 198,700 | 195,400 | 155,900 |
| 28 | 55,260 | 56,710 | 58,270 | 67,270 | 112,700 | 167,700 | 197,300 | 197,400 | 198,800 | 198,700 | 195,300 | 156,000 |
| 29 | 55,290 | ------ | 58,460 | 68,370 | 114,600 | 169,600 | 197,500 | 197,300 | 198,800 | 198,700 | 195,300 | 156,000 |
| 30 | 55,350 | ------ | 58,450 | 69,630 | 116,500 | 171,300 | 197,600 | 197,500 | 198,800 | 198,600 | 195,300 | 156,000 |
| 31 | 55,420 | ------ | 58,310 | ------ | 118,400 | ------ | 197,700 | 198,000 | ------ | 198,500 | ------ | 156,000 |
| MAX | 55,420 | 56,710 | 58,460 | 69,630 | 118,400 | 171,300 | 197,700 | 198,000 | 199,300 | 198,900 | 198,500 | 195,300 |
| MIN | 53,880 | 55,490 | 56,060 | 58,160 | 70,510 | 120,400 | 173,100 | 196,900 | 198,200 | 198,500 | 195,300 | 155,900 |
| (†) | 7,089.36 | 7,090.27 | 7,091.37 | 7,098.55 | 7,120.69 | 7,137.49 | 7,144.53 | 7,144.60 | 7,144.81 | 7,144.75 | 7,143.92 | 7,133.05 |
| (‡) | +1,620 | +1,290 | +1,600 | +11,320 | +48,770 | +52,900 | +26,400 | +300 | +800 | -300 | -3,200 | -39,300 |

CAL YR 1973 MAX 199,300 MIN 53,880 ‡ +102,200
WTR YR 1973 MAX 199,300 MIN 49,280 ‡ +149,400

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 08284520 WILLOW CREEK BELOW HERON DAM, N. MEX.

LOCATION.--Lat 36°39'56", long 106°42'13", Rio Arriba County, in Tierra Amarilla Grant, in outlet conduits of Heron Dam, 0.2 mi (0.3 km) upstream from Rio Chama, 5.1 mi (8.2 km) northeast of El Vado Dam, and 8.7 mi (14.0 km) southwest of Park View.

DRAINAGE AREA.--193 mi² (500 km²).

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

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

EXTREMES.--Current year: Maximum daily discharge, 2,220 ft³/s (62.9 m³/s) Dec. 12; no flow many days.
Period of record: Maximum daily discharge, 2,220 ft³/s (62.9 m³/s) Dec. 12, 1973; no flow many days each year.

REMARKS.--Flow regulated by Heron Dam (see sta 08284510) since Oct. 21, 1970. Outlet conduits are 14-in (0.356 m) and 120-in (3.048 m) in diameter.

COOPERATION.--Records furnished by Bureau of Reclamation.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 31 | 174 | 153 | | 0 | 103 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 40 | 117 | 154 | | 5.7 | 104 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 41 | 72 | 88 | | 0 | 131 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 41 | 73 | 42 | | 0 | 154 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 80 | 37 | 42 | | 0 | 154 | 0 | 0 | 171 | 0 |
| 6 | 0 | 0 | 106 | 14 | 42 | | 0 | 154 | 0 | 0 | 270 | 0 |
| 7 | 0 | 12 | 68 | 40 | 17 | | 0 | 154 | 0 | 0 | 283 | 0 |
| 8 | 0 | 20 | 60 | 41 | 0 | | 0 | 155 | 0 | 0 | 279 | 0 |
| 9 | 0 | 13 | 78 | 114 | 0 | | 0 | 83 | 0 | 0 | 116 | 0 |
| 10 | 0 | 0 | 78 | 170 | 0 | | 0 | 17 | 0 | 0 | 0 | 622 |
| 11 | 0 | 0 | 78 | 228 | 0 | | 0 | 19 | 29 | 0 | 0 | 1,740 |
| 12 | 0 | 20 | 79 | 374 | 0 | | 0 | 19 | 19 | 0 | 0 | 2,220 |
| 13 | 0 | 40 | 80 | 563 | 0 | | 0 | 14 | 0 | 0 | 0 | 2,210 |
| 14 | 0 | 31 | 96 | 649 | 0 | | 0 | 8.6 | 0 | 0 | 0 | 2,200 |
| 15 | 0 | 9.5 | 101 | 781 | 0 | | 0 | 3.1 | 0 | 0 | 0 | 2,180 |
| 16 | 0 | 0 | 78 | 599 | 0 | | 0 | 3.2 | 0 | 0 | 0 | 2,180 |
| 17 | 0 | 0 | 40 | 279 | 0 | | 0 | 0 | 0 | 0 | 0 | 2,170 |
| 18 | 0 | 0 | 40 | 195 | 0 | | 25 | 0 | 0 | 0 | 0 | 2,160 |
| 19 | 0 | 0 | 96 | 195 | 0 | | 48 | 0 | 0 | 0 | 0 | 1,320 |
| 20 | 0 | 12 | 205 | 195 | 0 | | 48 | 0 | 0 | 0 | 0 | 427 |
| 21 | 0 | 22 | 302 | 195 | 0 | | 48 | 6.3 | 0 | 0 | 0 | 0 |
| 22 | 10 | 22 | 259 | 195 | 0 | | 48 | 10 | 0 | 0 | 0 | 0 |
| 23 | 20 | 22 | 156 | 196 | 261 | | 48 | 4.0 | 0 | 0 | 0 | 0 |
| 24 | 20 | 22 | 101 | 196 | 147 | | 48 | 0 | 0 | 0 | 0 | 0 |
| 25 | 20 | 22 | 101 | 196 | 3.0 | | 48 | 0 | 0 | 0 | 0 | 0 |
| 26 | 8.6 | 8.0 | 39 | 272 | 0 | | 83 | 0 | 0 | 8.1 | 0 | 0 |
| 27 | 0 | 0 | 0 | 327 | 0 | | 103 | 45 | 0 | 0 | 0 | 0 |
| 28 | 0 | 15 | 0 | 326 | 0 | | 103 | 73 | 13 | 0 | 0 | 0 |
| 29 | 0 | ------ | 56 | 326 | 21 | | 103 | 42 | 0 | 0 | 0 | 0 |
| 30 | 0 | ------ | 143 | 262 | 40 | | 103 | 11 | 0 | 0 | 12 | 0 |
| 31 | 7.6 | ------ | 174 | ------ | 20 | ------ | 103 | 0 | ------ | 0 | ------ | 0 |
| TOTAL | 86.2 | 290.5 | 2,847 | 7,401 | 1,030.0 | 0 | 964.7 | 1,467.2 | 61 | 8.1 | 1,131 | 19,429 |
| MEAN | 2.78 | 10.4 | 91.8 | 247 | 33.2 | 0 | 31.1 | 47.3 | 2.03 | .26 | 37.7 | 627 |
| MAX | 20 | 40 | 302 | 781 | 261 | 0 | 103 | 155 | 29 | 8.1 | 283 | 2,220 |
| MIN | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 171 | 576 | 5,650 | 14,680 | 2,040 | 0 | 1,910 | 2,910 | 121 | 16 | 2,240 | 38,540 |

CAL YR 1973 TOTAL 34,715.70 MEAN 95.1 MAX 2,220 MIN 0 AC-FT 68,860
WTR YR 1973 TOTAL 24,275.70 MEAN 66.5 MAX 1,160 MIN 0 AC-FT 48,150

## 08285000 EL VADO RESERVOIR NEAR TIERRA AMARILLA, N. MEX.

LOCATION.--Lat 36°35'39", long 106°44'00", Rio Arriba County, in Tierra Amarilla Grant, at outlet tower of dam on Rio Chama, at village of El Vado, 12.4 mi (20.0 km) southwest of Tierra Amarilla, and at mile 77.7 (125.0 km).

DRAINAGE AREA.--873 mi² (2,261 km²), of which about 100 mi² (260 km²) probably is noncontributing.

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

GAGE.--Water-stage recorder. Prior to October 1967, nonrecording gage only below gage height 6,879.3 ft (2,096.81 m). Datum of gage is 8.21 ft (2.502 m) above mean sea level.

EXTREMES.--Current year: Maximum contents, 179,100 acre-ft (221 hm³) July 20, 21 (gage height 6,896.7 ft or 2,102.11 m); minimum, 21,620 acre-ft (26.7 hm³) Jan. 29 (gage height, 6,812.2 ft or 2,076.36 m).
Period of record: Maximum contents, 204,900 acre-ft (253 hm³) June 4, 5, 1948 (gage height, 6,904.2 ft or 2,104.40 m), of which 7,400 acre-ft (9.12 hm³) was uncontrolled storage; no storage at times prior to December 1966.

REMARKS.--Reservoir is formed by rockfill dam, steel faced. Storage began in January 1935. Capacity 196,500 acre-ft (242 hm³) between gage heights 6,759.0 ft (2,060.14 m) and 6,902.0 ft (2,103.73 m), top of spillway gate. Dead storage, 1,060 acre-ft (1.31 hm³) below 6,775.0 ft (2,065.02 m), sill of outlet works. Figures given herein represent total contents. Reservoir is used to impound water for irrigation by Middle Rio Grande Conservancy District and, since December 1972, for storage of transmountain water from San Juan River basin. Rehabilitation of outlet works, completed in December 1966, increased valve-controlled release from about 1,750 ft³/s (49.6 m³/s) to about 6,000 ft³/s (170 m³/s).

COOPERATION.--Records furnished by Bureau of Reclamation.

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

| | | | |
|---|---|---|---|
| 6,810 | 19,730 | 6,860 | 86,770 |
| 6,820 | 29,110 | 6,880 | 130,800 |
| 6,840 | 53,770 | 6,900 | 189,800 |

CONTENTS, IN ACRE-FEET, AT 2400, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 21,710 | 21,800 | 23,620 | 40,110 | 96,690 | 153,500 | 175,900 | 177,800 | 158,800 | 132,200 | 125,500 | 126,000 |
| 2 | 21,710 | 21,800 | 23,990 | 40,730 | 98,930 | 157,300 | 175,900 | 177,500 | 157,300 | 131,400 | 125,500 | 126,000 |
| 3 | 21,710 | 21,800 | 24,370 | 41,220 | 101,000 | 160,200 | 175,900 | 177,500 | 156,100 | 130,800 | 125,500 | 126,000 |
| 4 | 21,800 | 21,710 | 24,750 | 41,600 | 103,300 | 163,500 | 175,900 | 177,500 | 155,000 | 130,300 | 125,500 | 126,000 |
| 5 | 21,800 | 21,800 | 25,130 | 41,970 | 105,900 | 166,300 | 176,200 | 177,500 | 154,100 | 129,800 | 125,500 | 126,000 |
| 6 | 21,710 | 21,800 | 25,520 | 42,350 | 108,300 | 168,700 | 176,500 | 177,500 | 152,900 | 129,100 | 125,500 | 126,000 |
| 7 | 21,710 | 21,800 | 25,910 | 42,980 | 109,600 | 170,900 | 176,800 | 177,500 | 151,500 | 128,600 | 125,500 | 126,000 |
| 8 | 21,710 | 21,800 | 26,300 | 43,370 | 111,200 | 172,400 | 177,200 | 177,800 | 150,400 | 128,000 | 125,500 | 126,000 |
| 9 | 21,800 | 21,800 | 26,790 | 44,010 | 114,000 | 174,300 | 177,500 | 177,800 | 149,200 | 127,300 | 125,500 | 126,000 |
| 10 | 21,800 | 21,800 | 27,190 | 44,780 | 118,400 | 175,900 | 177,800 | 177,800 | 148,400 | 127,000 | 125,500 | 126,300 |
| 11 | 21,800 | 21,800 | 27,590 | 45,960 | 123,300 | 176,500 | 177,800 | 177,800 | 148,100 | 126,800 | 125,800 | 126,800 |
| 12 | 21,710 | 21,800 | 27,990 | 47,820 | 125,500 | 176,800 | 178,100 | 177,800 | 148,100 | 126,800 | 125,800 | 126,800 |
| 13 | 21,710 | 21,800 | 28,500 | 50,260 | 125,800 | 176,500 | 178,100 | 177,800 | 147,300 | 126,800 | 125,800 | 126,800 |
| 14 | 21,710 | 21,800 | 29,010 | 53,480 | 125,300 | 176,800 | 178,100 | 177,800 | 146,400 | 126,800 | 125,800 | 127,000 |
| 15 | 21,710 | 21,800 | 29,420 | 56,670 | 125,300 | 176,500 | 178,100 | 177,500 | 145,300 | 126,800 | 125,800 | 127,000 |
| 16 | 21,710 | 21,710 | 29,950 | 59,200 | 126,000 | 176,500 | 178,100 | 176,800 | 143,900 | 126,800 | 125,800 | 127,000 |
| 17 | 21,800 | 21,710 | 30,370 | 61,180 | 126,800 | 176,500 | 178,400 | 175,600 | 143,100 | 127,000 | 125,800 | 127,000 |
| 18 | 21,800 | 21,710 | 30,790 | 63,360 | 126,500 | 176,800 | 178,400 | 174,300 | 142,300 | 127,000 | 125,800 | 127,000 |
| 19 | 21,800 | 21,710 | 31,330 | 65,100 | 126,800 | 176,800 | 178,800 | 173,100 | 141,500 | 126,800 | 125,800 | 126,500 |
| 20 | 21,800 | 21,710 | 32,190 | 66,380 | 126,300 | 176,200 | 179,100 | 171,800 | 140,600 | 126,500 | 125,800 | 126,300 |
| 21 | 21,800 | 21,800 | 33,410 | 67,680 | 125,800 | 176,200 | 179,100 | 170,900 | 139,800 | 126,300 | 125,800 | 126,300 |
| 22 | 21,800 | 21,980 | 34,310 | 68,990 | 124,300 | 176,200 | 178,800 | 170,000 | 139,000 | 125,800 | 125,800 | 126,300 |
| 23 | 21,800 | 22,160 | 35,110 | 70,820 | 125,800 | 176,500 | 178,800 | 168,700 | 138,200 | 125,800 | 125,800 | 126,300 |
| 24 | 21,800 | 22,340 | 35,690 | 72,850 | 128,800 | 176,500 | 178,800 | 167,800 | 137,400 | 125,800 | 125,800 | 126,300 |
| 25 | 21,800 | 22,610 | 36,270 | 75,250 | 132,200 | 176,500 | 178,400 | 166,600 | 136,600 | 125,800 | 125,800 | 126,300 |
| 26 | 21,800 | 22,880 | 36,740 | 78,050 | 135,600 | 176,500 | 178,400 | 165,400 | 135,800 | 125,800 | 125,800 | 126,300 |
| 27 | 21,710 | 23,070 | 37,210 | 81,440 | 136,600 | 176,500 | 178,100 | 164,200 | 135,000 | 125,800 | 125,800 | 126,300 |
| 28 | 21,710 | 23,250 | 37,570 | 85,470 | 136,600 | 176,500 | 178,100 | 162,900 | 134,200 | 125,800 | 125,800 | 126,300 |
| 29 | 21,620 | ------ | 38,170 | 89,610 | 138,500 | 176,500 | 178,100 | 162,000 | 133,400 | 125,800 | 125,800 | 126,300 |
| 30 | 21,710 | ------ | 38,770 | 93,690 | 142,600 | 176,200 | 178,100 | 160,800 | 132,700 | 125,800 | 126,000 | 126,300 |
| 31 | 21,800 | ------ | 39,500 | ------ | 148,100 | ------ | 177,800 | 160,000 | ------ | 125,800 | ------ | 126,300 |
| MAX | 21,800 | 23,250 | 39,500 | 93,690 | 148,100 | 176,800 | 179,100 | 177,800 | 158,800 | 132,200 | 126,000 | 127,000 |
| MIN | 21,620 | 21,710 | 23,620 | 40,110 | 96,690 | 153,500 | 175,900 | 160,000 | 132,700 | 125,800 | 125,500 | 126,000 |
| (†) | 6,812.4 | 6,814.0 | 6,829.2 | 6,863.6 | 6,886.4 | 6,895.8 | 6,896.3 | 6,890.5 | 6,880.7 | 6,878.0 | 6,878.1 | 6,878.2 |
| (‡) | +90 | +1,450 | +16,250 | +54,190 | +54,410 | +28,100 | +1,600 | -17,800 | -27,300 | -6,900 | +200 | +300 |

CAL YR 1973 MAX 179,100 MIN 21,620 ‡ +104,590
WTR YR 1973 MAX 179,100 MIN 4,060 ‡ +128,640

† Gage height, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 08285500 RIO CHAMA BELOW EL VADO DAM, N. MEX.

LOCATION.--Lat 36°34'48", long 106°43'24", Rio Arriba County, in Tierra Amarilla Grant, on left bank 1.5 mi (2.4 km) downstream from El Vado Dam, 2.8 mi (4.5 km) upstream from Rio Nutrias, 13 mi (21 km) southwest of Tierra Amarilla, and at mile 76.2 (122.6 km).

DRAINAGE AREA.--877 mi² (2,271 km²), of which about 100 mi² (260 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1913 to November 1915, April to November 1916, March, April 1920, September 1920 to August 1924, October 1935 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "Chama River" prior to 1935, as "near Tierra Amarilla" 1913-14, 1935-47, as "near El Vado" 1915-16, and as "at El Vado" 1920-24.

GAGE.--Water-stage recorder. Datum of gage is 6,696.12 ft (2,040.977 m) above mean sea level. Prior to October 1935, at site 1.5 mi (2.4 km) upstream at different datum. October 1935 to September 1938 at site 1.1 mi (1.8 km) upstream at datum 30.34 ft (9.248 m) higher.

AVERAGE DISCHARGE.--36 calendar years (1936-71), 368 ft³/s (10.42 m³/s), 266,600 acre-ft/yr (329 hm³/yr), prior to release of transmountain water.

EXTREMES.--Current year: Maximum discharge, 5,980 ft³/s (169 m³/s) May 20 (gage height, 6.82 ft or 2.079 m); minimum, 10 ft³/s (0.28 m³/s) Feb. 6.
Period of record: Maximum discharge, 9,000 ft³/s (255 m³/s) May 22, 1920 (gage height, 12 ft (3.7 m), site and datum then in use), from rating curve extended above 3,500 ft³/s (99.1 m³/s); no flow Mar. 25, 26, 31, 1955. Maximum discharge since construction of El Vado Dam in 1935, 6,010 ft³/s (170 m³/s) May 17, 1941 (gage height, 6.89 ft or 2.100 m).
Flood of Oct. 4 or 5, 1911, was greater than floods in September 1904 and May 1920, from information by local residents.

REMARKS.--Records good. Flow regulated since 1935 by El Vado Reservoir (see sta 08285000). Since April 1972 flow affected by release of transmountain water from Heron Reservoir (see sta 08284510). Diversions for irrigation of about 10,600 acres (42.9 km²) above station.

REVISIONS (WATER YEARS).--WSP 1312: 1914, 1949. WSP 1392: 1949.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 83 | 85 | 29 | 27 | 49 | 663 | 664 | 259 | 607 | 361 | 44 | 37 |
| 2 | 83 | 85 | 30 | 27 | 144 | 926 | 571 | 259 | 607 | 330 | 37 | 37 |
| 3 | 83 | 85 | 29 | 27 | 253 | 926 | 398 | 254 | 607 | 330 | 32 | 37 |
| 4 | 83 | 85 | 29 | 27 | 358 | 934 | 330 | 259 | 613 | 330 | 32 | 37 |
| 5 | 83 | 88 | 27 | 29 | 514 | 934 | 222 | 254 | 613 | 335 | 172 | 35 |
| 6 | 83 | 92 | 27 | 29 | 519 | 975 | 148 | 254 | 613 | 335 | 306 | 35 |
| 7 | 83 | 100 | 29 | 30 | 585 | 1,270 | 148 | 201 | 613 | 330 | 306 | 35 |
| 8 | 83 | 98 | 29 | 29 | 664 | 1,480 | 148 | 148 | 613 | 330 | 306 | 35 |
| 9 | 83 | 103 | 30 | 30 | 762 | 1,480 | 148 | 113 | 619 | 286 | 163 | 35 |
| 10 | 83 | 93 | 27 | 30 | 882 | 1,480 | 148 | 83 | 535 | 259 | 29 | 440 |
| 11 | 83 | 85 | 27 | 31 | 1,960 | 1,850 | 148 | 83 | 290 | 157 | 29 | 1,500 |
| 12 | 83 | 98 | 30 | 31 | 3,400 | 2,060 | 200 | 80 | 125 | 71 | 32 | 2,210 |
| 13 | 83 | 125 | 29 | 31 | 4,020 | 2,010 | 148 | 80 | 395 | 73 | 39 | 2,210 |
| 14 | 83 | 125 | 27 | 31 | 3,990 | 1,960 | 148 | 80 | 607 | 73 | 39 | 2,220 |
| 15 | 83 | 125 | 27 | 31 | 4,000 | 1,790 | 148 | 183 | 607 | 57 | 39 | 2,220 |
| 16 | 83 | 100 | 27 | 33 | 4,000 | 1,310 | 151 | 390 | 607 | 44 | 39 | 2,230 |
| 17 | 83 | 85 | 30 | 34 | 4,160 | 1,090 | 151 | 571 | 493 | 44 | 39 | 2,230 |
| 18 | 83 | 83 | 30 | 34 | 4,970 | 1,010 | 199 | 632 | 430 | 71 | 40 | 2,230 |
| 19 | 83 | 85 | 29 | 34 | 5,300 | 1,010 | 237 | 632 | 430 | 141 | 40 | 1,730 |
| 20 | 83 | 58 | 29 | 36 | 5,760 | 1,020 | 237 | 632 | 430 | 195 | 39 | 556 |
| 21 | 83 | 26 | 27 | 36 | 5,790 | 934 | 241 | 619 | 430 | 195 | 39 | 48 |
| 22 | 83 | 24 | 26 | 36 | 5,300 | 746 | 245 | 638 | 430 | 195 | 39 | 48 |
| 23 | 103 | 25 | 26 | 36 | 3,690 | 670 | 245 | 632 | 430 | 109 | 39 | 48 |
| 24 | 119 | 25 | 26 | 34 | 2,630 | 664 | 250 | 625 | 425 | 42 | 39 | 48 |
| 25 | 122 | 26 | 26 | 31 | 2,630 | 670 | 250 | 625 | 425 | 42 | 39 | 48 |
| 26 | 111 | 26 | 26 | 34 | 2,630 | 670 | 250 | 619 | 420 | 42 | 39 | 48 |
| 27 | 100 | 27 | 26 | 41 | 2,630 | 670 | 250 | 619 | 425 | 44 | 39 | 48 |
| 28 | 100 | 27 | 26 | 42 | 2,630 | 670 | 254 | 619 | 420 | 44 | 39 | 42 |
| 29 | 88 | ------ | 27 | 45 | 1,880 | 670 | 254 | 619 | 420 | 46 | 37 | 39 |
| 30 | 57 | ------ | 27 | 49 | 1,200 | 670 | 254 | 613 | 420 | 46 | 37 | 39 |
| 31 | 69 | ------ | 27 | ------ | 569 | ------ | 259 | 553 | ------ | 44 | ------ | 39 |
| TOTAL | 2,695 | 2,089 | 861 | 995 | 77,469 | 33,212 | 7,444 | 12,228 | 14,699 | 5,001 | 2,188 | 20,594 |
| MEAN | 86.9 | 74.6 | 27.8 | 33.2 | 2,499 | 1,107 | 240 | 394 | 490 | 161 | 72.9 | 664 |
| MAX | 122 | 125 | 30 | 49 | 5,790 | 2,060 | 664 | 638 | 619 | 361 | 306 | 2,230 |
| MIN | 57 | 24 | 26 | 27 | 49 | 663 | 148 | 80 | 125 | 42 | 29 | 35 |
| AC-FT | 5,350 | 4,140 | 1,710 | 1,970 | 153,700 | 65,880 | 14,770 | 24,250 | 29,160 | 9,920 | 4,340 | 40,850 |

CAL YR 1973 TOTAL 179,475 MEAN 492 MAX 5,790 MIN 24 AC-FT 356,000
WTR YR 1973 TOTAL 167,891 MEAN 460 MAX 5,790 MIN 11 AC-FT 333,000

## 08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, N. MEX.

LOCATION.--Lat 36°19'06", long 106°35'50", Rio Arriba County, on left bank 40 ft (12 m) downstream from site of former bridge, 7.7 mi (12.4 km) downstream from Rio Gallina, 9 mi (14 km) northwest of Youngsville, 15.6 mi (25.1 km) upstream from Abiquiu Dam, 30.3 mi (48.8 km) downstream from El Vado Dam, and at mile 47.4 (76.3 km).

DRAINAGE AREA.--1,600 mi² (4,144 km²), of which about 100 mi² (260 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Altitude of gage is 6,275 ft (1,913 m) from topographic map.

AVERAGE DISCHARGE.--10 calendar years (1962-71), 338 ft³/s (9.572 m³/s), 244,900 acre-ft/yr (302 hm³/yr), prior to release of transmountain water.

EXTREMES.--Current year: Maximum discharge, 6,550 ft³/s (185 m³/s) May 20 (gage height, 8.70 ft or 2.652 m); minimum, about 25 ft³/s (0.71 m³/s) Dec. 10.
Period of record: Maximum discharge, 6,550 ft³/s (185 m³/s) May 20, 1973 (gage height, 8.70 ft or 2.652 m); minimum, 7.5 ft³/s (0.21 m³/s) Oct. 17, 18, 1963.
Major floods probably occurred on Sept. 29, 1904, Oct. 4 or 5, 1911, and May 22, 1920.

REMARKS.--Records good. Flow regulated by El Vado Reservoir (see sta 08285000). Since April 1972 flow affected by release of transmountain water from Heron Reservoir (see sta 08284510). Diversions for irrigation of about 15,000 acres (60.7 km²) above station. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 98 | 93 | 86 | 104 | 319 | 759 | 700 | 258 | 620 | 402 | 52 | 48 |
| 2 | 96 | 97 | 179 | 100 | 254 | 1,230 | 610 | 244 | 630 | 328 | 52 | 48 |
| 3 | 98 | 93 | 230 | 94 | 426 | 1,220 | 380 | 244 | 630 | 325 | 47 | 48 |
| 4 | 93 | 106 | 187 | 96 | 506 | 1,210 | 360 | 246 | 630 | 322 | 43 | 48 |
| 5 | 98 | 102 | 151 | 98 | 780 | 1,200 | 240 | 244 | 620 | 328 | 43 | 48 |
| 6 | 91 | 104 | 86 | 101 | 800 | 1,230 | 164 | 239 | 610 | 328 | 244 | 46 |
| 7 | 96 | 111 | 94 | 210 | 770 | 1,380 | 161 | 234 | 608 | 322 | 294 | 47 |
| 8 | 100 | 113 | 127 | 118 | 868 | 1,760 | 159 | 157 | 598 | 319 | 297 | 48 |
| 9 | 109 | 118 | 129 | 88 | 952 | 1,740 | 159 | 147 | 598 | 310 | 293 | 48 |
| 10 | 106 | 113 | 136 | 120 | 1,100 | 1,720 | 166 | 98 | 583 | 256 | 85 | 46 |
| 11 | 106 | 114 | 116 | 281 | 1,740 | 1,920 | 155 | 84 | 442 | 254 | 42 | 1,260 |
| 12 | 93 | 99 | 96 | 416 | 3,240 | 2,230 | 159 | 84 | 153 | 100 | 39 | 2,180 |
| 13 | 97 | 130 | 239 | 548 | 4,530 | 2,230 | 179 | 83 | 174 | 84 | 41 | 2,210 |
| 14 | 106 | 142 | 104 | 604 | 4,680 | 2,160 | 161 | 83 | 593 | 85 | 46 | 2,220 |
| 15 | 106 | 140 | 102 | 556 | 4,680 | 2,120 | 160 | 82 | 598 | 84 | 45 | 2,220 |
| 16 | 108 | 140 | 89 | 240 | 4,530 | 1,580 | 170 | 253 | 598 | 66 | 45 | 2,230 |
| 17 | 106 | 108 | 119 | 284 | 4,640 | 1,200 | 190 | 490 | 557 | 54 | 45 | 2,230 |
| 18 | 97 | 101 | 206 | 447 | 4,960 | 1,110 | 220 | 618 | 425 | 52 | 46 | 2,230 |
| 19 | 99 | 97 | 226 | 275 | 5,650 | 1,100 | 250 | 622 | 422 | 86 | 47 | 2,020 |
| 20 | 97 | 101 | 250 | 185 | 6,180 | 1,100 | 250 | 632 | 422 | 174 | 47 | 959 |
| 21 | 94 | 68 | 408 | 150 | 6,180 | 1,000 | 250 | 613 | 422 | 192 | 47 | 120 |
| 22 | 91 | 46 | 179 | 158 | 5,560 | 900 | 250 | 632 | 425 | 192 | 48 | 69 |
| 23 | 93 | 42 | 134 | 274 | 4,500 | 740 | 249 | 632 | 425 | 190 | 50 | 68 |
| 24 | 127 | 42 | 115 | 316 | 2,900 | 720 | 249 | 637 | 422 | 76 | 48 | 69 |
| 25 | 129 | 43 | 97 | 361 | 2,900 | 720 | 249 | 683 | 425 | 54 | 48 | 69 |
| 26 | 134 | 43 | 116 | 375 | 2,930 | 720 | 249 | 637 | 425 | 53 | 48 | 68 |
| 27 | 121 | 47 | 132 | 389 | 2,900 | 720 | 246 | 627 | 422 | 53 | 48 | 68 |
| 28 | 109 | 55 | 108 | 426 | 2,870 | 720 | 246 | 627 | 418 | 53 | 48 | 67 |
| 29 | 106 | ------ | 114 | 400 | 2,380 | 720 | 246 | 632 | 418 | 53 | 48 | 55 |
| 30 | 96 | ------ | 121 | 382 | 1,680 | 720 | 246 | 637 | 418 | 52 | 48 | 49 |
| 31 | 68 | ------ | 127 | ------ | 1,040 | ------ | 256 | 580 | ------ | 52 | ------ | 48 |
| TOTAL | 3,168 | 2,608 | 4,603 | 8,196 | 87,445 | 37,879 | 7,729 | 12,079 | 14,731 | 5,299 | 2,374 | 20,984 |
| MEAN | 102 | 93.1 | 148 | 273 | 2,821 | 1,263 | 249 | 390 | 491 | 171 | 79.1 | 677 |
| MAX | 134 | 142 | 408 | 604 | 6,180 | 2,230 | 700 | 683 | 630 | 402 | 297 | 2,230 |
| MIN | 68 | 42 | 86 | 88 | 254 | 720 | 155 | 82 | 153 | 52 | 39 | 46 |
| AC-FT | 6,280 | 5,170 | 9,130 | 16,260 | 173,400 | 75,130 | 15,330 | 23,960 | 29,220 | 10,510 | 4,710 | 41,620 |

CAL YR 1973 TOTAL 207,095 MEAN 567 MAX 6,180 MIN 39 AC-FT 410,800
WTR YR 1973 TOTAL 195,844 MEAN 537 MAX 6,180 MIN 11 AC-FT 388,500

## 08286900 ABIQUIU RESERVOIR NEAR ABIQUIU, N. MEX.

LOCATION.--Lat 36°14'24", long 106°25'44", Rio Arriba County, in Piedra Lumbre Grant, in operations building at Abiquiu Dam on Rio Chama, 6.6 mi (10.6 km) northwest of Abiquiu, and at mile 32.1 (51.6 km).

DRAINAGE AREA.--2,146 mi² (5,558 km²), of which about 100 mi² (260 km²) is probably noncontributing.

PERIOD OF RECORD.--February 1963 to September 1965 (monthend contents only), October 1965 to current year. Prior to October 1969, contents at 2400 hours.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents, 205,300 acre-ft (253 hm³) June 22 (elevation, 6,219.93 ft or 1,895.835 m); minimum, 1,900 acre-ft (2.34 hm³) Mar. 5,7 (elevation, 6,180.40 ft or 1,883.786 m).
Period of record: Maximum contents, 205,300 acre-ft (253 hm³) June 22, 1973 (elevation, 6,219.93 ft or, 1,895.835 m); no storage at times prior to May 1968.

REMARKS.--Reservoir is formed by earthfill dam, completed Feb. 5, 1963. Capacity, 1,216,000 acre-ft (1.50 km³) between elevations 6,060 ft (1,847 m), invert of outlet tunnel, and 6,350 ft (1,935 m), crest of spillway, based on capacity table effective Jan. 1, 1974. No dead storage. Reservoir is normally used for flood control. From May 1965 to January 1966 storage normally held in El Vado Reservoir was held in Abiquiu Reservoir while outlet works at El Vado were being rehabilitated. A desilting pool of about 2,000 acre-ft (2.47 hm³) has been maintained since May 1968.

COOPERATION.--Records furnished by Corps of Engineers.

Capacity table (elevation, in feet, and contents, in acre-feet)

(Based on survey by Corps of Engineers in 1970) Jan. 1 to Mar. 31

| | |
|---|---|
| 6,105 | 1,410 |
| 6,110 | 2,200 |
| 6,115 | 3,560 |

(Based on resurvey by Corps of Engineers in 1973) Apr. 1 to Dec. 31

| | | | |
|---|---|---|---|
| 6,105 | 1,380 | 6,150 | 26,120 |
| 6,110 | 2,420 | 6,160 | 37,680 |
| 6,120 | 6,240 | 6,180 | 74,890 |
| 6,130 | 11,300 | 6,200 | 131,000 |
| 6,140 | 17,650 | 6,220 | 205,600 |

CONTENTS, IN ACRE-FEET, AT 0800, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2,040 | 2,090 | 2,110 | 2,020 | 2,940 | 165,400 | 191,400 | 121,700 | 83,080 | 83,180 | 83,130 | 67,110 |
| 2 | 2,140 | 2,100 | 2,150 | 2,360 | 2,240 | 166,800 | 189,100 | 119,300 | 83,110 | 83,130 | 83,130 | 65,290 |
| 3 | 2,040 | 2,150 | 2,060 | 1,980 | 2,220 | 168,000 | 186,600 | 116,800 | 83,080 | 83,180 | 83,150 | 63,320 |
| 4 | 2,120 | 2,200 | 1,990 | 2,190 | 2,540 | 169,000 | 183,800 | 114,300 | 83,130 | 83,150 | 83,150 | 61,510 |
| 5 | 2,130 | 2,090 | 1,900 | 2,190 | 3,030 | 169,800 | 180,900 | 111,900 | 83,230 | 83,180 | 83,150 | 59,630 |
| 6 | 2,110 | 2,120 | 1,980 | 1,940 | 4,030 | 170,700 | 177,800 | 109,400 | 83,300 | 83,250 | 83,230 | 57,670 |
| 7 | 2,130 | 2,130 | 1,900 | 1,980 | 4,420 | 171,600 | 174,500 | 106,900 | 83,250 | 83,300 | 83,750 | 55,720 |
| 8 | 2,050 | 2,150 | 2,020 | 1,920 | 4,350 | 173,100 | 171,100 | 104,300 | 83,200 | 83,300 | 84,260 | 53,780 |
| 9 | 2,080 | 2,080 | 2,070 | 1,940 | 5,660 | 175,000 | 167,900 | 101,600 | 83,180 | 83,180 | 84,820 | 51,840 |
| 10 | 2,110 | 2,150 | 2,110 | 1,950 | 7,150 | 176,700 | 165,600 | 98,910 | 83,230 | 83,150 | 85,240 | 49,840 |
| 11 | 2,110 | 2,150 | 2,100 | 2,240 | 9,720 | 178,400 | 161,200 | 95,960 | 83,200 | 83,180 | 85,320 | 48,380 |
| 12 | 2,110 | 2,120 | 2,000 | 2,440 | 13,940 | 180,800 | 158,000 | 93,070 | 83,080 | 83,230 | 85,320 | 49,360 |
| 13 | 2,140 | 2,080 | 2,060 | 2,670 | 20,960 | 183,400 | 155,100 | 90,340 | 82,960 | 83,060 | 85,320 | 51,570 |
| 14 | 2,080 | 2,140 | 2,010 | 2,660 | 30,830 | 187,400 | 154,000 | 87,260 | 83,320 | 83,060 | 85,320 | 53,700 |
| 15 | 2,030 | 2,160 | 2,030 | 2,390 | 40,590 | 191,200 | 154,200 | 84,120 | 83,350 | 83,080 | 85,320 | 56,070 |
| 16 | 2,110 | 2,170 | 2,060 | 1,910 | 50,140 | 194,600 | 154,200 | 83,520 | 83,180 | 83,130 | 85,320 | 58,220 |
| 17 | 2,100 | 2,190 | 2,070 | 2,120 | 59,430 | 197,000 | 153,400 | 83,600 | 83,110 | 83,200 | 85,320 | 60,780 |
| 18 | 2,110 | 2,030 | 2,070 | 2,500 | 69,220 | 199,000 | 152,500 | 83,680 | 83,010 | 83,180 | 85,320 | 63,130 |
| 19 | 2,100 | 2,100 | 2,040 | 1,960 | 79,840 | 200,800 | 153,600 | 83,680 | 83,180 | 83,150 | 84,960 | 65,250 |
| 20 | 2,140 | 2,190 | 1,980 | 2,110 | 91,590 | 202,700 | 154,100 | 83,580 | 83,180 | 83,250 | 83,700 | 66,390 |
| 21 | 2,060 | 2,120 | 2,170 | 2,120 | 104,100 | 204,500 | 153,900 | 83,480 | 83,150 | 83,230 | 82,340 | 65,680 |
| 22 | 2,000 | 2,130 | 2,040 | 2,160 | 116,400 | 205,300 | 151,600 | 83,400 | 83,180 | 83,230 | 81,050 | 63,680 |
| 23 | 2,060 | 2,160 | 2,070 | 2,330 | 127,400 | 204,800 | 150,000 | 83,450 | 83,230 | 83,280 | 79,700 | 61,720 |
| 24 | 2,070 | 2,030 | 2,030 | 2,460 | 135,100 | 204,000 | 146,400 | 83,480 | 83,300 | 83,400 | 78,290 | 59,830 |
| 25 | 2,140 | 1,950 | 2,030 | 2,590 | 140,800 | 203,300 | 143,200 | 83,420 | 83,180 | 83,300 | 76,920 | 57,850 |
| 26 | 2,260 | 1,980 | 2,080 | 2,570 | 146,000 | 202,100 | 140,000 | 83,550 | 83,200 | 83,180 | 75,540 | 55,890 |
| 27 | 2,280 | 2,020 | 2,070 | 2,570 | 151,300 | 200,800 | 136,800 | 83,450 | 83,280 | 83,230 | 74,020 | 53,800 |
| 28 | 2,250 | 2,070 | 2,030 | 2,740 | 156,000 | 198,700 | 133,700 | 83,320 | 83,250 | 83,230 | 72,390 | 51,660 |
| 29 | 2,200 | ------ | 2,050 | 2,920 | 160,800 | 196,400 | 130,600 | 83,230 | 83,180 | 83,320 | 70,700 | 49,620 |
| 30 | 2,140 | ------ | 2,070 | 3,120 | 163,200 | 194,000 | 127,400 | 83,180 | 83,150 | 83,250 | 68,980 | 47,630 |
| 31 | 2,180 | ------ | 2,020 | ------ | 164,800 | ------ | 124,200 | 83,200 | ------ | 83,150 | ------ | 45,550 |
| MAX | 2,280 | 2,200 | 2,170 | 3,120 | 164,800 | 205,300 | 191,400 | 121,700 | 83,350 | 83,400 | 85,320 | 67,110 |
| MIN | 2,000 | 1,950 | 1,900 | 1,910 | 2,220 | 165,400 | 124,200 | 83,180 | 82,960 | 83,060 | 68,980 | 45,550 |
| (†) | 6,109.90 | 6,109.35 | 6,109.07 | 6,112.15 | 6,109.58 | 6,117.14 | 6,197.95 | 6,183.48 | 6,183.46 | 6,183.46 | 6,177.39 | 6,165.28 |
| (‡) | +220 | -110 | -50 | +970 | +161,680 | +29,200 | -69,800 | -41,000 | -50 | 0 | -14,170 | -23,430 |

CAL YR 1973 MAX 205,300 MIN 1,900 ‡ +43,480
WTR YR 1973 MAX 205,300 MIN 1,900 ‡ +79,470

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.
NOTE.--Change in contents for April and for water and calendar years computed on basis of revised capacity table effective Apr. 1, 1973.

## 08287000 RIO CHAMA BELOW ABIQUIU DAM, N. MEX.

LOCATION.--Lat 36°14'12", long 106°24'59", in SE¼SE¼ sec.8, T.23 N., R.5 E., Rio Arriba County, on right bank 0.8 mi (1.3 km) downstream from Abiquiu Dam, 5.9 mi (9.5 km) northwest of Abiquiu, and at mile 31.3 (50.4 km).

DRAINAGE AREA.--2,147 mi² (5,561 km²), of which about 100 mi² (260 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1961 to current year (monthly discharge only, October 1961).

GAGE.--Water-stage recorder. Concrete control since Jan. 25, 1966. Altitude of gage is 6,040 ft (1,841 m) from topographic map. Prior to Jan. 25, 1966, at datum 1.60 ft (0.488 m) lower.

AVERAGE DISCHARGE.--10 calendar years (1962-71), 363 ft³/s (10.28 m³/s), 263,000 acre-ft/yr (324 hm³/yr), prior to release of transmountain water.

EXTREMES.--Current year: Maximum daily discharge, 2,020 ft³/s (57.2 m³/s) June 29 to July 2 (gage height 4.98 ft or 1.518 m); minimum, about 0.7 ft³/s (0.02 m³/s) May 9.
Period of record: Maximum discharge, 2,990 ft³/s (84.7 m³/s) July 1, 1965 (gage height, 6.69 ft or 2.039 m); maximum gage height, 7.29 ft (2.222 m) Jan. 14, 1967 (backwater from ice); minimum discharge, about 0.5 ft³/s (0.01 m³/s) Mar. 17, 1966, Jan. 28, 1972.

REMARKS.--Records good. Flow controlled by El Vado Reservoir (see sta 08285000) 46.4 mi (74.7 km) upstream and Abiquiu Reservoir (see sta 08286900) 0.8 mi (1.3 km) upstream. Since April 1972 flow affected by release of transmountain water from Heron Reservoir (see sta 08284510) 54.5 mi (87.7 km) upstream. Diversions for irrigation of about 17,600 acres (71.2 hm³) above station. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 51 | 104 | 59 | 134 | 890 | 806 | 2,020 | 1,560 | 650 | 415 | 25 | 1,010 |
| 2 | 100 | 76 | 152 | 43 | 701 | 806 | 2,020 | 1,560 | 631 | 359 | 25 | 1,010 |
| 3 | 90 | 76 | 253 | 36 | 722 | 806 | 1,960 | 1,560 | 611 | 330 | 25 | 1,000 |
| 4 | 88 | 132 | 239 | 79 | 956 | 806 | 1,930 | 1,550 | 589 | 325 | 25 | 1,000 |
| 5 | 100 | 127 | 158 | 132 | 1,070 | 806 | 1,920 | 1,550 | 603 | 312 | 25 | 1,020 |
| 6 | 69 | 109 | 114 | 152 | 1,070 | 806 | 1,930 | 1,570 | 638 | 312 | 25 | 1,060 |
| 7 | 97 | 118 | 71 | 216 | 1,220 | 806 | 1,940 | 1,600 | 660 | 324 | 25 | 1,060 |
| 8 | 93 | 132 | 80 | 223 | 1,310 | 806 | 1,940 | 1,600 | 667 | 372 | 25 | 1,080 |
| 9 | 75 | 109 | 134 | 148 | 823 | 807 | 1,940 | 1,600 | 654 | 362 | 26 | 1,070 |
| 10 | 94 | 109 | 133 | 117 | 1,140 | 813 | 1,930 | 1,600 | 631 | 283 | 25 | 1,070 |
| 11 | 94 | 139 | 163 | 242 | 1,090 | 813 | 1,920 | 1,580 | 584 | 244 | 25 | 1,060 |
| 12 | 78 | 130 | 129 | 493 | 1,150 | 813 | 1,920 | 1,580 | 319 | 155 | 26 | 1,070 |
| 13 | 87 | 110 | 190 | 666 | 875 | 303 | 1,410 | 1,670 | 141 | 124 | 25 | 1,070 |
| 14 | 135 | 124 | 303 | 780 | 24 | 64 | 155 | 1,730 | 418 | 76 | 25 | 1,010 |
| 15 | 101 | 134 | 303 | 931 | 24 | 66 | 155 | 942 | 688 | 59 | 25 | 969 |
| 16 | 85 | 138 | 307 | 610 | 25 | 66 | 420 | 281 | 676 | 42 | 25 | 971 |
| 17 | 106 | 165 | 165 | 323 | 25 | 66 | 902 | 486 | 609 | 44 | 25 | 1,000 |
| 18 | 106 | 117 | 210 | 638 | 44 | 66 | 111 | 643 | 450 | 54 | 130 | 1,060 |
| 19 | 95 | 66 | 280 | 517 | 72 | 96 | 109 | 702 | 398 | 39 | 545 | 1,080 |
| 20 | 102 | 105 | 263 | 265 | 74 | 114 | 244 | 721 | 425 | 140 | 721 | 1,080 |
| 21 | 132 | 102 | 389 | 223 | 76 | 322 | 1,020 | 715 | 425 | 190 | 716 | 1,080 |
| 22 | 90 | 41 | 309 | 248 | 76 | 993 | 1,480 | 688 | 422 | 186 | 715 | 1,080 |
| 23 | 69 | 72 | 156 | 374 | 78 | 1,080 | 1,710 | 661 | 406 | 130 | 730 | 1,070 |
| 24 | 92 | 84 | 178 | 526 | 137 | 1,080 | 1,900 | 665 | 433 | 78 | 755 | 1,070 |
| 25 | 79 | 45 | 119 | 631 | 413 | 1,260 | 1,900 | 667 | 427 | 85 | 748 | 1,060 |
| 26 | 112 | 33 | 150 | 703 | 501 | 1,310 | 1,900 | 685 | 405 | 43 | 800 | 1,100 |
| 27 | 133 | 33 | 177 | 761 | 508 | 1,700 | 1,900 | 703 | 437 | 20 | 836 | 1,130 |
| 28 | 133 | 39 | 174 | 857 | 508 | 1,930 | 1,900 | 703 | 457 | 20 | 883 | 1,130 |
| 29 | 132 | ------ | 145 | 890 | 681 | 2,020 | 1,900 | 696 | 469 | 45 | 924 | 1,120 |
| 30 | 106 | ------ | 184 | 940 | 799 | 2,020 | 1,900 | 677 | 445 | 64 | 980 | 1,120 |
| 31 | 94 | ------ | 195 | ------ | 805 | ------ | 1,740 | 661 | ------ | 50 | ------ | 1,110 |
| TOTAL | 3,018 | 2,769 | 5,882 | 12,898 | 17,887 | 24,250 | 46,126 | 33,606 | 15,368 | 5,282 | 9,910 | 32,820 |
| MEAN | 97.4 | 98.9 | 190 | 430 | 577 | 808 | 1,488 | 1,084 | 512 | 170 | 330 | 1,059 |
| MAX | 135 | 165 | 389 | 940 | 1,310 | 2,020 | 2,020 | 1,730 | 688 | 415 | 980 | 1,130 |
| MIN | 51 | 33 | 59 | 36 | 24 | 64 | 109 | 281 | 141 | 20 | 25 | 969 |
| AC-FT | 5,990 | 5,490 | 11,670 | 25,580 | 35,480 | 48,100 | 91,490 | 66,660 | 30,480 | 10,480 | 19,660 | 65,100 |

CAL YR 1973 TOTAL 209,816 MEAN 575 MAX 2,020 MIN 20 AC-FT 416,200
WTR YR 1973 TOTAL 179,857 MEAN 493 MAX 2,020 MIN 16 AC-FT 356,700

## 08289000 RIO OJO CALIENTE AT LA MADERA, N. MEX.

LOCATION.--Lat 36°20'59", long 106°02'37", in NW¼NE¼ sec.1, T.24 N., R.8 E., Rio Arriba County, on left bank 400 ft (120 m) upstream from bridge on State Highway 96, 2.4 mi (3.9 km) south of La Madera, 2.6 mi (4.2 km) downstream from confluence of Rio Vallecitos and Rio Tusas, 3.1 mi (5.0 km) north of Ojo Caliente, and at mile 19.9 (32.0 km).

DRAINAGE AREA.--419 mi² (1,085 km²).

PERIOD OF RECORD.--April 1932 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,358.84 ft (1,938.174 m) above mean sea level. Prior to Apr. 23, 1934, at site about 2.6 mi (4.2 km) upstream at different datum. Apr. 23, 1934 to Apr. 21, 1936, at datum 12.58 ft (3.834 m) lower and Apr. 22, 1936 to Oct. 26, 1956, at datum 13.84 ft (4.218 m) lower, both at site 1,400 ft (430 m) downstream.

AVERAGE DISCHARGE.--41 calendar years, 67.7 ft³/s (1.917 m³/s), 49,050 acre-ft/yr (60.5 hm³/yr); 20 calendar years (1954-73), 55.8 ft³/s (1.580 m³/s), 40,430 acre-ft/yr 49.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,670 ft³/s (47.3 m³/s) May 11 (gage height, 6.27 ft or 1.911 m); minimum, 1.5 ft³/s (0.042 m³/s) Aug. 26.
Period of record: Maximum discharge, 3,140 ft³/s (88.9 m³/s) Apr. 21, 1958 (gage height, 6.42 ft or 1.957 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s);maximum gage height, 7.25 ft (2.210 m), from floodmarks, June 19, 1966; minimum discharge, 0.2 ft³/s (0.006 m³/s) Aug. 17, 1956.
The flood of Apr. 21, 1958, may have been exceeded by a flood in May 1920, from information by local resident.

REMARKS.--Records fair. Diversions above station for irrigation of about 3,500 acres (14.2 hm³), 1962 determination.

REVISIONS (WATER YEARS).--WSP 1712: 1959.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | 25 | 29 | 69 | 497 | 307 | 25 | 7.1 | 3.0 | 4.0 | 12 | 16 |
| 2 | 21 | 20 | 30 | 68 | 475 | 284 | 23 | 6.4 | 2.6 | 4.6 | 12 | 18 |
| 3 | 19 | 21 | 31 | 48 | 470 | 246 | 20 | 6.4 | 2.6 | 4.6 | 12 | 19 |
| 4 | 21 | 22 | 34 | 44 | 648 | 262 | 19 | 5.8 | 3.1 | 4.0 | 12 | 16 |
| 5 | 21 | 22 | 34 | 43 | 767 | 224 | 18 | 5.8 | 3.3 | 3.0 | 11 | 12 |
| 6 | 20 | 22 | 33 | 46 | 644 | 206 | 17 | 5.2 | 3.4 | 4.0 | 13 | 12 |
| 7 | 20 | 23 | 34 | 71 | 492 | 200 | 15 | 4.6 | 3.2 | 5.2 | 13 | 14 |
| 8 | 20 | 23 | 35 | 59 | 594 | 187 | 13 | 4.6 | 3.4 | 4.6 | 13 | 17 |
| 9 | 22 | 21 | 37 | 53 | 829 | 173 | 11 | 4.0 | 3.3 | 4.0 | 11 | 18 |
| 10 | 22 | 20 | 38 | 57 | 1,150 | 161 | 10 | 4.0 | 5.0 | 5.8 | 11 | 17 |
| 11 | 20 | 22 | 42 | 86 | 1,270 | 158 | 11 | 4.0 | 7.2 | 5.8 | 13 | 17 |
| 12 | 20 | 24 | 45 | 145 | 1,230 | 126 | 13 | 3.5 | 5.5 | 5.8 | 10 | 16 |
| 13 | 21 | 21 | 56 | 221 | 1,120 | 115 | 14 | 3.0 | 5.2 | 5.8 | 8.5 | 17 |
| 14 | 23 | 19 | 42 | 364 | 886 | 166 | 14 | 3.0 | 4.9 | 6.4 | 7.0 | 19 |
| 15 | 23 | 20 | 44 | 378 | 852 | 118 | 18 | 5.2 | 4.9 | 7.0 | 7.0 | 15 |
| 16 | 24 | 20 | 47 | 228 | 889 | 95 | 18 | 3.5 | 5.0 | 8.5 | 7.8 | 16 |
| 17 | 25 | 23 | 53 | 241 | 937 | 89 | 17 | 3.0 | 5.2 | 8.5 | 7.8 | 16 |
| 18 | 25 | 19 | 59 | 364 | 931 | 86 | 16 | 2.6 | 5.2 | 10 | 9.4 | 16 |
| 19 | 23 | 20 | 63 | 214 | 1,050 | 76 | 29 | 2.6 | 5.3 | 10 | 11 | 15 |
| 20 | 25 | 21 | 72 | 152 | 994 | 62 | 25 | 3.0 | 4.5 | 9.4 | 12 | 14 |
| 21 | 23 | 24 | 110 | 151 | 919 | 53 | 18 | 3.5 | 4.0 | 9.4 | 12 | 14 |
| 22 | 21 | 25 | 77 | 171 | 706 | 46 | 16 | 3.5 | 4.1 | 8.5 | 16 | 14 |
| 23 | 22 | 25 | 71 | 278 | 575 | 40 | 13 | 4.0 | 4.7 | 7.0 | 17 | 15 |
| 24 | 23 | 25 | 61 | 354 | 546 | 37 | 13 | 4.6 | 4.8 | 6.4 | 13 | 15 |
| 25 | 23 | 26 | 58 | 489 | 519 | 35 | 16 | 3.5 | 5.2 | 7.0 | 13 | 14 |
| 26 | 25 | 26 | 64 | 549 | 569 | 33 | 20 | 2.6 | 5.9 | 6.4 | 16 | 14 |
| 27 | 26 | 27 | 79 | 613 | 446 | 31 | 14 | 2.2 | 5.6 | 6.4 | 14 | 12 |
| 28 | 22 | 28 | 58 | 858 | 324 | 30 | 13 | 2.6 | 5.5 | 5.8 | 9.4 | 14 |
| 29 | 23 | ------ | 62 | 847 | 304 | 28 | 10 | 2.6 | 4.7 | 7.8 | 11 | 14 |
| 30 | 24 | ------ | 56 | 644 | 323 | 26 | 10 | 3.5 | 3.5 | 7.8 | 17 | 16 |
| 31 | 25 | ------ | 51 | ------ | 332 | ------ | 35 | 3.5 | ------ | 10 | ------ | 14 |
| TOTAL | 692 | 634 | 1,605 | 7,905 | 22,288 | 3,700 | 524 | 123.4 | 133.8 | 203.5 | 351.9 | 476 |
| MEAN | 22.3 | 22.6 | 51.8 | 264 | 719 | 123 | 16.9 | 3.98 | 4.46 | 6.56 | 11.7 | 15.4 |
| MAX | 26 | 28 | 110 | 858 | 1,270 | 307 | 35 | 7.1 | 7.2 | 10 | 17 | 19 |
| MIN | 19 | 19 | 29 | 43 | 304 | 26 | 10 | 2.2 | 2.6 | 3.0 | 7.0 | 12 |
| AC-FT | 1,370 | 1,260 | 3,180 | 15,680 | 44,210 | 7,340 | 1,040 | 245 | 265 | 404 | 698 | 944 |

CAL YR 1973 TOTAL 38,636.6 MEAN 106 MAX 1,270 MIN 2.2 AC-FT 76,640
WTR YR 1973 TOTAL 39,488.0 MEAN 108 MAX 1,270 MIN 2.2 AC-FT 78,320

PEAK DISCHARGE (BASE, 600 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-29 | 1345 | 5.67 | 1,080 | 5-11 | 0215 | 6.27 | 1,670 |
| 5- 5 | 0800 | 5.51 | 932 | | | | |

## 08290000 RIO CHAMA NEAR CHAMITA, N. MEX.

LOCATION.--Lat 36°04'26", long 106°06'40", in NE¼NE¼ sec.8, T.21 N., R.8 E., Rio Arriba County, San Juan Pueblo Grant, at downstream end of pier nearest left bank of bridge on U.S. Highway 285, 0.5 mi (0.8 km) west of Chamita, 2.5 mi (4.0 km) northwest of San Juan Pueblo, and at mile 2.8 (4.5 km).

DRAINAGE AREA.--3,144 mi² (8,143 km²), of which about 100 mi² (260 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1912 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as Chama River near Chamita prior to 1928, and Chama River at Chamita 1929-30.

GAGE.--Water-stage recorder. Concrete control since Jan. 1, 1964. Datum of gage is 5,653.61 ft (1,723.220 m) above mean sea level. Prior to Oct. 4, 1933, at railroad bridge 2.3 mi (3.7 km) downstream at different datums. Oct. 4, 1933 to Mar. 1, 1942, at site 50 ft (15 m) downstream at datum 0.22 ft (0.067 m) higher. Mar. 2, 1942 to Dec. 31, 1963, at site 200 ft (61 m) downstream, present datum.

AVERAGE DISCHARGE.--59 calendar years (1913-71), 537 ft³/s (15.21 m³/s), 389,100 acre-ft/yr (480 hm³/yr), prior to release of transmountain water.

EXTREMES.--Current year: Maximum discharge, 3,310 ft³/s (93.7 m³/s) July 12 (gage height, 6.04 ft or 1.841 m); minimum, 16 ft³/s (0.45 m³/s) Nov. 15.
Period of record: Maximum discharge, 15,000 ft³/s (425 m³/s) May 22, 1920, from rating curve extended above 2,300 ft³/s (65.1 m³/s); maximum gage height, 10.45 ft (3.185 m) Aug. 22, 1961; no flow at times.
The floods of Sept. 29, 1904, and Oct. 4 or 5, 1911, probably exceeded 15,000 ft³/s (425 m³/s). Another major flood occurred in 1884, from newspaper accounts.

REMARKS.--Records good. Diversions above station for irrigation of about 27,600 acres (112 km²). Chamita ditch, on left bank, and Hernandez ditch, on right bank, bypass gage for irrigation of several hundred acres below station; see tabulation below for monthly diversion. Flow partly regulated by El Vado Reservoir (see sta 08285000) and Abiquiu Reservoir (see sta 08286900), 74.9 mi (120.5 km) and 29.3 mi (47.1 km) upstream, respectively. Since April 1972 flow affected by release of transmountain water from Heron Reservoir (see sta 08284510) 83.0 mi (133.5 km) upstream. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1512: 1913-15, 1934, 1936. WSP 1632: 1929(M). WSP 1732: 1931(M). WSP 1923: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 87 | 170 | 109 | 275 | 1,680 | 1,140 | 1,850 | 1,450 | 646 | 394 | 69 | 1,040 |
| 2 | 82 | 124 | 136 | 149 | 1,440 | 1,130 | 1,860 | 1,460 | 608 | 371 | 48 | 1,030 |
| 3 | 131 | 121 | 319 | 343 | 1,260 | 1,080 | 1,820 | 1,450 | 587 | 308 | 43 | 1,040 |
| 4 | 95 | 142 | 339 | 124 | 1,660 | 1,060 | 1,750 | 1,430 | 542 | 313 | 38 | 1,030 |
| 5 | 127 | 218 | 299 | 152 | 1,890 | 991 | 1,740 | 1,420 | 533 | 311 | 51 | 1,030 |
| 6 | 85 | 152 | 189 | 245 | 1,830 | 944 | 1,780 | 1,420 | 555 | 303 | 51 | 1,080 |
| 7 | 111 | 151 | 184 | 240 | 1,760 | 936 | 1,810 | 1,450 | 588 | 293 | 46 | 1,090 |
| 8 | 120 | 155 | 130 | 348 | 1,880 | 929 | 1,820 | 1,440 | 588 | 318 | 44 | 1,130 |
| 9 | 96 | 176 | 203 | 239 | 1,750 | 916 | 1,780 | 1,440 | 617 | 348 | 44 | 1,120 |
| 10 | 124 | 139 | 196 | 195 | 2,390 | 918 | 1,750 | 1,490 | 638 | 290 | 45 | 1,110 |
| 11 | 122 | 184 | 208 | 214 | 2,710 | 916 | 1,750 | 1,490 | 924 | 276 | 44 | 1,100 |
| 12 | 109 | 206 | 229 | 589 | 2,840 | 877 | 1,870 | 1,490 | 472 | 190 | 46 | 1,090 |
| 13 | 104 | 171 | 178 | 827 | 2,930 | 695 | 1,580 | 1,520 | 226 | 176 | 39 | 1,090 |
| 14 | 153 | 158 | 347 | 1,150 | 1,550 | 216 | 260 | 1,610 | 228 | 131 | 44 | 1,070 |
| 15 | 146 | 183 | 153 | 1,360 | 1,250 | 159 | 244 | 1,330 | 645 | 99 | 46 | 989 |
| 16 | 110 | 180 | 140 | 1,210 | 1,260 | 123 | 155 | 241 | 746 | 84 | 33 | 1,000 |
| 17 | 148 | 201 | 144 | 538 | 1,290 | 108 | 810 | 339 | 663 | 57 | 21 | 1,010 |
| 18 | 142 | 226 | 192 | 975 | 1,260 | 98 | 297 | 526 | 502 | 62 | 34 | 1,080 |
| 19 | 138 | 127 | 338 | 1,050 | 1,490 | 73 | 219 | 594 | 355 | 65 | 301 | 1,120 |
| 20 | 125 | 119 | 345 | 571 | 1,420 | 72 | 110 | 672 | 398 | 45 | 751 | 1,120 |
| 21 | 157 | 185 | 414 | 496 | 1,370 | 76 | 518 | 662 | 403 | 156 | 723 | 1,130 |
| 22 | 150 | 138 | 615 | 463 | 1,100 | 715 | 1,270 | 652 | 391 | 164 | 704 | 1,120 |
| 23 | 101 | 104 | 278 | 586 | 877 | 1,020 | 1,410 | 615 | 368 | 172 | 702 | 1,120 |
| 24 | 127 | 146 | 356 | 922 | 844 | 1,040 | 1,690 | 630 | 384 | 95 | 746 | 1,120 |
| 25 | 132 | 133 | 208 | 1,140 | 933 | 1,110 | 1,680 | 680 | 430 | 94 | 746 | 1,110 |
| 26 | 130 | 94 | 176 | 1,340 | 1,150 | 1,130 | 1,850 | 673 | 395 | 96 | 766 | 1,130 |
| 27 | 174 | 91 | 244 | 1,440 | 1,170 | 1,440 | 1,780 | 686 | 410 | 55 | 837 | 1,190 |
| 28 | 168 | 96 | 296 | 1,640 | 952 | 1,610 | 1,750 | 683 | 432 | 28 | 866 | 1,190 |
| 29 | 163 | ------ | 221 | 1,750 | 971 | 1,730 | 1,750 | 677 | 456 | 22 | 963 | 1,180 |
| 30 | 171 | ------ | 285 | 1,870 | 1,200 | 1,800 | 1,720 | 710 | 449 | 53 | 983 | 1,160 |
| 31 | 139 | ------ | 289 | ------ | 1,180 | ------ | 1,690 | 678 | ------ | 88 | ------ | 1,160 |
| TOTAL | 3,967 | †4,290 | 7,760 | 22,441 | 47,287 | 25,052 | 42,363 | 31,608 | 15,179 | 5,457 | 9,874 | 33,979 |
| MEAN | 128 | 153 | 250 | 748 | 1,525 | 835 | 1,367 | 1,020 | 506 | 176 | 329 | 1,096 |
| MAX | 174 | 226 | 615 | 1,870 | 2,930 | 1,800 | 1,870 | 1,610 | 924 | 394 | 983 | 1,190 |
| MIN | 82 | 91 | 109 | 124 | 844 | 72 | 110 | 241 | 226 | 22 | 21 | 989 |
| AC-FT | 7,870 | 8,510 | 15,390 | 44,510 | 93,790 | 49,690 | 84,030 | 62,690 | 30,110 | 10,820 | 19,590 | 67,400 |
| (†) | - | - | - | 94 | 640 | 950 | 825 | 821 | 603 | 427 | - | - |
| (‡) | - | - | - | 356 | 593 | 1,010 | 799 | 950 | 652 | 597 | - | - |

CAL YR 1973 TOTAL 249,257.0 MEAN 683 MAX 2,930 MIN 21 AC-FT 494,400
WTR YR 1973 TOTAL 220,791.8 MEAN 605 MAX 2,930 MIN 7.6 AC-FT 437,900

† Diversion, in acre-feet, by Chamita ditch.
‡ Diversion, in acre-feet, by Hernandez ditch.

Diversions from Rio Chama

During the irrigation season records of discharge are collected on all 17 ditches and 2 pumps which divert from Rio Chama below El Vado Dam. All measuring devices consist of totalizing type flowmeters. All ditches are also equipped with Parshall flumes. In most cases meters on ditches are located below the most downstream wasteway and above any irrigated land. Flows tabulated represent water that is delivered to each ditch or portion thereof and may include waste water from another ditch. No attempt is made to credit for water returned to Rio Chama or delivered to another ditch.

08286300 MONASTERY PUMP NEAR ALIRE, N. MEX.--Lat 36°22'45", long 106°40'55", in SE¼SW¼, sec.24, T.25 N., R.2 E., Rio Arriba County, in Santa Fe National Forest, totalizing flowmeter on discharge pipe of pump on left bank of Rio Chama, at Christ of the Desert Monastery, 8.8 mi (14.2 km) southwest of Alire, and 24 mi (39 km) northwest of Abiquiu. Period of record, April 1972 to current year.

08287020 ABEYTA TRUJILLO DITCH NEAR ABIQUIU, N. MEX.--Lat 36°14'03", long 106°23'22", Rio Arriba County, in Carson National Forest, totalizing flowmeter and Parshall flume on left bank 0.9 mi (1.4 km) downstream from heading located on left bank of Rio Chama, and 4.5 mi (7.2 km) northeast of Abiquiu. Period of record, April 1972 to current year.

08287040 WINFELD MORTON PUMP NEAR ABIUQIU, N. MEX.--Lat 36°12'40", long 106°20'48", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter on discharge pipe of pump on left bank of Jose Pablo Gonzales ditch 700 ft (210 m) downstream from ditch heading located on left bank of Rio Chama, and 1.4 mi (2.3 km) west of Abiquiu. Period of record, April 1972 to current year.

08287060 JOSE PABLO GONZALES DITCH NEAR ABIQUIU, N. MEX.--Lat 36°12'25", long 106°20'35", Rio Arriba County, in Town of Abiquiu Grant, totalizing flowmeter and Parshall flume on left bank, 0.5 mi (0.8 km) downstream from Winfield Morton pump, 0.6 mi (1.0 km) downstream from heading located on left bank of Rio Chama, and 1.2 mi (1.9 km) west of Abiquiu. Period of record, April 1972 to current year.

08287150 GONZALES DITCH AT ABIQUIU, N. MEX.--Lat 36°12'46", long 106°19'16", Rio Arriba County, in Town of Abiquiu Grant, totalizing flowmeter and Parshall flume on right bank, 0.2 mi (0.3 km) downstream from heading located on right bank of Rio Chama, and 0.4 mi (0.6 km) northwest of Abiquiu. Period of record, April 1972 to current year.

08287200 LA PUENTE DITCH NEAR ABIQUIU, N. MEX.--Lat 36°12'52", long 106°16'27", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on left bank, 100 ft (30 m) downstream from culvert on U.S. Highway 84, 0.4 mi (0.6 km) downstream from heading located on right bank of Rio Chama, and 2.5 mi (4.0 km) east of Abiquiu. Period of record, April 1972 to current year.

08287250 QUINTANA DITCH NEAR ABIQUIU, N. MEX.--Lat 36°12'55", long 106°16'26", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank, 100 ft (30 m) upstream from culvert on U.S. Highway 84, 0.2 mi (0.3 km) downstream from heading located on right bank of Rio Chama, and 2.6 mi (4.2 km) east of Abiquiu. Period of record, April 1972 to current year.

08287270 VALENTINE MARTINEZ DITCH NEAR ABIQUIU, N. MEX.--Lat 36°12'55", long 106°16'12", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank on north side of U.S. Highway 84, 0.2 mi (0.3 km) downstream from heading located on left bank of Quintana ditch (see sta 08287250), and 2.8 mi (4.5 km) east of Abiquiu. Period of record, April 1972 to current year.

08287300 MARIANO DITCH NEAR ABIQUIU, N. MEX.--Lat 36°13'05", long 106°16'09", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on left bank 0.5 mi (0.8 km) downstream from heading located on left bank of Rio Chama, and 2.9 mi (4.7 km) east of Abiquiu. Period of record, April 1972 to current year.

08287400 FERRAN DITCH NEAR ABIQUIU, N. MEX.--Lat 36°12'57", long 106°14'34", Rio Arriba County, in Carson National Forest, totalizing flowmeter and Parshall flume on left bank just downstream from siphon, 40 ft (12 m) upstream from forest boundary, 0.2 mi (0.3 km) downstream from culvert on State Highway 96, 0.4 mi (0.6 km) downstream from tail of Mariano ditch (see sta 08287300), 0.9 mi (1.4 km) downstream from heading located on left bank of Rio Chama, and 4.4 mi (7.1 km) east of Abiquiu. Period of record, April 1972 to current year.

08287600 TIERRA AZUL DITCH NEAR MEDANALES, N. MEX.--Lat 36°12'06", long 106°14'11", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank 1.1 mi (1.8 km) downstream from heading located on right bank of Rio Chama, and 3.5 mi (5.6 km) northwest of Medanales. Period of record, April 1972 to current year.

08288050 JOSE V. MARTINEZ DITCH NEAR MEDANALES, N. MEX.--Lat 36°11'44", long 106°13'39", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on left bank 0.1 mi (0.2 km) downstream from heading located on left bank of Rio Chama, and 2.9 mi (4.7 km) northwest of Medanales. Period of record, April 1972 to current year.

08288100 MANZANARES AND MONTOYO DITCH NEAR MEDANALES, N. MEX.--Lat 36°11'13", long 106°12'35", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank, 0.2 mi (0.3 km) downstream from heading located on right bank of Rio Chama, and 1.7 mi (2.7 km) northeast of Medanales. Period of record, April 1972 to current year.

08288150 RIO DE CHAMA DITCH NEAR MEDANALES, N. MEX.--Lat 36°11'13", long 106°12'02", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter, water-stage recorder, and Parshall flume on left bank, 0.5 mi (0.8 km) downstream from tail of Jose V. Martinez ditch (see sta 08288050), 0.7 mi (1.1 km) downstream from heading located on left bank of Rio Chama, and 1.3 mi (2.1 km) northwest of Medanales. Period of record, April 1972 to current year.

08288200 MARTINEZ AND DURANES DITCH (UPPER) NEAR MEDANALES, N. MEX.--Lat 36°10'55", long 106°11'59", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank, 300 ft (91 m) downstream from tail of Manzanares and Montoya ditch (see sta 08288100), 0.7 mi (1.1 km) downstream from heading located on right bank of Rio Chama, and 1.1 mi (1.8 km) northwest of Medanales. Period of record, April 1972 to current year.

08288250 MARTINEZ AND DURANES DITCH (LOWER) NEAR MEDANALES, N. MEX.--Lat 36°09'26", long 106°10'24", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank, 0.9 mi (1.4 km) downstream from culvert on State Highway 233, 1.4 mi (2.3 km) south of Medanales, 2.5 mi (4.0 km) downstream from "upper" gage (see sta 08288200), and 3.2 mi (5.1 km) downstream from heading located on right bank of Rio Chama. Period of record, April 1972 to current year.

08288300 CHILI DITCH NEAR HERNANDEZ, N. MEX.--Lat 36°07'00", long 106°09'11", in SW¼SW¼ sec.24, T.22 N., R.7 E., Rio Arriba County, totalizing flowmeter and Parshall flume on left bank, 0.4 mi (0.6 km) downstream from heading located on right bank of Rio Chama, 0.5 mi (0.8 km) upstream from siphon under Rio del Oso, and 4.1 mi (6.6 km) northwest of Hernandez. Period of record, April 1972 to current year.

Diversions from Rio Chama - Continued

08289500 CHAMITA DITCH NEAR CHAMITA, N. MEX.--Lat 36°04'57", long 106°06'54", in SW¼NE¼ sec.5, T.21 N., R.8 E., in Rio Arriba County, in San Juan Pueblo Grant, totalizing flowmeter and Parshall flume on left bank, 30 ft (9 m) upstream from flume over Arroyo de la Penita, 0.7 mi (1.1 km) downstream from heading located on left bank of Rio Chama, and 1.0 mi (1.6 km) northwest of Chamita. Period of record, March 1936 to April 1941, February 1963 to current year (records furnished by Bureau of Reclamation August 1966 to December 1972).

08289800 HERNANDEZ DITCH AT HERNANDEZ, N. MEX.--Lat 36°04'52", long 106°07'16", Rio Arriba County, in Bartolome Sanchez Grant, totalizing flowmeter and Parshall flume on right bank, 0.7 mi (1.1 km) downstream from heading located on right bank of Rio Chama, 1.1 mi (1.8 km) north of Hernandez, and 1.3 mi (2.1 km) northwest of Chamita. Period of record, March 1963 to current year (records furnished by Bureau of Reclamation July 1965 to December 1971).

08290100 SALAZAR DITCH AT HERNANDEZ, N. MEX.--Lat 36°03'44", long 106°06'31", in SE¼SE¼ sec.8,T.21 N., R.8 E., Rio Arriba County, in San Juan Pueblo Grant, totalizing flowmeter and Parshall flume on right bank, 0.1 mi (0.2 km) downstream from heading located on right bank of Rio Chama, and 0.6 mi (1.0 km) east of Hernandez. Period of record, April 1972 to current year.

Diversions from Rio Chama, in acre-feet, calendar year 1973

| | Diversion | APR | MAY | JUN | JUL | AUG | SEP | OCT |
|---|---|---|---|---|---|---|---|---|
| 08286300 | Monastery pump | 0 | 0 | 0 | 2.1 | 0 | 0.1 | 0 |
| 08287020 | Abeyta Trujillo ditch | 0 | 176 | 397 | 311 | 426 | 323 | 97 |
| 08287040 | Winfield Morton pump | 0 | 1.0 | 42 | 52 | 28 | 34 | 1.4 |
| 08287060 | Jose Pablo Gonzales ditch | 213 | 631 | 1,030 | 733 | 895 | 832 | 312 |
| 08287150 | Gonzales ditch | 0 | 101 | 244 | 183 | 150 | 99 | 43 |
| 08287200 | La Puente ditch | 0 | 109 | 57 | 21 | 36 | 0 | 0 |
| 08287250 | Quintana ditch | 66 | 65 | 72 | 43 | 102 | 40 | 28 |
| 08287270 | Valentine Martinez ditch | 4.0 | 18 | 24 | 15 | 28 | 10 | 9 |
| 08287300 | Mariano ditch | 0 | 34 | 198 | 201 | 210 | 218 | 38 |
| 08287400 | Ferran ditch | 0 | a60 | a60 | a100 | a50 | 15 | 0 |
| 08287600 | Tierra Azul ditch | 0 | 250 | 382 | 651 | 655 | 214 | 4 |
| 08288050 | Jose V. Martinez ditch | 164 | 158 | 108 | 122 | 98 | 144 | 51 |
| 08288100 | Manzanares and Montoya ditch | 7.0 | 69 | 57 | 75 | 67 | 26 | 1.0 |
| 08288150 | Rio de Chama ditch | 228 | 428 | 639 | 666 | 691 | 511 | 167 |
| 08288200 | Martinez and Duranes ditch (upper) | 262 | 723 | 766 | 714 | 932 | 560 | 321 |
| 08288250 | Martinez and Duranes ditch (lower) | 243 | 585 | 213 | 107 | 169 | 78 | 150 |
| 08288300 | Chili ditch | a230 | a290 | a340 | a380 | a360 | a220 | a140 |
| 08289500 | Chamita ditch | b94 | b640 | b950 | b825 | b821 | b603 | b427 |
| 08289800 | Hernandez ditch | b356 | b593 | b1,010 | b799 | b950 | b652 | b597 |
| 08290100 | Salazar ditch | 78 | 539 | 686 | 784 | 681 | 298 | a350 |

a Parshall flume submerged; record partially estimated.
b Bureau of Reclamation records used to supplement or modify flowmeter reading.

## 08291000 SANTA CRUZ RIVER AT CUNDIYO, N. MEX.

LOCATION.--Lat 35°57'53", long 105°54'14", in SE¼NW¼ sec.17, T.20 N., R.10 E., Santa Fe County, on left bank 135 ft (41 m) downstream from bridge on State Highway 4, 200 ft (61 m) downstream from confluence of Rio Medio and Rio Frijoles, 0.6 mi (1.0 km) northwest of Cundiyo, 1.8 mi (2.9 km) upstream from Santa Cruz Dam, and at mile 11.9 (19.1 km).

DRAINAGE AREA.--86 mi² (220 km²), approximately.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1953, published as Rio Santa Cruz at Cundiyo.

GAGE.--Water-stage recorder. Concrete control since Jan. 3, 1954. Altitude of gage is 6,460 ft (1,969 m) from topographic map. Sept. 1, 1930 to Aug. 12, 1932, water-stage recorder at site about 1 mi (2 km) downstream at different datum. Aug. 13, 1932 to Oct. 29, 1934, water-stage recorder at site 35 ft (11 m) upstream at datum 0.42 ft (0.128 m) higher. Oct. 30, 1934 to Jan. 2, 1954, water-stage recorder at present site at datum 0.64 ft (0.195 m) lower.

AVERAGE DISCHARGE.--43 calendar years, 29.0 ft³/s (0.821 m³/s), 21,010 acre-ft/yr (25.9 hm³/yr); 20 calendar years (1954-73), 26.4 ft³/s (0.748 m³/s), 19,130 acre-ft/yr (23.6 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 483 ft³/s (13.7 m³/s) May 21 (gage height, 3.48 ft or 1.061 m); maximum gage height, 3.53 ft (1.076 m) Dec. 27, backwater from ice; minimum discharge, 3.8 ft³/s (0.108 m³/s) Nov. 15, result of freezeup.
Period of record: Maximum discharge, 2,420 ft³/s (68.5 m³/s) Sept. 24, 1931 (gage height, 7.8 ft or 2.38 m, site and datum then in use), from rating curve extended above 170 ft³/s (4.81 m³/s); minimum, 0.19 ft³/s (0.005 m³/s) Mar. 13, 1954, result of freezeup.

REMARKS.--Records good except those for winter periods, which are fair. Diversions for irrigation of about 1,000 acres (4.05 hm³) above station.

REVISIONS (WATER YEARS).--WSP 1392: 1931(M), 1932-33, 1934-39(M), 1942, 1943(M).

### DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12 | 11 | 18 | 43 | 135 | 275 | 126 | 27 | 16 | 10 | 9.0 | 10 |
| 2 | 11 | 11 | 23 | 44 | 125 | 273 | 119 | 26 | 14 | 10 | 9.0 | 9.7 |
| 3 | 10 | 11 | 28 | 38 | 125 | 256 | 115 | 25 | 13 | 9.9 | 8.4 | 9.3 |
| 4 | 11 | 12 | 27 | 37 | 138 | 246 | 109 | 28 | 13 | 10 | 9.2 | 9.2 |
| 5 | 12 | 12 | 27 | 39 | 154 | 235 | 103 | 24 | 13 | 10 | 8.8 | 9.0 |
| 6 | 11 | 12 | 22 | 48 | 141 | 238 | 94 | 23 | 12 | 12 | 9.3 | 9.0 |
| 7 | 11 | 12 | 22 | 60 | 133 | 233 | 88 | 21 | 12 | 11 | 9.9 | 9.5 |
| 8 | 11 | 12 | 21 | 53 | 134 | 245 | 83 | 21 | 11 | 10 | 9.8 | 10 |
| 9 | 11 | 10 | 21 | 51 | 158 | 267 | 81 | 20 | 9.6 | 9.8 | 9.5 | 10 |
| 10 | 12 | 11 | 21 | 55 | 250 | 292 | 75 | 19 | 13 | 12 | 9.4 | 10 |
| 11 | 11 | 12 | 21 | 69 | 291 | 304 | 65 | 18 | 41 | 12 | 9.2 | 10 |
| 12 | 11 | 12 | 24 | 84 | 360 | 313 | 63 | 19 | 20 | 12 | 9.1 | 9.5 |
| 13 | 12 | 12 | 29 | 94 | 350 | 309 | 61 | 18 | 16 | 12 | 8.9 | 9.4 |
| 14 | 12 | 12 | 27 | 117 | 349 | 324 | 57 | 18 | 14 | 12 | 8.9 | 9.2 |
| 15 | 12 | 11 | 26 | 123 | 269 | 298 | 58 | 18 | 12 | 12 | 6.1 | 9.0 |
| 16 | 12 | 11 | 26 | 96 | 236 | 269 | 54 | 16 | 11 | 12 | 5.6 | 9.5 |
| 17 | 13 | 13 | 29 | 88 | 209 | 247 | 60 | 14 | 12 | 11 | 7.4 | 9.5 |
| 18 | 13 | 11 | 34 | 100 | 243 | 236 | 54 | 14 | 12 | 11 | 7.5 | 9.2 |
| 19 | 13 | 10 | 41 | 87 | 325 | 218 | 51 | 13 | 12 | 10 | 8.2 | 9.0 |
| 20 | 12 | 11 | 49 | 80 | 378 | 196 | 45 | 14 | 12 | 10 | 6.6 | 8.5 |
| 21 | 11 | 12 | 56 | 72 | 418 | 195 | 43 | 15 | 11 | 9.9 | 8.3 | 9.0 |
| 22 | 10 | 12 | 51 | 76 | 407 | 183 | 41 | 14 | 11 | 9.8 | 11 | 8.5 |
| 23 | 10 | 11 | 49 | 86 | 346 | 171 | 37 | 12 | 9.7 | 9.7 | 11 | 8.5 |
| 24 | 11 | 12 | 44 | 100 | 328 | 167 | 34 | 12 | 12 | 9.3 | 9.5 | 9.0 |
| 25 | 12 | 12 | 44 | 109 | 336 | 159 | 30 | 12 | 9.8 | 8.9 | 9.5 | 8.5 |
| 26 | 11 | 12 | 46 | 104 | 330 | 158 | 32 | 12 | 11 | 9.3 | 10 | 8.5 |
| 27 | 11 | 13 | 51 | 108 | 292 | 158 | 29 | 11 | 12 | 9.3 | 9.0 | 8.0 |
| 28 | 10 | 15 | 47 | 111 | 254 | 155 | 28 | 11 | 12 | 9.1 | 8.5 | 8.5 |
| 29 | 10 | ------ | 45 | 113 | 234 | 148 | 28 | 13 | 11 | 9.3 | 9.0 | 8.5 |
| 30 | 11 | ------ | 40 | 125 | 239 | 138 | 30 | 20 | 9.8 | 8.9 | 10 | 8.8 |
| 31 | 12 | ------ | 42 | ------ | 248 | ------ | 28 | 17 | ------ | 8.7 | ------ | 8.5 |
| TOTAL | 352 | 328 | 1,051 | 2,410 | 7,935 | 6,906 | 1,921 | 545 | 397.9 | 320.9 | 265.6 | 282.8 |
| MEAN | 11.4 | 11.7 | 33.9 | 80.3 | 256 | 230 | 62.0 | 17.6 | 13.3 | 10.4 | 8.85 | 9.12 |
| MAX | 13 | 15 | 56 | 125 | 418 | 324 | 126 | 28 | 41 | 12 | 11 | 10 |
| MIN | 10 | 10 | 18 | 37 | 125 | 138 | 28 | 11 | 9.6 | 8.7 | 5.6 | 8.0 |
| AC-FT | 698 | 651 | 2,080 | 4,780 | 15,740 | 13,700 | 3,810 | 1,080 | 789 | 637 | 527 | 561 |

CAL YR 1973 TOTAL 22,715.2 MEAN 62.2 MAX 418 MIN 5.6 AC-FT 45,060
WTR YR 1973 TOTAL 23,367.9 MEAN 64.0 MAX 418 MIN 9.6 AC-FT 46,350

PEAK DISCHARGE (BASE, 100 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-14 | 2230 | 2.65 | 170 | 5-21 | 2300 | 3.48 | 483 |
| 5-12 | 2300 | 3.30 | 418 | 6-14 | 0315 | 3.26 | 360 |

## 08294300 RIO NAMBE AT NAMBE FALLS, NEAR NAMBE, N. MEX.

LOCATION.--Lat 35°50'46", long 105°54'29", in NW¼SW¼ sec.29, T.19 N., R.10 E., Santa Fe County, in Nambe Indian Reservation, on left bank 800 ft (240 m) downstream from Nambe Falls, 2.4 mi (3.9 km) upstream from confluence of Rio Nambe and Rio En Medio, 4.2 mi (6.8 km) southeast of Nambe Pueblo and 5.2 mi (8.4 km) southeast of Nambe.

DRAINAGE AREA.--25.1 mi² (65.0 km²).

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 6,513.73 ft (1,985.385 m) above mean sea level (levels by Bureau of Reclamation).

AVERAGE DISCHARGE.--10 calendar years, 11.0 ft³/s (0.312 m³/s), 7,970 acre-ft/yr (9.83 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 149 ft³/s (4.22 m³/s) June 14 (gage height, 1.63 ft or 0.497 m); minimum not determined. Period of record: Maximum discharge, 1,090 ft³/s (30.9 m³/s) Aug. 8, 1967 (gage height, about 6.0 ft or 1.83 m, from floodmarks), from rating curve extended above 44 ft³/s (1.25 m³/s) on basis of field estimate of peak flow; minimum determined, 0.50 ft³/s (0.014 m³/s) Mar. 19, 1971, but may have been less during periods of ice effect.

COOPERATION.--Records furnished by Bureau of Reclamation.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.8 | 3.8 | 4.5 | 21 | 56 | 118 | 86 | 16 | 11 | 6.0 | 5.3 | 5.1 |
| 2 | 3.9 | 3.7 | 5.1 | 24 | 44 | 118 | 82 | 17 | 9.8 | 6.0 | 4.8 | 4.8 |
| 3 | 3.8 | 3.6 | 5.1 | 25 | 41 | 115 | 82 | 17 | 8.9 | 6.0 | 4.5 | 4.8 |
| 4 | 3.3 | 3.6 | 5.8 | 26 | 49 | 113 | 75 | 18 | 8.5 | 6.0 | 5.1 | 5.1 |
| 5 | 3.5 | 3.8 | 6.1 | 23 | 60 | 115 | 68 | 17 | 8.0 | 6.0 | 4.5 | 5.1 |
| 6 | 3.4 | 3.8 | 6.1 | 22 | 53 | 118 | 64 | 17 | 8.0 | 7.4 | 4.5 | 6.1 |
| 7 | 3.2 | 3.8 | 6.5 | 26 | 46 | 110 | 58 | 17 | 7.6 | 6.6 | 4.8 | 5.2 |
| 8 | 3.5 | 3.6 | 6.1 | 29 | 41 | 110 | 56 | 17 | 6.8 | 6.0 | 4.5 | 5.3 |
| 9 | 3.3 | 3.3 | 6.1 | 30 | 46 | 107 | 56 | 17 | 6.8 | 5.6 | 4.8 | 5.4 |
| 10 | 3.5 | 3.1 | 6.5 | 30 | 64 | 118 | 56 | 15 | 12 | 6.4 | 4.8 | 5.4 |
| 11 | 3.3 | 3.4 | 6.5 | 31 | 86 | 127 | 49 | 14 | 25 | 7.0 | 4.8 | 5.4 |
| 12 | 3.1 | 3.6 | 6.5 | 31 | 115 | 135 | 48 | 16 | 12 | 7.0 | 4.5 | 5.4 |
| 13 | 3.6 | 3.5 | 6.8 | 31 | 121 | 135 | 44 | 14 | 11 | 7.0 | 4.5 | 5.4 |
| 14 | 3.6 | 3.3 | 8.0 | 37 | 113 | 138 | 41 | 14 | 10 | 7.0 | 4.5 | 5.4 |
| 15 | 3.6 | 3.2 | 11 | 55 | 96 | 127 | 40 | 16 | 10 | 7.0 | 4.0 | 5.5 |
| 16 | 3.8 | 3.3 | 9.4 | 46 | 86 | 118 | 36 | 13 | 9.8 | 7.0 | 4.8 | 5.4 |
| 17 | 3.8 | 3.3 | 8.5 | 43 | 79 | 113 | 40 | 13 | 8.9 | 6.6 | 5.1 | 5.3 |
| 18 | 3.8 | 3.1 | 8.5 | 46 | 84 | 110 | 32 | 12 | 8.5 | 6.6 | 4.5 | 5.1 |
| 19 | 3.6 | 3.0 | 8.9 | 46 | 99 | 107 | 30 | 11 | 8.9 | 5.6 | 4.8 | 5.1 |
| 20 | 3.4 | 3.0 | 9.4 | 44 | 110 | 104 | 28 | 11 | 8.0 | 5.6 | 3.8 | 5.1 |
| 21 | 3.3 | 3.2 | 11 | 40 | 113 | 99 | 26 | 11 | 8.0 | 5.6 | 5.0 | 5.3 |
| 22 | 3.3 | 3.0 | 13 | 35 | 110 | 94 | 24 | 11 | 7.6 | 5.6 | 5.8 | 5.1 |
| 23 | 3.5 | 3.0 | 14 | 35 | 102 | 91 | 21 | 11 | 8.0 | 5.6 | 5.4 | 5.1 |
| 24 | 3.8 | 3.1 | 18 | 39 | 107 | 91 | 20 | 9.8 | 8.5 | 5.4 | 5.4 | 5.4 |
| 25 | 4.0 | 3.2 | 18 | 48 | 104 | 91 | 17 | 9.8 | 8.0 | 4.9 | 5.6 | 5.2 |
| 26 | 4.2 | 3.3 | 16 | 49 | 102 | 94 | 18 | 8.9 | 8.0 | 5.2 | 5.8 | 5.0 |
| 27 | 4.1 | 3.8 | 20 | 55 | 102 | 96 | 15 | 8.9 | 7.1 | 5.3 | 5.8 | 4.8 |
| 28 | 3.8 | 4.0 | 20 | 62 | 102 | 94 | 20 | 9.8 | 7.0 | 5.3 | 5.8 | 5.0 |
| 29 | 3.5 | ------ | 21 | 63 | 102 | 91 | 18 | 11 | 6.4 | 5.3 | 5.7 | 5.0 |
| 30 | 3.8 | ------ | 21 | 64 | 107 | 89 | 17 | 20 | 6.0 | 5.3 | 5.6 | 5.1 |
| 31 | 4.1 | ------ | 22 | ------ | 118 | ------ | 17 | 13 | ------ | 5.3 | ------ | 5.2 |
| TOTAL | 113.2 | 95.4 | 335.4 | 1,156 | 2,658 | 3,286 | 1,284 | 426.2 | 274.1 | 187.2 | 148.8 | 161.6 |
| MEAN | 3.65 | 3.41 | 10.8 | 38.5 | 85.7 | 110 | 41.4 | 13.7 | 9.14 | 6.04 | 4.96 | 5.21 |
| MAX | 4.8 | 4.0 | 22 | 64 | 121 | 138 | 86 | 20 | 25 | 7.4 | 5.8 | 6.1 |
| MIN | 3.1 | 3.0 | 4.5 | 21 | 41 | 89 | 15 | 8.9 | 6.0 | 4.9 | 3.8 | 4.8 |
| AC-FT | 225 | 189 | 665 | 2,290 | 5,270 | 6,520 | 2,550 | 845 | 544 | 371 | 295 | 321 |

CAL YR 1973 TOTAL 10,125.9 MEAN 27.7 MAX 138 MIN 3.0 AC-FT 20,080
WTR YR 1973 TOTAL 10,352.6 MEAN 28.4 MAX 138 MIN 3.0 AC-FT 20,530

PEAK DISCHARGE (BASE, 40 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-15 | 0300 | 1.14 | 60 | 5-13 | 2130 | 1.65 | 136 |
| 4-30 | 2030 | 1.19 | 68 | 6-14 | 0330 | 1.63 | 149 |
| 5- 5 | 2200 | 1.27 | 68 | 9-11 | 0930 | 1.27 | 56 |

NOTE.--No gage-height record Sept. 29 to Nov. 2.

## 08295200 RIO EN MEDIO NEAR SANTA FE, N. MEX.

LOCATION.--Lat 35°47'30", long 105°47'38", Santa Fe County, in Santa Fe National Forest, on right bank 300 ft (91m) east of Santa Fe Ski Basin parking area, and 10.8 mi (17.4 km) northeast of Santa Fe.

DRAINAGE AREA.--0.63 $mi^2$ (1.63 $km^2$).

PERIOD OF RECORD.--October 1963 to October 1973 (discontinued).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 10,600 ft (3,231 m) from topographic map.

AVERAGE DISCHARGE.--9 calendar years (1964-72), 0.730 $ft^3/s$ (0.0207 $m^3/s$), 529 acre-ft/yr (652,000 $m^3/yr$).

EXTREMES.--Maximum discharge during period January to October 1973, 11.5 $ft^3/s$ (0.326 $m^3/s$) June 13 (gage height, 1.52 ft or 0.463 m); minimum, 0.23 $ft^3/s$ (0.007 $m^3/s$) Mar. 13.
Period of record: Maximum discharge, 16.3 $ft^3/s$ (0.462 $m^3/s$) July 16, 1965 (gage height, 1.70 ft or 0.518 m), from rating curve extended above 6.90 $ft^3/s$ (0.195 $m^3/s$) on basis of theoretical rating; minimum, 0.14 $ft^3/s$ (0.004 $m^3/s$) Feb. 18, 1971.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .39 | .31 | .29 | .30 | .57 | 6.55 | 7.87 | 1.42 | .73 | .45 | | |
| 2 | .39 | .30 | .29 | .29 | .56 | 5.88 | 7.56 | 1.42 | .69 | .45 | | |
| 3 | .39 | .30 | .29 | .29 | .62 | 5.50 | 7.12 | 1.36 | .69 | .47 | | |
| 4 | .39 | .30 | .29 | .28 | .70 | 5.50 | 6.69 | 1.31 | .66 | .48 | | |
| 5 | .39 | .30 | .29 | .29 | .77 | 6.01 | 6.14 | 1.21 | .62 | .54 | | |
| 6 | .39 | .30 | .29 | .28 | .77 | 6.69 | 5.75 | 1.21 | .62 | .56 | | |
| 7 | .39 | .30 | .29 | .28 | .77 | 7.27 | 5.37 | 1.16 | .62 | .52 | | |
| 8 | .39 | .31 | .29 | .27 | .73 | 7.56 | 5.13 | 1.11 | .59 | .49 | | |
| 9 | .39 | .31 | .29 | .27 | .90 | 7.72 | 5.06 | 1.11 | .62 | .49 | | |
| 10 | .39 | .31 | .29 | .27 | 1.40 | 8.34 | 4.66 | 1.02 | .79 | .47 | | |
| 11 | .37 | .31 | .29 | .27 | 2.26 | 9.17 | 4.33 | 1.06 | 1.06 | .54 | | |
| 12 | .37 | .33 | .29 | .27 | 3.40 | 9.34 | 4.12 | 1.11 | .69 | .56 | | |
| 13 | .37 | .31 | .29 | .29 | 3.52 | 9.34 | 3.91 | 1.09 | .66 | .57 | | |
| 14 | .36 | .31 | .29 | .34 | 2.72 | 9.51 | 3.85 | 1.06 | .60 | .56 | | |
| 15 | .36 | .31 | .29 | .34 | 2.33 | 9.00 | 3.15 | 1.02 | .54 | .52 | | |
| 16 | .36 | .30 | .29 | .34 | 2.18 | 8.67 | 3.06 | .93 | .51 | .49 | | |
| 17 | .36 | .30 | .29 | .36 | 2.36 | 8.34 | 2.88 | .89 | .54 | .49 | | |
| 18 | .35 | .30 | .29 | .36 | 3.25 | 8.18 | 2.64 | .89 | .57 | .48 | | |
| 19 | .35 | .30 | .30 | .35 | 4.86 | 8.03 | 2.40 | .84 | .56 | .47 | | |
| 20 | .34 | .29 | .30 | .35 | 5.60 | 7.72 | 2.18 | .84 | .52 | .47 | | |
| 21 | .34 | .29 | .31 | .34 | 6.03 | 7.56 | 2.11 | .84 | .49 | .45 | | |
| 22 | .34 | .29 | .29 | .35 | 5.50 | 7.27 | 1.97 | .80 | .48 | .44 | | |
| 23 | .34 | .30 | .29 | .35 | 5.00 | 7.12 | 1.84 | .77 | .49 | .44 | | |
| 24 | .34 | .29 | .29 | .36 | 5.33 | 6.97 | 1.71 | .73 | .48 | .44 | | |
| 25 | .33 | .29 | .29 | .36 | 5.44 | 6.97 | 1.65 | .73 | .47 | .44 | | |
| 26 | .33 | .29 | .30 | .36 | 4.89 | 7.41 | 1.65 | .69 | .47 | .44 | | |
| 27 | .33 | .29 | .30 | .43 | 4.33 | 8.03 | 1.53 | .69 | .45 | .42 | | |
| 28 | .33 | .29 | .29 | .47 | 4.34 | 8.34 | 1.67 | .75 | .45 | .42 | | |
| 29 | .34 | ------ | .29 | .54 | 5.05 | 8.34 | 1.57 | .83 | .47 | .42 | | |
| 30 | .33 | ------ | .29 | .57 | 6.11 | 8.34 | 1.53 | .86 | .47 | .42 | | |
| 31 | .31 | ------ | .30 | ------ | 6.69 | ------ | 1.47 | .84 | ------ | .41 | | |
| TOTAL | 11.15 | 8.43 | 9.06 | 10.22 | 98.98 | 230.67 | 112.57 | 30.59 | 17.60 | 14.81 | | |
| MEAN | .360 | .301 | .292 | .341 | 3.193 | 7.689 | 3.631 | .987 | .587 | .478 | | |
| MAX | .39 | .33 | .31 | .57 | 6.69 | 9.51 | 7.87 | 1.42 | 1.06 | .57 | | |
| MIN | .31 | .29 | .29 | .27 | .56 | 5.50 | 1.47 | .69 | .45 | .41 | | |
| AC-FT | 22.1 | 16.7 | 18.0 | 20.3 | 196 | 458 | 223 | 60.7 | 34.9 | 29.4 | | |

WTR YR 1973 TOTAL 581.58 MEAN 1.593 MAX 9.51 MIN .27 AC-FT 1,150

PEAK DISCHARGE (BASE, 5.00 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-21 | 1600 | 1.26 | 7.12 | 7- 9 | 1600 | 1.38 | 9.00 |
| 5-30 | 1700 | 1.28 | 7.41 | 7-14 | 2100 | 1.24 | 6.83 |
| 6-13 | 2300 | 1.52 | 11.5 | | | | |

## 08302100 NORTH FORK TESUQUE CREEK TRIBUTARY NEAR SANTA FE, N. MEX.

LOCATION.--Lat 35°46'44", long 105°48'04", Santa Fe County, in Santa Fe National Forest, on left bank 40 ft (12 m) upstream from culvert on gravel road leading to radio towers from State Highway 475, 172 ft (52 m) upstream from mouth, and 9.9 miles (15.9 km) northeast of Santa Fe.

DRAINAGE AREA.--0.013 $mi^2$ (8.5 acres or 3.44 $km^2$).

PERIOD OF RECORD.--July to December 1973.

GAGE.--Water-stage recorder and 45° V-notch sharp-crested weir. Altitude of gage is 10,240 ft (3,121 m), from topographic map.

EXTREMES.--Maximum discharge during period, 0.045 $ft^3/s$ (0.001 $m^3/s$) Sept. 11 (gage height, 1.275 ft or 0.389 m); minimum 0.001 $ft^3/s$ (0.00003 $m^3/s$) Dec. 25.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | - | .004 | .003 | .002 | .002 | .002 |
| 2 | | | | | | | - | .004 | .002 | .002 | .002 | .002 |
| 3 | | | | | | | - | .004 | .002 | .002 | .002 | .002 |
| 4 | | | | | | | - | .004 | .002 | .002 | .002 | .002 |
| 5 | | | | | | | - | .004 | .002 | .003 | .002 | .002 |
| 6 | | | | | | | - | .004 | .002 | .002 | .002 | .002 |
| 7 | | | | | | | - | .004 | .002 | .002 | .002 | .002 |
| 8 | | | | | | | - | .004 | .002 | .002 | .002 | .002 |
| 9 | | | | | | | - | .004 | .002 | .002 | .002 | .002 |
| 10 | | | | | | | - | .004 | .003 | .003 | .002 | .002 |
| 11 | | | | | | | - | .004 | .005 | .004 | .002 | .002 |
| 12 | | | | | | | - | .004 | .003 | .004 | .002 | .002 |
| 13 | | | | | | | - | .005 | .003 | .004 | .002 | .002 |
| 14 | | | | | | | - | .004 | .003 | .003 | .002 | .002 |
| 15 | | | | | | | - | .004 | .002 | .003 | .002 | .002 |
| 16 | | | | | | | - | .004 | .002 | .002 | .002 | .002 |
| 17 | | | | | | | - | .003 | .002 | .002 | .002 | .002 |
| 18 | | | | | | | .007 | .003 | .002 | .002 | .002 | .002 |
| 19 | | | | | | | .006 | .003 | .002 | .002 | .002 | .002 |
| 20 | | | | | | | .006 | .002 | .002 | .002 | .002 | .002 |
| 21 | | | | | | | .006 | .002 | .002 | .002 | .002 | .002 |
| 22 | | | | | | | .006 | .003 | .002 | .002 | .002 | .002 |
| 23 | | | | | | | .006 | .003 | .002 | .002 | .002 | .002 |
| 24 | | | | | | | .005 | .002 | .002 | .002 | .002 | .002 |
| 25 | | | | | | | .005 | .002 | .002 | .002 | .002 | .002 |
| 26 | | | | | | | .005 | .002 | .002 | .002 | .002 | .002 |
| 27 | | | | | | | .004 | .002 | .002 | .002 | .002 | .002 |
| 28 | | | | | | | .005 | .002 | .002 | .002 | .002 | .002 |
| 29 | | | | | | | .005 | .003 | .002 | .002 | .002 | .002 |
| 30 | | | | | | | .005 | .003 | .002 | .002 | .002 | .002 |
| 31 | | | | | | | .004 | .003 | ------ | .002 | ------ | .002 |
| TOTAL | | | | | | | - | .103 | .068 | .072 | .060 | .062 |
| MEAN | | | | | | | - | .0033 | .0023 | .0023 | .0020 | .0020 |
| MAX | | | | | | | - | .005 | .005 | .004 | .002 | .002 |
| MIN | | | | | | | - | .002 | .002 | .002 | .002 | .002 |
| AC-FT | | | | | | | - | .20 | .13 | .14 | .12 | .12 |

PEAK DISCHARGE (BASE, 0.040 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|
| 9-11 | 0130 | 1.275 | .045 |

## 08302200 NORTH FORK TESUQUE CREEK NEAR SANTA FE, N. MEX.

LOCATION.--Lat 35°46'12", long 105°48'31", Santa Fe County, in Santa Fe National Forest, on left bank 60 ft (18 m) upstream from culvert on State Highway 475, 250 ft (75 m) upstream from Middle Fork Tesuque Creek, and 9.2 mi (14.8 km) northeast of Santa Fe.

DRAINAGE AREA.--1.60 mi² (4.14 km²).

PERIOD OF RECORD.--October 1962 to October 1973 (discontinued).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 9,670 ft (2,947 m) from topographic map.

AVERAGE DISCHARGE.--10 calendar years (1963-72), 1.396 ft³/s (0.0395 m³/s), 1,010 acre-ft/yr (1.25 hm³/yr).

EXTREMES.--Maximum discharge during period January to October 1973, 21.0 ft³/s (0.595 m³/s) May 21 (gage height, 1.88 ft or 0.573 m); minimum, 0.11 ft³/s (0.003 m³/s) Oct. 10, result of regulation.
Period of record: Maximum discharge, 32.9 ft³/s (0.932 m³/s) Aug. 1, 1966 (gage height, 2.25 ft or 0.686 m); minimum, 0.08 ft³/s (0.002 m³/s) Nov. 17, 1971, result of freezeup.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .89 | .71 | .75 | .73 | 3.61 | 20.2 | 8.80 | 1.53 | .77 | .54 | | |
| 2 | .84 | .71 | .77 | .71 | 3.42 | 20.2 | 8.70 | 1.47 | .73 | .54 | | |
| 3 | .84 | .71 | .84 | .71 | 3.71 | 19.3 | 8.20 | 1.42 | .71 | .54 | | |
| 4 | .84 | .69 | .80 | .69 | 4.66 | 17.8 | 7.40 | 1.36 | .69 | .54 | | |
| 5 | .80 | .69 | .80 | .73 | 5.37 | 17.3 | 6.80 | 1.31 | .69 | .62 | | |
| 6 | .80 | .69 | .77 | .80 | 5.01 | 17.3 | 6.40 | 1.26 | .67 | .59 | | |
| 7 | .77 | .71 | .75 | .80 | 4.44 | 18.6 | 5.90 | 1.21 | .66 | .56 | | |
| 8 | .80 | .69 | .71 | .77 | 4.33 | 18.8 | 5.50 | 1.21 | .64 | .54 | | |
| 9 | .80 | .67 | .71 | .77 | 5.24 | 18.8 | 5.40 | 1.26 | .64 | .54 | | |
| 10 | .77 | .67 | .71 | .89 | 7.77 | 18.3 | 4.80 | 1.21 | .76 | .56 | | |
| 11 | .77 | .67 | .71 | .93 | 11.1 | 18.3 | 4.30 | 1.26 | 1.18 | .60 | | |
| 12 | .77 | .64 | .77 | 1.02 | 14.5 | 18.6 | 4.10 | 1.26 | .77 | .60 | | |
| 13 | .75 | .66 | .89 | 1.21 | 15.8 | 18.8 | 3.80 | 1.22 | .69 | .62 | | |
| 14 | .77 | .66 | .89 | 1.71 | 13.3 | 17.5 | 3.60 | 1.15 | .67 | .59 | | |
| 15 | .77 | .69 | .77 | 1.97 | 11.0 | 16.3 | 3.30 | 1.06 | .66 | .56 | | |
| 16 | .77 | .67 | .77 | 1.78 | 10.4 | 15.1 | 3.10 | .97 | .64 | .52 | | |
| 17 | .77 | .67 | .77 | 1.71 | 10.2 | 13.8 | 3.10 | .97 | .60 | .51 | | |
| 18 | .80 | .67 | .80 | 1.84 | 12.3 | 12.7 | 2.60 | .93 | .60 | .49 | | |
| 19 | .77 | .71 | .89 | 1.78 | 16.2 | 11.9 | 2.48 | .89 | .60 | .49 | | |
| 20 | .77 | .69 | .97 | 1.59 | 19.3 | 11.0 | 2.40 | .89 | .59 | .48 | | |
| 21 | .75 | .64 | 1.02 | 1.48 | 20.2 | 10.6 | 2.33 | .89 | .57 | .47 | | |
| 22 | .75 | .64 | 1.02 | 1.48 | 20.4 | 9.69 | 2.25 | .84 | .57 | .47 | | |
| 23 | .73 | .64 | .93 | 1.53 | 19.3 | 9.00 | 2.11 | .84 | .57 | .47 | | |
| 24 | .73 | .64 | .93 | 1.90 | 19.1 | 8.60 | 2.04 | .80 | .59 | .47 | | |
| 25 | .73 | .64 | .89 | 2.18 | 19.1 | 8.20 | 2.04 | .77 | .59 | .47 | | |
| 26 | .73 | .64 | .89 | 2.25 | 18.8 | 8.40 | 1.97 | .75 | .59 | .47 | | |
| 27 | .71 | .71 | .84 | 2.65 | 18.3 | 9.40 | 1.84 | .73 | .59 | .45 | | |
| 28 | .71 | .71 | .80 | 3.33 | 17.0 | 9.50 | 1.92 | .77 | .57 | .45 | | |
| 29 | .71 | ------ | .77 | 3.91 | 16.6 | 9.50 | 1.78 | .85 | .57 | .45 | | |
| 30 | .71 | ------ | .77 | 4.12 | 17.5 | 9.30 | 1.71 | .89 | .57 | .44 | | |
| 31 | .71 | ------ | .75 | ------ | 19.3 | ------ | 1.59 | .84 | ------ | .44 | | |
| TOTAL | 23.83 | 18.93 | 25.45 | 47.97 | 387.26 | 432.79 | 122.26 | 32.81 | 19.74 | 16.08 | | |
| MEAN | .769 | .676 | .821 | 1.599 | 12.5 | 14.4 | 3.944 | 1.058 | .658 | .519 | | |
| MAX | .89 | .71 | 1.02 | 4.12 | 20.4 | 20.2 | 8.80 | 1.53 | 1.18 | .62 | | |
| MIN | .71 | .64 | .71 | .69 | 3.42 | 8.20 | 1.59 | .73 | .57 | .44 | | |
| AC-FT | 47.3 | 37.5 | 50.5 | 95.1 | 768 | 858 | 243 | 65.1 | 39.2 | 31.9 | | |

WTR YR 1973 TOTAL 1,220.06 MEAN 3.343 MAX 20.4 MIN .57 AC-FT 2,420

PEAK DISCHARGE (BASE, 5.00 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-12 | 1730 | 1.74 | 17.0 | 5-21 | 2000 | 1.88 | 21.0 |

## 08302300 MIDDLE FORK TESUQUE CREEK NEAR SANTA FE, N. MEX.

LOCATION.--Lat 35°46'03", long 105°48'25", Santa Fe County, in Santa Fe National Forest, on right bank 800 ft (240 m) upstream from culvert on State Highway 475, 950 ft (290 m) upstream from mouth, and 9.2 mi (14.8 km) northeast of Santa Fe.

DRAINAGE AREA.--0.43 $mi^2$ (1.11 $km^2$).

PERIOD OF RECORD.--November 1961 to October 1973 (discontinued).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 9,770 ft (2,978 m), from topographic map.

AVERAGE DISCHARGE.--11 calendar years (1962-72), 0.276 $ft^3/s$ (0.0078 $m^3/s$), 200 acre-ft/yr (247,000 $m^3/yr$).

EXTREMES.--Maximum discharge during period January to October 1973, 6.75 $ft^3/s$ (0.191 $m^3/s$) June 13 (gage height, 1.64 ft or 0.500 m); minimum, 0.047 $ft^3/s$ (0.0013 $m^3/s$) Oct. 10, result of freezeup.
Period of record: Maximum discharge, 6.75 $ft^3/s$ (0.191 $m^3/s$) June 13, 1973 (gage height, 1.64 ft or 0.500 m); minimum, 0.020 $ft^3/s$ (0.0006 $m^3/s$) Nov. 1, 1968, result of freezeup.

REMARKS.--Records good except those for May and June, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .13 | .12 | .12 | .11 | .41 | 4.37 | 3.05 | .39 | .22 | .16 | | |
| 2 | .13 | .12 | .12 | .11 | .35 | 4.12 | 2.91 | .39 | .21 | .16 | | |
| 3 | .13 | .12 | .12 | .11 | .43 | 3.95 | 2.71 | .37 | .19 | .16 | | |
| 4 | .12 | .12 | .12 | .11 | .63 | 3.79 | 2.52 | .35 | .18 | .16 | | |
| 5 | .12 | .12 | .12 | .11 | .68 | 3.64 | 2.28 | .35 | .18 | .18 | | |
| 6 | .12 | .12 | .12 | .12 | .55 | 3.64 | 2.11 | .34 | .18 | .18 | | |
| 7 | .12 | .12 | .12 | .12 | .45 | 3.71 | 1.89 | .35 | .18 | .17 | | |
| 8 | .12 | .12 | .12 | .12 | .43 | 4.08 | 1.74 | .32 | .18 | .16 | | |
| 9 | .12 | .12 | .12 | .12 | .64 | 4.82 | 1.59 | .31 | .18 | .16 | | |
| 10 | .12 | .12 | .12 | .13 | 1.19 | 5.29 | 1.45 | .31 | .22 | .14 | | |
| 11 | .11 | .11 | .13 | .13 | 1.82 | 5.58 | 1.28 | .31 | .38 | .17 | | |
| 12 | .12 | .11 | .13 | .13 | 2.05 | 6.10 | 1.20 | .34 | .22 | .16 | | |
| 13 | .12 | .11 | .13 | .15 | 2.40 | 6.31 | 1.04 | .34 | .20 | .16 | | |
| 14 | .12 | .11 | .13 | .21 | 2.28 | 6.10 | .97 | .34 | .20 | .16 | | |
| 15 | .12 | .11 | .13 | .25 | 2.11 | 5.99 | .91 | .30 | .19 | .16 | | |
| 16 | .12 | .11 | .13 | .22 | 2.22 | 5.79 | .80 | .28 | .18 | .15 | | |
| 17 | .12 | .11 | .13 | .22 | 2.16 | 5.48 | .71 | .27 | .18 | .15 | | |
| 18 | .11 | .11 | .13 | .22 | 2.46 | 4.91 | .60 | .26 | .18 | .15 | | |
| 19 | .11 | .11 | .13 | .22 | 3.12 | 4.37 | .55 | .25 | .18 | .15 | | |
| 20 | .11 | .11 | .13 | .20 | 3.41 | 4.04 | .53 | .25 | .18 | .15 | | |
| 21 | .11 | .11 | .13 | .18 | 3.33 | 3.95 | .50 | .25 | .17 | .14 | | |
| 22 | .11 | .11 | .13 | .19 | 3.41 | 3.71 | .50 | .25 | .16 | .14 | | |
| 23 | .11 | .11 | .13 | .19 | 3.26 | 3.30 | .45 | .25 | .16 | .14 | | |
| 24 | .11 | .11 | .12 | .22 | 3.33 | 3.00 | .43 | .22 | .16 | .13 | | |
| 25 | .12 | .11 | .12 | .25 | 3.41 | 3.00 | .43 | .22 | .16 | .13 | | |
| 26 | .12 | .11 | .12 | .26 | 3.41 | 3.10 | .45 | .21 | .16 | .13 | | |
| 27 | .12 | .11 | .12 | .36 | 3.19 | 3.20 | .41 | .21 | .16 | .12 | | |
| 28 | .12 | .11 | .12 | .50 | 3.05 | 3.30 | .50 | .22 | .16 | .13 | | |
| 29 | .12 | ------ | .11 | .50 | 3.19 | 3.40 | .45 | .30 | .16 | .13 | | |
| 30 | .12 | ------ | .11 | .48 | 3.56 | 3.26 | .43 | .25 | .16 | .13 | | |
| 31 | .12 | ------ | .11 | ------ | 3.95 | ------ | .43 | .24 | ------ | .12 | | |
| TOTAL | 3.67 | 3.18 | 3.82 | 6.24 | 66.88 | 129.30 | 35.82 | 9.04 | 5.62 | 4.63 | | |
| MEAN | .118 | .114 | .123 | .208 | 2.157 | 4.310 | 1.155 | .292 | .187 | .149 | | |
| MAX | .13 | .12 | .13 | .50 | 3.95 | 6.31 | 3.05 | .39 | .38 | .18 | | |
| MIN | .11 | .11 | .11 | .11 | .35 | 3.00 | .41 | .21 | .16 | .12 | | |
| AC-FT | 7.28 | 6.31 | 7.58 | 12.4 | 133 | 256 | 71.0 | 17.9 | 11.1 | 9.18 | | |

WTR YR 1973 TOTAL 278.64 MEAN .763 MAX 6.31 MIN .11 AC-FT 553

PEAK DISCHARGE (BASE, 1.70 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 6-13 | 2200 | 1.64 | 6.75 | 7-15 | 1800 | 0.91 | 1.89 |
| 7-12 | 1700 | .89 | 1.79 | | | | |

## 08302400 SOUTH FORK TESUQUE CREEK NEAR SANTA FE, N. MEX.

LOCATION.--Lat 35°45'37", long 105°48'39", Santa Fe County, in Santa Fe National Forest, on left bank 150 ft (46 m) upstream from culvert on State Highway 475, 2,700 ft (820 m) upstream from mouth, and 8.7 mi (14.0 km) northeast of Santa Fe.

DRAINAGE AREA.--0.47 $mi^2$ (1.22 $km^2$).

PERIOD OF RECORD.--October 1962 to October 1973 (discontinued).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 9,740 ft (2,969 m) from topographic map.

AVERAGE DISCHARGE.--10 calendar years (1963-72), 0.226 $ft^3/s$ (0.0064 $m^3/s$), 164 acre-ft/yr (202,000 $m^3/yr$).

EXTREMES.--Maximum discharge during period January to October 1973, 5.00 $ft^3/s$ (0.142 $m^3/s$) June 13 (gage height, 1.45 ft or 0.442 m); minimum daily, 0.090 $ft^3/s$ (0.0025 $m^3/s$) Feb. 26 to Mar. 1, but may have been less during periods of ice effect.
Period of record: Maximum discharge, 5.00 $ft^3/s$ (0.142 $m^3/s$) June 13, 1973 (gage height, 1.45 ft or 0.442 m); minimum recorded, 0.063 $ft^3/s$ (0.0018 $m^3/s$) Mar. 4-7, 1969, June 19, 1971, but may have been less during periods of ice effect.

REMARKS.--Records fair except those for winter periods, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .11 | .10 | .090 | .11 | .45 | 3.19 | 1.69 | .35 | .22 | .16 | | |
| 2 | .11 | .10 | .095 | .11 | .43 | 3.56 | 1.59 | .34 | .21 | .16 | | |
| 3 | .11 | .10 | .095 | .11 | .43 | 3.48 | 1.54 | .34 | .20 | .16 | | |
| 4 | .11 | .10 | .095 | .11 | .58 | 3.33 | 1.36 | .32 | .20 | .16 | | |
| 5 | .11 | .10 | .095 | .11 | .66 | 3.26 | 1.28 | .31 | .20 | .18 | | |
| 6 | .11 | .11 | .095 | .11 | .66 | 3.33 | 1.16 | .30 | .20 | .18 | | |
| 7 | .11 | .11 | .095 | .11 | .58 | 3.48 | 1.01 | .30 | .19 | .17 | | |
| 8 | .11 | .10 | .095 | .11 | .53 | 3.71 | .94 | .30 | .19 | .16 | | |
| 9 | .11 | .10 | .095 | .11 | .58 | 4.20 | .94 | .30 | .20 | .16 | | |
| 10 | .11 | .10 | .095 | .12 | .94 | 4.55 | .90 | .29 | .27 | .17 | | |
| 11 | .11 | .099 | .099 | .12 | 1.50 | 4.82 | .87 | .29 | .33 | .18 | | |
| 12 | .11 | .10 | .11 | .12 | 2.00 | 4.91 | .86 | .30 | .20 | .18 | | |
| 13 | .11 | .099 | .11 | .13 | 2.16 | 4.82 | .80 | .30 | .20 | .18 | | |
| 14 | .11 | .095 | .12 | .15 | 1.74 | 4.55 | .74 | .30 | .20 | .18 | | |
| 15 | .11 | .095 | .12 | .18 | 1.45 | 4.37 | .71 | .28 | .19 | .17 | | |
| 16 | .11 | .095 | .12 | .19 | 1.32 | 4.12 | .63 | .26 | .18 | .18 | | |
| 17 | .12 | .095 | .12 | .19 | 1.28 | 3.85 | .58 | .25 | .18 | .17 | | |
| 18 | .13 | .095 | .12 | .22 | 1.41 | 3.60 | .53 | .25 | .18 | .16 | | |
| 19 | .13 | .095 | .12 | .22 | 1.84 | 3.30 | .48 | .25 | .18 | .16 | | |
| 20 | .13 | .095 | .12 | .22 | 2.22 | 3.05 | .45 | .24 | .18 | .16 | | |
| 21 | .13 | .095 | .12 | .22 | 2.46 | 2.91 | .43 | .25 | .18 | .16 | | |
| 22 | .13 | .095 | .11 | .20 | 2.46 | 2.71 | .43 | .24 | .17 | .16 | | |
| 23 | .12 | .095 | .11 | .22 | 2.46 | 2.46 | .41 | .23 | .17 | .15 | | |
| 24 | .11 | .095 | .11 | .23 | 2.28 | 2.28 | .40 | .22 | .18 | .15 | | |
| 25 | .10 | .095 | .11 | .26 | 2.22 | 2.16 | .39 | .22 | .17 | .15 | | |
| 26 | .10 | .090 | .11 | .28 | 2.28 | 2.05 | .39 | .22 | .18 | .15 | | |
| 27 | .10 | .090 | .11 | .30 | 2.28 | 1.94 | .37 | .22 | .18 | .15 | | |
| 28 | .10 | .090 | .11 | .37 | 2.34 | 1.84 | .46 | .22 | .17 | .16 | | |
| 29 | .10 | ------ | .12 | .43 | 2.34 | 1.79 | .41 | .25 | .17 | .16 | | |
| 30 | .10 | ------ | .11 | .48 | 2.40 | 1.74 | .38 | .24 | .17 | .16 | | |
| 31 | .10 | ------ | .11 | ------ | 2.65 | ------ | .36 | .22 | ------ | .16 | | |
| TOTAL | 3.46 | 2.728 | 3.334 | 5.84 | 48.93 | 99.36 | 23.49 | 8.40 | 5.84 | 5.09 | | |
| MEAN | .112 | .0974 | .108 | .195 | 1.578 | 3.312 | .758 | .271 | .195 | .164 | | |
| MAX | .13 | .11 | .12 | .48 | 2.65 | 4.91 | 1.69 | .35 | .33 | .18 | | |
| MIN | .10 | .090 | .090 | .11 | .43 | 1.74 | .36 | .22 | .17 | .15 | | |
| AC-FT | 6.86 | 5.41 | 6.61 | 11.6 | 97.1 | 197 | 46.6 | 16.7 | 11.6 | 10.1 | | |

WTR YR 1973 TOTAL 213.002 MEAN .584 MAX 4.91 MIN .090 AC-FT 422

PEAK DISCHARGE (BASE, 0.75 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-13 | 0330 | 0.97 | 2.22 | 7-28 | 1500 | 0.78 | 1.28 |
| 6-13 | 2100 | 1.45 | 5.00 | 9-11 | 0230 | .65 | .87 |

NOTE.--No gage-height record Jan. 1 to Feb. 1.

## 08304100 LITTLE TESUQUE CREEK NEAR SANTA FE, N. MEX.

LOCATION.--Lat 35°44'48", long 105°49'39", in NW¼NE¼ sec.36, T.18 N., R.10 E., Santa Fe County, in Santa Fe National Forest, on right bank 1,200 ft (370 m) upstream from east boundary of Hyde State Park, 0.25 mi (0.4 km) by access road east of State Highway 475, and 7.4 mi (11.9 km) northeast of Santa Fe.

DRAINAGE AREA.--0.64 $mi^2$ (1.66 $km^2$).

PERIOD OF RECORD.--June 1962 to October 1973 (discontinued).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 9,020 ft (2,749 m) from topographic map.

AVERAGE DISCHARGE.--10 calendar years (1963-72), 0.153 $ft^3/s$ (0.0043 $m^3/s$), 111 acre-ft/yr (137,000 $m^3/yr$).

EXTREMES.--Maximum discharge during period January to October 1973, 4.20 $ft^3/s$ (0.119 $m^3/s$) May 12 (gage height, 1.27 ft or 0.387 m); minimum, 0.060 $ft^3/s$ (0.0017 $m^3/s$) Feb. 22-25.
Period of record: Maximum discharge, 4.20 $ft^3/s$ (0.119 $m^3/s$) May 12, 1973 (gage height, 1.27 ft or 0.387 m); minimum, 0.007 $ft^3/s$ (0.0002 $m^3/s$) July 5, 6, 10, 11, 1967, July 15, 1971.

REMARKS.--Records good.

REVISIONS.--WRD N. Mex. 1969: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .074 | .070 | .090 | .11 | 1.16 | 2.98 | .71 | .18 | .11 | .078 | | |
| 2 | .074 | .070 | .11 | .10 | 1.04 | 3.33 | .66 | .18 | .095 | .078 | | |
| 3 | .074 | .070 | .12 | .099 | 1.12 | 3.41 | .63 | .17 | .090 | .074 | | |
| 4 | .074 | .074 | .12 | .095 | 1.41 | 3.19 | .58 | .17 | .086 | .078 | | |
| 5 | .078 | .074 | .11 | .095 | 1.69 | 2.91 | .53 | .17 | .086 | .099 | | |
| 6 | .074 | .074 | .10 | .11 | 1.59 | 2.78 | .48 | .17 | .086 | .095 | | |
| 7 | .074 | .074 | .099 | .16 | 1.36 | 2.84 | .45 | .16 | .082 | .090 | | |
| 8 | .074 | .074 | .10 | .15 | 1.36 | 3.05 | .44 | .16 | .082 | .082 | | |
| 9 | .074 | .074 | .090 | .15 | 1.65 | 3.41 | .45 | .16 | .090 | .082 | | |
| 10 | .074 | .074 | .090 | .17 | 2.42 | 3.64 | .41 | .16 | .14 | .10 | | |
| 11 | .070 | .074 | .090 | .22 | 3.33 | 3.87 | .39 | .15 | .39 | .11 | | |
| 12 | .067 | .074 | .099 | .25 | 3.95 | 3.95 | .40 | .14 | .13 | .11 | | |
| 13 | .067 | .070 | .11 | .30 | 3.79 | 3.86 | .33 | .14 | .11 | .11 | | |
| 14 | .070 | .070 | .11 | .46 | 3.05 | 3.33 | .32 | .13 | .10 | .11 | | |
| 15 | .074 | .067 | .10 | .58 | 2.40 | 3.05 | .31 | .12 | .099 | .10 | | |
| 16 | .082 | .067 | .099 | .43 | 2.28 | 2.71 | .30 | .11 | .095 | .11 | | |
| 17 | .082 | .067 | .10 | .39 | 2.28 | 2.40 | .28 | .11 | .090 | .099 | | |
| 18 | .086 | .067 | .12 | .48 | 2.71 | 2.11 | .27 | .10 | .090 | .095 | | |
| 19 | .082 | .067 | .14 | .41 | 3.71 | 1.89 | .28 | .10 | .090 | .095 | | |
| 20 | .082 | .067 | .16 | .34 | 4.04 | 1.69 | .25 | .10 | .090 | .090 | | |
| 21 | .082 | .067 | .17 | .30 | 3.87 | 1.54 | .25 | .11 | .086 | .090 | | |
| 22 | .082 | .060 | .16 | .30 | 3.79 | 1.36 | .24 | .10 | .086 | .090 | | |
| 23 | .074 | .060 | .15 | .35 | 3.48 | 1.28 | .23 | .095 | .090 | .086 | | |
| 24 | .074 | .060 | .13 | .45 | 3.41 | 1.16 | .22 | .095 | .090 | .082 | | |
| 25 | .070 | .063 | .12 | .60 | 3.41 | 1.08 | .22 | .090 | .090 | .078 | | |
| 26 | .070 | .067 | .12 | .60 | 3.33 | .97 | .25 | .086 | .095 | .082 | | |
| 27 | .070 | .074 | .13 | .72 | 3.19 | .97 | .22 | .086 | .095 | .082 | | |
| 28 | .070 | .082 | .13 | .97 | 2.91 | .87 | .21 | .10 | .095 | .082 | | |
| 29 | .070 | ------ | .12 | 1.12 | 2.65 | .84 | .20 | .15 | .090 | .082 | | |
| 30 | .070 | ------ | .11 | 1.28 | 2.58 | .77 | .19 | .15 | .086 | .082 | | |
| 31 | .070 | ------ | .10 | ------ | 2.71 | ------ | .19 | .12 | ------ | .078 | | |
| TOTAL | 2.308 | 1.951 | 3.597 | 11.789 | 81.67 | 71.24 | 10.89 | 4.062 | 3.134 | 2.799 | | |
| MEAN | .0745 | .0697 | .116 | .393 | 2.635 | 2.375 | .351 | .131 | .104 | .0903 | | |
| MAX | .086 | .082 | .17 | 1.28 | 4.04 | 3.95 | .71 | .18 | .39 | .11 | | |
| MIN | .067 | .060 | .090 | .095 | 1.04 | .77 | .19 | .086 | .082 | .074 | | |
| AC-FT | 4.58 | 3.87 | 7.13 | 23.4 | 162 | 141 | 21.6 | 8.06 | 6.22 | 5.55 | | |

WTR YR 1973 TOTAL 198.231 MEAN .543 MAX 4.04 MIN .042 AC-FT 393

PEAK DISCHARGE (BASE, 1.00 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-12 | 1830 | 1.27 | 4.20 | 6-12 | 2330 | 1.25 | 4.04 |
| 5-19 | 1630 | 1.26 | 4.12 | 9-11 | 0330 | .73 | 1.16 |

## 08304200 LITTLE TESUQUE CREEK TRIBUTARY NO. 4 NEAR SANTA FE, N. MEX.

LOCATION.--Lat 35°44'07", long 105°49'59", in NE¼NW¼ sec.1, T.17 N., R.10 E., Santa Fe County, on right bank in Hyde State Park, 1,000 ft (300 m) upstream from mouth and State Highway 475, and 6.8 mi (10.9 km) northeast of Santa Fe.

DRAINAGE AREA.--0.69 mi² (1.79 km²).

PERIOD OF RECORD.--October 1964 to October 1973 (discontinued).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 8,600 ft (2,621 m) from topographic map. Prior to Aug. 6, 1968, at datum 0.20 ft (0.061 m) lower.

AVERAGE DISCHARGE.--8 calendar years (1965-72), 0.0922 ft³/s (0.0026 m³/s), 66.8 acre-ft/yr (82,400 m³/yr).

EXTREMES.--Maximum discharge during period January to October 1973, 6.86 ft³/s (0.194 m³/s) May 12, 20 (gage height, 1.54 ft or 0.469 m), from rating curve extended above 2.7 ft³/s (0.076 m³/s) on basis of theoretical rating; no flow Aug. 28.
Period of record: Maximum discharge, 6.86 ft³/s (0.194 m³/s) May 12, 20, 1973 (gage height, 1.54 ft or 0.469 m), from rating curve extended above 2.7 ft³/s (0.076 m³/s) on basis of theoretical rating; no flow many days most years.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .057 | .067 | .15 | .25 | 2.16 | 2.16 | .11 | .047 | .004 | .007 | | |
| 2 | .057 | .067 | .20 | .23 | 1.84 | 2.16 | .11 | .042 | .018 | .008 | | |
| 3 | .057 | .070 | .22 | .22 | 1.97 | 1.94 | .11 | .034 | .015 | .008 | | |
| 4 | .057 | .074 | .22 | .21 | 2.57 | 1.74 | .095 | .029 | .012 | .007 | | |
| 5 | .057 | .082 | .21 | .23 | 3.12 | 1.50 | .086 | .025 | .010 | .006 | | |
| 6 | .057 | .090 | .19 | .35 | 2.84 | 1.36 | .078 | .021 | .008 | .005 | | |
| 7 | .057 | .090 | .17 | .45 | 2.28 | 1.24 | .070 | .018 | .006 | .004 | | |
| 8 | .057 | .090 | .16 | .39 | 2.40 | 1.16 | .078 | .016 | .004 | .005 | | |
| 9 | .053 | .090 | .15 | .39 | 3.11 | 1.08 | .078 | .015 | .004 | .008 | | |
| 10 | .053 | .090 | .15 | .48 | 4.59 | 1.04 | .082 | .013 | .004 | .010 | | |
| 11 | .053 | .086 | .15 | .58 | 5.86 | .94 | .078 | .013 | .24 | .011 | | |
| 12 | .053 | .082 | .18 | .74 | 6.75 | .87 | .094 | .013 | .078 | .020 | | |
| 13 | .053 | .078 | .22 | .94 | 6.20 | .87 | .12 | .012 | .044 | .027 | | |
| 14 | .057 | .078 | .22 | 1.28 | 5.29 | .80 | .095 | .013 | .034 | .032 | | |
| 15 | .067 | .067 | .21 | 1.45 | 4.29 | .66 | .11 | .015 | .027 | .032 | | |
| 16 | .086 | .063 | .20 | 1.16 | 3.79 | .58 | .095 | .015 | .025 | .032 | | |
| 17 | .099 | .060 | .22 | 1.04 | 3.64 | .50 | .12 | .013 | .021 | .029 | | |
| 18 | .099 | .060 | .26 | 1.12 | 4.29 | .45 | .095 | .010 | .020 | .029 | | |
| 19 | .099 | .057 | .33 | 1.01 | 5.89 | .39 | .086 | .008 | .016 | .027 | | |
| 20 | .099 | .057 | .40 | .84 | 6.53 | .35 | .063 | .006 | .013 | .025 | | |
| 21 | .095 | .053 | .45 | .74 | 5.89 | .31 | .053 | .005 | .012 | .023 | | |
| 22 | .090 | .053 | .45 | .71 | 5.29 | .28 | .053 | .004 | .010 | .021 | | |
| 23 | .086 | .053 | .40 | .80 | 4.29 | .25 | .044 | .002 | .009 | .020 | | |
| 24 | .082 | .053 | .36 | 1.04 | 3.71 | .22 | .039 | .002 | .007 | .018 | | |
| 25 | .082 | .060 | .31 | 1.45 | 3.56 | .20 | .032 | .002 | .006 | .016 | | |
| 26 | .078 | .074 | .33 | 1.50 | 3.41 | .18 | .034 | .001 | .005 | .016 | | |
| 27 | .070 | .086 | .37 | 1.62 | 2.98 | .16 | .039 | .001 | .005 | .015 | | |
| 28 | .070 | .11 | .34 | 2.16 | 2.46 | .15 | .036 | 0 | .005 | .015 | | |
| 29 | .070 | ------ | .31 | 2.46 | 2.11 | .15 | .044 | .001 | .005 | .016 | | |
| 30 | .070 | ------ | .28 | 2.58 | 1.94 | .12 | .044 | .001 | .006 | .016 | | |
| 31 | .070 | ------ | .25 | ------ | 2.05 | ------ | .047 | .001 | ------ | .015 | | |
| TOTAL | 2.190 | 2.040 | 8.06 | 28.42 | 117.10 | 23.81 | 2.318 | .398 | .673 | .523 | | |
| MEAN | .0706 | .0729 | .260 | .947 | 3.777 | .794 | .0748 | .0128 | .0224 | .0169 | | |
| MAX | .099 | .11 | .45 | 2.58 | 6.75 | 2.16 | .12 | .047 | .24 | .032 | | |
| MIN | .053 | .053 | .15 | .21 | 1.84 | .12 | .032 | 0 | .004 | .004 | | |
| AC-FT | 4.34 | 4.05 | 16.0 | 56.4 | 232 | 47.2 | 4.60 | .79 | 1.33 | 1.04 | | |

WTR YR 1973 TOTAL 190.85 MEAN .523 MAX 6.75 MIN 0 AC-FT 379

PEAK DISCHARGE (BASE, 1.00 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-14 | 2000 | 0.87 | 1.59 | 5-20 | 0500 | 1.54 | 6.86 |
| 5-12 | 1930 | 1.54 | 6.86 | | | | |

## 08304300 LITTLE TESUQUE CREEK TRIBUTARY NO. 3 NEAR SANTA FE, N. MEX.

LOCATION.--Lat 35°43'35", long 105°50'01", in SE¼SW¼ sec.1, T.17 N., R.10 E., Santa Fe County, in Santa Fe National Forest, on right bank 1,900 ft (580 m) upstream from mouth and State Highway 475, and 6.5 mi (10.5 km) northeast of Santa Fe.

DRAINAGE AREA.--0.65 $mi^2$ (1.68 $km^2$).

PERIOD OF RECORD.--September 1963 to April 1973 (discontinued).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 8,460 ft (2,579 m) from topographic map.

AVERAGE DISCHARGE.--9 calendar years (1964-72), 0.0300 $ft^3/s$ (0.0008 $m^3/s$), 21.7 acre-ft/yr (26,800 $m^3/yr$).

EXTREMES.--Maximum discharge during period January to April 1973, 2.65 $ft^3/s$ (0.0750 $m^3/s$) Apr. 30 (gage height, 1.06 ft or 0.323 m); no flow many days.
Period of record: Maximum discharge, 2.65 $ft^3/s$ (0.0750 $m^3/s$) Apr. 30, 1973, gage height, 1.06 ft or 0.323 m); no flow most of time.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | .036 | .15 | .26 | | | | | | | | |
| 2 | 0 | .034 | .29 | .24 | | | | | | | | |
| 3 | 0 | .036 | .42 | .22 | | | | | | | | |
| 4 | 0 | .042 | .42 | .18 | | | | | | | | |
| 5 | 0 | .050 | .38 | .20 | | | | | | | | |
| 6 | 0 | .067 | .33 | .39 | | | | | | | | |
| 7 | 0 | .078 | .29 | .71 | | | | | | | | |
| 8 | 0 | .086 | .26 | .58 | | | | | | | | |
| 9 | 0 | .086 | .25 | .50 | | | | | | | | |
| 10 | 0 | .082 | .22 | .66 | | | | | | | | |
| 11 | 0 | .078 | .22 | .97 | | | | | | | | |
| 12 | 0 | .070 | .24 | 1.20 | | | | | | | | |
| 13 | 0 | .060 | .34 | 1.28 | | | | | | | | |
| 14 | 0 | .050 | .38 | 1.88 | | | | | | | | |
| 15 | 0 | .044 | .35 | 1.94 | | | | | | | | |
| 16 | .011 | .034 | .31 | 1.20 | | | | | | | | |
| 17 | .066 | .025 | .33 | .90 | | | | | | | | |
| 18 | .090 | .016 | .41 | 1.08 | | | | | | | | |
| 19 | .090 | .010 | .52 | .94 | | | | | | | | |
| 20 | .090 | .005 | .66 | .77 | | | | | | | | |
| 21 | .090 | 0 | .74 | .60 | | | | | | | | |
| 22 | .082 | 0 | .66 | .55 | | | | | | | | |
| 23 | .070 | 0 | .60 | .71 | | | | | | | | |
| 24 | .067 | 0 | .58 | .94 | | | | | | | | |
| 25 | .057 | .008 | .43 | 1.36 | | | | | | | | |
| 26 | .047 | .016 | .50 | 1.50 | | | | | | | | |
| 27 | .044 | .032 | .60 | 1.63 | | | | | | | | |
| 28 | .044 | .078 | .52 | 2.16 | | | | | | | | |
| 29 | .044 | ------ | .41 | 2.46 | | | | | | | | |
| 30 | .039 | ------ | .35 | 2.52 | | | | | | | | |
| 31 | .036 | ------ | .28 | ------ | | | | | | | | |
| TOTAL | .967 | 1.123 | 12.44 | 30.53 | | | | | | | | |
| MEAN | .0312 | .0401 | .401 | 1.018 | | | | | | | | |
| MAX | .090 | .086 | .74 | 2.52 | | | | | | | | |
| MIN | 0 | 0 | .15 | .18 | | | | | | | | |
| AC-FT | 1.92 | 2.23 | 24.7 | 60.6 | | | | | | | | |

PEAK DISCHARGE (BASE, 0.40 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 3- 3 | 1400 | 0.405 | 0.44 | 4-14 | 2200 | 1.08 | 2.46 |
| 3-21 | 1430 | .64 | .77 | 4-30 | 0200 | 1.06 | 2.65 |

## 08304400 LITTLE TESUQUE CREEK TRIBUTARY NO. 2 NEAR SANTA FE, N. MEX.

LOCATION.--Lat 35°43'34", long 105°51'24", in SW¼SW¼ sec.2, T.17 N., R.10 E., Santa Fe County, in Santa Fe National Forest, on right bank 150 ft (45 m) upstream from mouth, 200 ft (60 m) south of State Highway 475, and 5.3 mi (8.5 km) northeast of Santa Fe.

DRAINAGE AREA.--0.45 mi² (1.17 km²).

PERIOD OF RECORD.--June 1962 to October 1973 (discontinued).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 7,960 ft (2,426 m) from topographic map.

AVERAGE DISCHARGE.--10 calendar years (1963-72), 0.0094 ft³/s (0.0003 m³/s), 6.81 acre-ft yr (8,400 m³/yr).

EXTREMES.--Maximum discharge during period January to October 1973, 1.45 ft³/s (0.0411 m³/s) May 12 (gage height, 0.86 ft or 0.262 m); minimum, 0.002 ft³/s (0.00006 m³/s) Sept. 5-10.
Period of record: Maximum discharge, 1.45 ft³/s (0.0411 m³/s) May 12, 1973 (gage height, 0.86 ft or 0.262 m); no flow many days most years.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .010 | .008 | .029 | .090 | 1.12 | .20 | .034 | .016 | .003 | .006 | | |
| 2 | .009 | .008 | .036 | .095 | .97 | .20 | .032 | .015 | .003 | .006 | | |
| 3 | .009 | .008 | .039 | .090 | .87 | .18 | .032 | .013 | .003 | .005 | | |
| 4 | .009 | .008 | .036 | .086 | .90 | .17 | .029 | .012 | .003 | .005 | | |
| 5 | .009 | .010 | .036 | .099 | 1.12 | .15 | .027 | .012 | .003 | .006 | | |
| 6 | .008 | .012 | .036 | .13 | 1.20 | .14 | .025 | .011 | .002 | .006 | | |
| 7 | .008 | .012 | .036 | .14 | 1.04 | .13 | .023 | .011 | .002 | .006 | | |
| 8 | .008 | .012 | .034 | .12 | .94 | .12 | .023 | .011 | .002 | .006 | | |
| 9 | .008 | .012 | .034 | .12 | 1.01 | .12 | .023 | .010 | .002 | .005 | | |
| 10 | .008 | .012 | .034 | .12 | 1.20 | .11 | .021 | .011 | .002 | .005 | | |
| 11 | .007 | .011 | .034 | .15 | 1.36 | .10 | .021 | .011 | .011 | .006 | | |
| 12 | .007 | .011 | .036 | .19 | 1.41 | .099 | .025 | .011 | .008 | .007 | | |
| 13 | .007 | .012 | .039 | .25 | 1.28 | .095 | .027 | .011 | .007 | .007 | | |
| 14 | .007 | .012 | .042 | .36 | 1.16 | .090 | .023 | .011 | .007 | .007 | | |
| 15 | .007 | .011 | .039 | .45 | .97 | .086 | .025 | .009 | .008 | .007 | | |
| 16 | .008 | .011 | .039 | .43 | .87 | .078 | .023 | .007 | .007 | .007 | | |
| 17 | .010 | .011 | .042 | .39 | .74 | .074 | .025 | .007 | .006 | .008 | | |
| 18 | .010 | .011 | .047 | .41 | .68 | .070 | .023 | .006 | .005 | .008 | | |
| 19 | .010 | .011 | .050 | .41 | .68 | .067 | .025 | .005 | .005 | .008 | | |
| 20 | .011 | .011 | .057 | .39 | .63 | .063 | .023 | .005 | .005 | .008 | | |
| 21 | .011 | .011 | .070 | .35 | .58 | .060 | .023 | .005 | .005 | .008 | | |
| 22 | .011 | .012 | .074 | .34 | .55 | .057 | .025 | .005 | .005 | .008 | | |
| 23 | .010 | .012 | .082 | .35 | .50 | .053 | .023 | .004 | .005 | .008 | | |
| 24 | .010 | .013 | .086 | .45 | .45 | .050 | .021 | .004 | .006 | .008 | | |
| 25 | .009 | .015 | .090 | .63 | .42 | .050 | .021 | .004 | .006 | .008 | | |
| 26 | .009 | .016 | .12 | .68 | .37 | .047 | .021 | .004 | .006 | .008 | | |
| 27 | .009 | .021 | .12 | .71 | .34 | .044 | .020 | .004 | .006 | .008 | | |
| 28 | .009 | .027 | .11 | .87 | .30 | .042 | .018 | .003 | .006 | .008 | | |
| 29 | .009 | ------ | .10 | 1.04 | .27 | .036 | .018 | .003 | .006 | .008 | | |
| 30 | .009 | ------ | .099 | 1.20 | .24 | .036 | .018 | .003 | .006 | .008 | | |
| 31 | .009 | ------ | .090 | ------ | .22 | ------ | .018 | .003 | ------ | .008 | | |
| TOTAL | .275 | .341 | 1.816 | 11.14 | 24.39 | 2.817 | .735 | .247 | .151 | .217 | | |
| MEAN | .0089 | .0122 | .0586 | .371 | .787 | .0939 | .0237 | .0080 | .0050 | .0070 | | |
| MAX | .011 | .027 | .12 | 1.20 | 1.41 | .20 | .034 | .016 | .011 | .008 | | |
| MIN | .007 | .008 | .029 | .086 | .22 | .036 | .018 | .003 | .002 | .005 | | |
| AC-FT | .55 | .68 | 3.60 | 22.1 | 48.4 | 5.59 | 1.46 | .49 | .30 | .43 | | |

WTR YR 1973 TOTAL 43.909 MEAN .120 MAX 1.41 MIN .002 AC-FT 87.1

PEAK DISCHARGE (BASE, 0.09 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 3-26 | 1800 | 0.31 | 0.13 | 5-12 | 2300 | 0.86 | 1.45 |
| 4-15 | 0030 | .54 | .48 | 7-12 | 2100 | .355 | .22 |

## 08312600 POJOAQUE RIVER AT SAN ILDEFONSO PUEBLO, N. MEX.

LOCATION.--Lat 35°53'51", long 106°06'24", Santa Fe County, in San Ildefonso Pueblo Grant, on right bank 0.7 mi (1.1 km) northeast of San Ildefonso Pueblo, and 1.0 mi (1.6 km) upstream from mouth.

DRAINAGE AREA.--184 mi² (477 km²), approximately.

PERIOD OF RECORD.--May 1972 to current year (operated as a miscellaneous measurement site and high-flow station only).

GAGE.--Water-stage recorder. Altitude of gage is 5,560 ft (1,695 m) from topographic map.

EXTREMES.--Current year: Maximum discharge, 1,130 ft³/s (32.0 m³/s) July 16 (gage height, 4.70 ft or 1.433 m), from rating curve extended as explained below; minimum observed, 0.03 ft³/s (0.001 m³/s) Jan. 28, but may have been less during periods of ice effect.
Period of record: Maximum discharge, 6,100 ft³/s (173 m³/s) Aug. 19, 1972 (gage height, 6.80 ft or 2.073 m, from floodmarks), from rating curve extended above 110 ft³/s (3.12 m³/s) on basis of slop-area measurements at gage heights 5.12 ft (1.561 m) and 6.80 ft (2.073 m); no flow many days in 1972.

REMARKS.--Records poor. Diversions for irrigation of about 4,900 acres (19.8 km²), 1973 determination, above station. Mean daily discharge computed only when flow exceeds about 40 ft³/s (1.13 m³/s). See table below for results of discharge measurements made during year.

DISCHARGE MEASUREMENTS, IN CUBIC FEET PER SECOND

| Date | Discharge | Date | Discharge | Date | Discharge | Date | Discharge | Date | Discharge |
|---|---|---|---|---|---|---|---|---|---|
| Jan. 28 | 0.03 | May 3 | 47 | June 5 | 110 | July 27 | * 1.8 | Oct. 16 | 0.48 |
| Feb. 26 | 1.3 | 10 | 104 | 18 | 104 | Aug. 16 | * .75 | Nov. 13 | .32 |
| Mar. 9 | 3.2 | 15 | 131 | July 12 | 17 | 29 | * .75 | Dec. 6 | 6.9 |
| 28 | 10 | 25 | 167 | 17 | 34 | Sept. 11 | *32 | 28 | 14 |
| Apr. 26 | 41 | | | | | | | | |

*Estimated.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | - | 45 | 80 | 44 | - | | | | |
| 2 | | | | - | 45 | 115 | 42 | - | | | | |
| 3 | | | | - | 48 | 100 | 66 | - | | | | |
| 4 | | | | - | 61 | 107 | 43 | - | | | | |
| 5 | | | | - | 53 | 113 | - | - | | | | |
| 6 | | | | - | 53 | 115 | - | - | | | | |
| 7 | | | | - | 68 | 142 | - | - | | | | |
| 8 | | | | - | 73 | 139 | - | - | | | | |
| 9 | | | | - | 84 | 178 | - | - | | | | |
| 10 | | | | - | 105 | 171 | - | - | | | | |
| 11 | | | | - | 113 | 163 | - | - | | | | |
| 12 | | | | - | 129 | 155 | - | - | | | | |
| 13 | | | | - | 136 | 120 | - | - | | | | |
| 14 | | | | - | 136 | 126 | - | - | | | | |
| 15 | | | | - | 133 | 159 | - | - | | | | |
| 16 | | | | - | 113 | 118 | 40 | - | | | | |
| 17 | | | | - | 84 | 171 | - | - | | | | |
| 18 | | | | - | 100 | 129 | - | - | | | | |
| 19 | | | | - | 120 | 113 | - | - | | | | |
| 20 | | | | - | 142 | 159 | - | - | | | | |
| 21 | | | | - | 142 | 110 | - | - | | | | |
| 22 | | | | - | 208 | 66 | - | - | | | | |
| 23 | | | | - | 208 | 46 | - | - | | | | |
| 24 | | | | - | 203 | 37 | - | - | | | | |
| 25 | | | | - | 163 | 34 | - | - | | | | |
| 26 | | | | 42 | 139 | 29 | - | - | | | | |
| 27 | | | | 45 | 120 | 26 | - | - | | | | |
| 28 | | | | 45 | 102 | 28 | - | - | | | | |
| 29 | | | | 45 | 80 | 30 | - | - | | | | |
| 30 | | | | 44 | 71 | 37 | - | 40 | | | | |
| 31 | | ------ | | ------ | 91 | ------ | - | - | | | | |
| TOTAL | | | | | 3,368 | 3,116 | - | - | | | | |
| MEAN | | | | | 109 | 104 | - | - | | | | |
| MAX | | | | | 208 | 178 | - | - | | | | |
| MIN | | | | | 45 | 26 | - | - | | | | |
| AC-FT | | | | | 6,680 | 6,180 | - | - | | | | |

PEAK DISCHARGE (BASE, 250 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-22 | 1900 | 4.04 | 287 | 8-30 | 0330 | 4.60 | 1,000 |
| 7-16 | 1930 | 4.70 | 1,130 | | | | |

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

LOCATION.--Lat 35°52'29", long 106°08'30", in SW¼SW¼ sec.18, T.19 N., R.8 E., Santa Fe County, in San Ildefonso Pueblo Grant, near right bank on downstream end of pier of former railway bridge, 400 ft (120 m) downstream from bridge on State Highway 4, 1.8 mi (2.9 km) southwest of San Ildefonso Pueblo, 2.5 mi (4.0 km) downstream from Pojoaque River, 6.8 mi (10.9 km) west of Pojoaque, and at mile 1,614.2 (2,597.2 km).

DRAINAGE AREA.--14,300 mi² (37,040 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--February 1895 to December 1905, June 1909 to current year. Monthly discharge only for some periods, published in WSP 1312. In early reports this record was published as "at Water Tank," as "at Rio Grande," and as "near Buckman."

GAGE.--Water-stage recorder. Datum of gage is 5,488.48 ft (1,672.889 m) above mean sea level. See WSP 1312, 1732, or 1923 for history of changes prior to June 1, 1910.

AVERAGE DISCHARGE.--74 calendar years (1896-1905, 1910-73), 1,514 ft³/s (42.88 m³/s), 1,097,000 acre-ft/yr (1.35 km³/yr); 20 calendar years (1954-73), 1,119 ft³/s (31.69 m³/s), 810,700 acre-ft/yr (1.000 km³/yr).

EXTREMES.--Current year: Maximum discharge, 8,350 ft³/s (236 m³/s) May 13 (gage height, 7.74 ft or 2.359 m); minimum, 531 ft³/s (15.0 m³/s) Nov.15.
Period of record: Maximum discharge, 24,400 ft³/s (691 m³/s) May 23, 1920; maximum gage height, 14.5 ft (4.42 m) Sept. 29, 1904 (present site and datum); minimum daily discharge, 60 ft³/s (1.70 m³/s) July 4, 5, 1902.
The 1920 flood is greatest since at least 1884 and probably since 1741; information from W. H. Yeo's file on floods.

REMARKS.--Records good. Flow partly regulated by Heron, El Vado and Abiquiu Reservoirs (see sta 08284510, 08285000, 08286900) on Rio Chama which contributes about 40 percent of total flow. Since April 1972 flow affected by release of transmountain water from Heron Reservoir. Diversions above station for irrigation of about 620,000 acres (2,510 km²) in Colorado and 75,000 acres (304 km²) in New Mexico. Water-quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 828: Drainage area. WSP 1512: 1895-99, 1904-6, 1911-12, 1914, 1931(M), 1935. WSP 1712: 1904(M).

### DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 664 | 689 | 797 | 1,300 | 3,650 | 5,560 | 4,620 | 2,660 | 1,070 | 908 | 789 | 1,630 |
| 2 | 677 | 633 | 946 | 1,170 | 3,330 | 5,850 | 4,560 | 2,590 | 1,040 | 874 | 756 | 1,640 |
| 3 | 696 | 610 | 1,210 | 1,250 | 2,860 | 5,940 | 4,320 | 2,560 | 1,060 | 776 | 708 | 1,720 |
| 4 | 709 | 645 | 1,180 | 1,050 | 3,070 | 5,920 | 4,170 | 2,450 | 1,120 | 782 | 732 | 1,730 |
| 5 | 722 | 715 | 1,090 | 1,030 | 3,560 | 5,500 | 3,920 | 2,340 | 1,100 | 750 | 744 | 1,710 |
| 6 | 689 | 677 | 946 | 1,080 | 3,730 | 5,030 | 3,580 | 2,240 | 1,070 | 789 | 732 | 1,720 |
| 7 | 657 | 696 | 922 | 1,110 | 3,570 | 4,790 | 3,510 | 2,240 | 1,060 | 770 | 720 | 1,630 |
| 8 | 677 | 709 | 922 | 1,200 | 3,750 | 4,670 | 3,590 | 2,180 | 1,040 | 796 | 708 | 1,660 |
| 9 | 689 | 715 | 970 | 1,060 | 3,570 | 4,660 | 3,460 | 2,130 | 1,040 | 874 | 684 | 1,690 |
| 10 | 709 | 677 | 1,000 | 1,070 | 4,470 | 4,970 | 3,330 | 2,090 | 1,090 | 908 | 648 | 1,670 |
| 11 | 683 | 709 | 994 | 1,100 | 5,450 | 5,310 | 3,220 | 2,030 | 1,670 | 950 | 624 | 1,690 |
| 12 | 645 | 756 | 1,040 | 1,400 | 6,530 | 5,620 | 3,310 | 2,010 | 1,190 | 894 | 597 | 1,690 |
| 13 | 645 | 715 | 1,080 | 1,830 | 7,620 | 5,810 | 3,440 | 2,030 | 796 | 860 | 586 | 1,710 |
| 14 | 683 | 715 | 1,220 | 2,290 | 7,010 | 5,600 | 2,080 | 2,070 | 738 | 841 | 575 | 1,720 |
| 15 | 715 | 729 | 1,030 | 2,720 | 5,860 | 5,580 | 1,970 | 1,860 | 1,240 | 789 | 564 | 1,650 |
| 16 | 664 | 729 | 1,070 | 2,610 | 5,530 | 5,290 | 1,740 | 763 | 1,360 | 789 | 564 | 1,670 |
| 17 | 702 | 763 | 1,130 | 1,940 | 5,330 | 4,850 | 2,340 | 696 | 1,250 | 776 | 570 | 1,660 |
| 18 | 709 | 776 | 1,170 | 2,290 | 5,410 | 4,520 | 2,150 | 908 | 1,130 | 756 | 575 | 1,680 |
| 19 | 696 | 696 | 1,310 | 2,550 | 6,130 | 4,450 | 2,080 | 1,010 | 922 | 841 | 750 | 1,730 |
| 20 | 709 | 645 | 1,370 | 1,770 | 6,960 | 3,960 | 1,780 | 1,100 | 943 | 860 | 1,270 | 1,710 |
| 21 | 715 | 715 | 1,440 | 1,620 | 7,620 | 3,560 | 2,290 | 1,240 | 964 | 950 | 1,290 | 1,650 |
| 22 | 696 | 702 | 1,640 | 1,520 | 8,000 | 3,830 | 3,160 | 1,110 | 936 | 992 | 1,290 | 1,670 |
| 23 | 651 | 639 | 1,360 | 1,550 | 7,730 | 4,190 | 3,200 | 1,010 | 887 | 985 | 1,300 | 1,700 |
| 24 | 633 | 664 | 1,380 | 1,870 | 7,320 | 4,150 | 3,270 | 1,040 | 867 | 929 | 1,380 | 1,650 |
| 25 | 683 | 677 | 1,260 | 2,130 | 6,920 | 4,190 | 3,080 | 1,040 | 915 | 860 | 1,340 | 1,620 |
| 26 | 670 | 645 | 1,190 | 2,390 | 6,510 | 4,230 | 3,390 | 1,050 | 854 | 874 | 1,360 | 1,620 |
| 27 | 715 | 657 | 1,220 | 2,600 | 6,600 | 4,620 | 3,170 | 1,060 | 854 | 848 | 1,440 | 1,670 |
| 28 | 696 | 696 | 1,240 | 2,990 | 6,220 | 4,870 | 3,100 | 1,030 | 901 | 789 | 1,380 | 1,670 |
| 29 | 683 | ------ | 1,240 | 3,390 | 5,880 | 4,990 | 3,060 | 1,040 | 929 | 776 | 1,480 | 1,710 |
| 30 | 651 | ------ | 1,310 | 3,650 | 5,480 | 4,750 | 3,050 | 1,300 | 950 | 796 | 1,500 | 1,720 |
| 31 | 709 | ------ | 1,310 | ------ | 5,270 | ------ | 2,940 | 1,110 | ------ | 828 | ------ | 1,710 |
| TOTAL | 21,242 | 19,394 | 35,987 | 55,530 | 170,930 | 147,260 | 96,880 | 49,987 | 30,986 | 26,210 | 27,656 | 52,100 |
| MEAN | 685 | 693 | 1,161 | 1,851 | 5,514 | 4,909 | 3,125 | 1,612 | 1,033 | 845 | 922 | 1,681 |
| MAX | 722 | 776 | 1,640 | 3,650 | 8,000 | 5,940 | 4,620 | 2,660 | 1,670 | 992 | 1,500 | 1,730 |
| MIN | 633 | 610 | 797 | 1,030 | 2,860 | 3,560 | 1,740 | 696 | 738 | 750 | 564 | 1,620 |
| AC-FT | 42,130 | 38,470 | 71,380 | 110,100 | 339,000 | 292,100 | 192,200 | 99,150 | 61,460 | 51,990 | 54,860 | 103,300 |

CAL YR 1973 TOTAL 734,162 MEAN 2,011 MAX 8,000 MIN 564 AC-FT 1,456,000
WTR YR 1973 TOTAL 702,941 MEAN 1,926 MAX 8,000 MIN 244 AC-FT 1,394,000

### PEAK DISCHARGE (BASE, 5,200 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-13 | 1830 | 7.74 | 8,350 | 6-13 | 0900 | 6.59 | 5,960 |
| 5-22 | 1400 | 7.70 | 8,250 | 6-29 | 0030 | 6.24 | 5,230 |

## 08315500 MCCLURE RESERVOIR NEAR SANTA FE, N. MEX.

LOCATION.--Lat 35°41'18", long 105°50'06", in NE¼SW¼ sec.24, T.17 N., R.10 E., Santa Fe County, in Santa Fe National Forest, on outlet tower at McClure Dam on Santa Fe River, 2.1 mi (3.4 km) upstream from Nichols Reservoir, 5.8 mi (9.3 km) east of Santa Fe, and at mile 34.0 (54.7 km).

DRAINAGE AREA.--17.4 mi² (45.1 km²).

PERIOD OF RECORD.--September 1929, July to October 1930, April 1931 to June 1946, September 1947 to current year. Prior to October 1947, published in WSP 1312. Prior to October 1965, monthend contents only.

GAGE.--Water-stage recorder. Altitude of gage is 7,788 ft (2,374 m) from topographic map. Prior to Oct. 1, 1947, nonrecording gages at same site and various datums all referred to the Public Service Co. of New Mexico assumed datum, 165.9 ft (50.57 m) lower.

EXTREMES.--Current year: Maximum contents, 2,670 acre-ft (3.29 hm³) May 12, 13 (gage height, 97.4 ft or 29.69 m); minimum, 1,030 acre-ft (1.27 hm³) Feb. 28 to Mar. 3.
Period of record: Maximum contents, 3,140 acre-ft (3.87 hm³) June 25, 1960 (gage height, 103.7 ft or 31.61 m) ; no contents Jan. 25 to May 8, 1951.

REMARKS.--Reservoir is formed by earthfill dam, completed in 1926 (capacity, 503 acre-ft or 620,000 m³), raised 5 ft (1.5 m) in 1935 (capacity, 650 acre-ft or 801,000 m³), and raised 36.5 ft (11.13 m) more in 1947 (capacity, 2,615 acre-ft or 3.22 hm³ at gage height 96.6 ft or 29.44 m, crest of concrete spillway). Between October 1947 and May 1953 varying amounts of sandbag bulkheads were placed on crest of spillway to increase capacity. Between May 1953 and December 1971 spillway was equipped with radial gates that opened automatically thereby increasing capacity to over 3,000 acre-ft (3.70 hm³). Radial gates were removed during 1972 (capacity, 2,615 acre-ft or 3.22 hm³). No dead storage. Water is for municipal use of city of Santa Fe.

COOPERATION.--Supplementary stage readings and capacity table furnished by Public Service Co. of New Mexico.

Capacity table (gage height, in feet, and usable contents, in acre-feet)
(Based on survey by Public Service Co. of New Mexico in 1947)

| | | | |
|---|---|---|---|
| 60 | 668 | 90 | 2,160 |
| 70 | 1,050 | 100 | 2,860 |
| 80 | 1,550 | | |

CONTENTS, IN ACRE-FEET, AT 2400, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1,100 | 1,240 | 1,030 | 1,460 | 2,660 | 2,650 | 2,640 | 2,560 | 2,500 | 2,490 | 2,180 | 1,910 |
| 2 | 1,110 | 1,250 | 1,030 | 1,470 | 2,660 | 2,650 | 2,640 | 2,540 | 2,500 | 2,480 | 2,170 | 1,900 |
| 3 | 1,110 | 1,250 | 1,030 | 1,470 | 2,650 | 2,650 | 2,640 | 2,540 | 2,500 | 2,470 | 2,160 | 1,890 |
| 4 | 1,110 | 1,260 | 1,040 | 1,480 | 2,650 | 2,650 | 2,640 | 2,530 | 2,510 | 2,460 | 2,150 | 1,890 |
| 5 | 1,120 | 1,260 | 1,040 | 1,500 | 2,660 | 2,650 | 2,630 | 2,520 | 2,510 | 2,440 | 2,140 | 1,880 |
| 6 | 1,120 | 1,260 | 1,040 | 1,520 | 2,660 | 2,650 | 2,630 | 2,520 | 2,510 | 2,440 | 2,130 | 1,870 |
| 7 | 1,120 | 1,260 | 1,040 | 1,540 | 2,660 | 2,650 | 2,630 | 2,500 | 2,510 | 2,420 | 2,130 | 1,860 |
| 8 | 1,130 | 1,260 | 1,050 | 1,570 | 2,660 | 2,650 | 2,630 | 2,490 | 2,510 | 2,420 | 2,120 | 1,860 |
| 9 | 1,140 | 1,260 | 1,060 | 1,610 | 2,660 | 2,650 | 2,630 | 2,480 | 2,520 | 2,410 | 2,110 | 1,850 |
| 10 | 1,140 | 1,260 | 1,070 | 1,640 | 2,660 | 2,650 | 2,630 | 2,470 | 2,520 | 2,400 | 2,100 | 1,840 |
| 11 | 1,140 | 1,250 | 1,080 | 1,680 | 2,660 | 2,650 | 2,630 | 2,460 | 2,540 | 2,400 | 2,090 | 1,840 |
| 12 | 1,140 | 1,240 | 1,090 | 1,740 | 2,670 | 2,650 | 2,630 | 2,450 | 2,540 | 2,380 | 2,080 | 1,840 |
| 13 | 1,140 | 1,230 | 1,100 | 1,810 | 2,670 | 2,650 | 2,630 | 2,440 | 2,540 | 2,380 | 2,070 | 1,840 |
| 14 | 1,140 | 1,220 | 1,110 | 1,900 | 2,660 | 2,650 | 2,630 | 2,440 | 2,540 | 2,360 | 2,060 | 1,840 |
| 15 | 1,150 | 1,210 | 1,120 | 2,000 | 2,660 | 2,650 | 2,630 | 2,430 | 2,540 | 2,360 | 2,050 | 1,840 |
| 16 | 1,160 | 1,200 | 1,130 | 2,080 | 2,660 | 2,650 | 2,630 | 2,430 | 2,540 | 2,350 | 2,040 | 1,840 |
| 17 | 1,160 | 1,190 | 1,140 | 2,130 | 2,660 | 2,640 | 2,630 | 2,440 | 2,550 | 2,330 | 2,030 | 1,840 |
| 18 | 1,170 | 1,150 | 1,170 | 2,190 | 2,660 | 2,640 | 2,630 | 2,440 | 2,550 | 2,330 | 2,020 | 1,840 |
| 19 | 1,170 | 1,130 | 1,190 | 2,240 | 2,660 | 2,640 | 2,620 | 2,450 | 2,550 | 2,310 | 2,010 | 1,850 |
| 20 | 1,180 | 1,120 | 1,210 | 2,270 | 2,660 | 2,640 | 2,620 | 2,450 | 2,550 | 2,310 | 2,000 | 1,850 |
| 21 | 1,180 | 1,110 | 1,240 | 2,300 | 2,660 | 2,640 | 2,620 | 2,460 | 2,550 | 2,290 | 2,000 | 1,850 |
| 22 | 1,180 | 1,090 | 1,260 | 2,340 | 2,660 | 2,640 | 2,620 | 2,470 | 2,550 | 2,280 | 1,990 | 1,850 |
| 23 | 1,190 | 1,060 | 1,280 | 2,380 | 2,660 | 2,640 | 2,620 | 2,470 | 2,550 | 2,270 | 1,980 | 1,850 |
| 24 | 1,190 | 1,050 | 1,300 | 2,420 | 2,660 | 2,640 | 2,620 | 2,470 | 2,550 | 2,270 | 1,970 | 1,850 |
| 25 | 1,190 | 1,050 | 1,320 | 2,490 | 2,660 | 2,640 | 2,610 | 2,470 | 2,550 | 2,250 | 1,960 | 1,850 |
| 26 | 1,200 | 1,040 | 1,340 | 2,560 | 2,660 | 2,640 | 2,610 | 2,470 | 2,540 | 2,240 | 1,950 | 1,850 |
| 27 | 1,210 | 1,040 | 1,370 | 2,630 | 2,660 | 2,640 | 2,610 | 2,470 | 2,530 | 2,230 | 1,940 | 1,850 |
| 28 | 1,210 | 1,030 | 1,390 | 2,650 | 2,650 | 2,640 | 2,600 | 2,470 | 2,520 | 2,220 | 1,940 | 1,850 |
| 29 | 1,220 | ------ | 1,410 | 2,650 | 2,650 | 2,640 | 2,590 | 2,480 | 2,510 | 2,210 | 1,930 | 1,860 |
| 30 | 1,230 | ------ | 1,430 | 2,660 | 2,650 | 2,640 | 2,580 | 2,490 | 2,500 | 2,200 | 1,920 | 1,860 |
| 31 | 1,240 | ------ | 1,450 | ------ | 2,650 | ------ | 2,570 | 2,490 | ------ | 2,190 | ------ | 1,860 |
| MAX | 1,240 | 1,260 | 1,450 | 2,660 | 2,670 | 2,650 | 2,640 | 2,560 | 2,550 | 2,490 | 2,180 | 1,910 |
| MIN | 1,100 | 1,030 | 1,030 | 1,460 | 2,650 | 2,640 | 2,570 | 2,430 | 2,500 | 2,190 | 1,920 | 1,840 |
| (†) | 74.0 | 69.4 | 78.1 | 97.2 | 97.1 | 97.0 | 96.0 | 94.9 | 95.0 | 90.5 | 86.2 | 85.2 |
| (‡) | +140 | -210 | +420 | +1,210 | -10 | -10 | -70 | -80 | +10 | -310 | -270 | -60 |

CAL YR 1973 MAX 2,670 MIN 1,030 ‡ +760
WTR YR 1973 MAX 2,670 MIN 378 ‡ +2,085

† Gage height, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 08316000 SANTA FE RIVER NEAR SANTA FE, N. MEX.

LOCATION.--Lat 35°41'12", long 105°50'35", in NE¼SE¼ sec.23, T.17 N., R.10 E., Santa Fe County, in Santa Fe National Forest, on left bank 0.4 mi (0.6 km) downstream from McClure Dam, 5.3 mi (8.5 km) east of Santa Fe, and at mile 33.6 (54.1 km).

DRAINAGE AREA.--18.2 mi² (47.1 km²).

PERIOD OF RECORD.--June 1910, January 1913 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1953, published as Santa Fe Creek near Santa Fe.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,718 ft (2,352 m) from topographic map. See WSP 1312 for history of changes prior to Oct. 1, 1947.

AVERAGE DISCHARGE.--61 calendar years, 8.06 ft³/s (0.228 m³/s), 5,840 acre-ft/yr (7.20 hm³/yr); 20 calendar years (1954-73), 6.37 ft³/s (0.180 m³/s), 4,620 acre-ft/yr (5.70 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 175 ft³/s (4.96 m³/s) May 11 (gage height, 3.56 ft or 1.085 m); minimum, 0.25 ft³/s (0.007 m³/s) Aug. 22.
Period of record: Maximum discharge, 1,500 ft³/s (42.5 m³/s) Aug. 14, 1921 (gage height, 5.17 ft, or 1.576 m, site and datum then in use), from rating curve extended above 150 ft³/s (4.25 m³/s); minimum, 0.08 ft³/s (0.002 m³/s) July 31, Aug. 1, 1951.
Peaks which probably exceeded 1,000 ft³/s (28.3 m³/s) occurred Aug. 19, 1872, and Sept. 29 or 30, 1904. Without regulation the flood of Sept. 23, 1929, might have exceeded 1,500 ft³/s (42.5 m³/s).

REMARKS.--Records good except those for June, which are fair. Flow regulated by McClure Reservoir (see sta 08315500), completed in 1926, raised in 1935 and again in 1947.

REVISIONS (WATER YEARS).--WSP 1512: 1933, 1936-37(M), 1942, drainage area. WSP 1732: 1923, 1925.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.4 | 1.4 | 7.9 | 5.1 | 67 | 56 | 32 | 11 | 1.4 | 6.2 | 6.0 | 5.3 |
| 2 | 1.4 | 1.4 | 7.9 | 5.1 | 52 | 55 | 29 | 11 | 1.3 | 6.2 | 6.0 | 5.1 |
| 3 | 1.4 | 1.4 | 7.9 | 5.1 | 46 | 54 | 26 | 11 | 1.3 | 6.2 | 6.0 | 4.9 |
| 4 | 1.4 | 1.6 | 7.9 | 5.1 | 54 | 53 | 24 | 10 | 1.3 | 6.5 | 6.0 | 4.9 |
| 5 | 1.4 | 1.8 | 7.9 | 5.1 | 68 | 52 | 21 | 9.7 | 1.2 | 6.5 | 6.0 | 4.9 |
| 6 | 1.4 | 1.8 | 7.9 | 5.3 | 80 | 51 | 19 | 9.4 | 1.3 | 6.5 | 6.0 | 4.9 |
| 7 | 1.4 | 1.8 | 7.6 | 5.8 | 63 | 50 | 17 | 9.4 | 1.3 | 6.5 | 6.0 | 4.9 |
| 8 | 1.3 | 5.3 | 5.3 | 5.8 | 54 | 49 | 15 | 9.4 | 1.3 | 6.5 | 6.0 | 4.9 |
| 9 | 1.3 | 9.4 | 1.9 | 5.8 | 62 | 48 | 15 | 9.4 | 1.3 | 6.5 | 6.0 | 4.9 |
| 10 | 1.4 | 9.4 | 2.0 | 6.0 | 106 | 47 | 16 | 9.4 | 1.3 | 6.5 | 6.0 | 2.8 |
| 11 | 1.4 | 9.4 | 2.2 | 6.5 | 134 | 46 | 14 | 9.0 | 1.5 | 6.5 | 6.0 | 1.0 |
| 12 | 1.5 | 9.7 | 2.3 | 7.0 | 133 | 45 | 13 | 8.7 | 1.5 | 6.5 | 6.0 | 1.0 |
| 13 | 1.5 | 9.7 | 2.5 | 7.6 | 104 | 44 | 13 | 8.7 | 1.5 | 6.5 | 6.0 | 1.0 |
| 14 | 1.5 | 9.4 | 2.6 | 8.2 | 91 | 43 | 12 | 8.7 | 1.5 | 6.5 | 6.0 | 1.0 |
| 15 | 1.5 | 9.4 | 2.8 | 7.9 | 72 | 42 | 13 | 5.0 | 1.4 | 6.5 | 6.0 | 1.0 |
| 16 | 1.5 | 9.4 | 2.8 | 7.6 | 66 | 41 | 11 | 2.0 | 1.4 | 6.5 | 6.0 | 1.0 |
| 17 | 1.5 | 9.0 | 2.8 | 7.6 | 63 | 41 | 12 | 2.0 | 1.5 | 6.5 | 6.0 | 1.0 |
| 18 | 1.5 | 9.0 | 3.0 | 7.6 | 70 | 41 | 12 | 2.0 | 1.5 | 6.5 | 6.0 | 1.0 |
| 19 | 1.5 | 9.0 | 3.2 | 7.6 | 95 | 40 | 11 | 1.0 | 1.5 | 6.5 | 6.0 | 1.0 |
| 20 | 1.5 | 9.0 | 3.5 | 7.6 | 116 | 40 | 9.4 | 1.0 | 1.5 | 6.5 | 6.0 | 1.0 |
| 21 | 1.5 | 8.7 | 3.7 | 7.6 | 110 | 40 | 8.7 | 1.0 | 1.4 | 6.5 | 6.0 | 1.0 |
| 22 | 1.5 | 8.7 | 3.8 | 7.6 | 102 | 39 | 8.4 | .80 | 1.4 | 6.5 | 5.8 | 1.1 |
| 23 | 1.5 | 8.4 | 4.0 | 7.6 | 88 | 36 | 8.2 | 1.3 | 1.4 | 6.5 | 5.8 | 1.1 |
| 24 | 1.5 | 8.4 | 4.0 | 8.2 | 80 | 36 | 8.2 | 1.3 | 1.4 | 6.5 | 5.8 | 1.1 |
| 25 | 1.5 | 8.2 | 4.0 | 8.2 | 76 | 34 | 8.4 | 1.3 | 3.9 | 6.5 | 5.8 | 1.1 |
| 26 | 1.4 | 8.2 | 4.4 | 8.2 | 75 | 35 | 9.4 | 1.2 | 6.2 | 6.5 | 5.5 | 1.1 |
| 27 | 1.4 | 7.9 | 4.7 | 8.2 | 66 | 37 | 11 | 1.3 | 6.2 | 6.5 | 5.5 | 1.1 |
| 28 | 1.4 | 7.9 | 4.7 | 44 | 64 | 37 | 11 | 1.3 | 6.2 | 6.5 | 5.5 | 1.1 |
| 29 | 1.4 | ------ | 4.9 | 72 | 62 | 37 | 11 | 1.3 | 6.2 | 6.2 | 5.3 | 1.1 |
| 30 | 1.4 | ------ | 4.9 | 79 | 60 | 35 | 11 | 1.4 | 6.2 | 6.2 | 5.3 | 1.1 |
| 31 | 1.4 | ------ | 4.9 | ------ | 58 | ------ | 11 | 1.4 | ------ | 6.2 | ------ | 1.1 |
| TOTAL | 44.6 | 194.7 | 139.9 | 380.0 | 2,437 | 1,304 | 440.7 | 161.40 | 68.3 | 199.7 | 176.3 | 69.5 |
| MEAN | 1.44 | 6.95 | 4.51 | 12.7 | 78.6 | 43.5 | 14.2 | 5.21 | 2.28 | 6.44 | 5.88 | 2.24 |
| MAX | 1.5 | 9.7 | 7.9 | 79 | 134 | 56 | 32 | 11 | 6.2 | 6.5 | 6.0 | 5.3 |
| MIN | 1.3 | 1.4 | 1.9 | 5.1 | 46 | 34 | 8.2 | .80 | 1.2 | 6.2 | 5.3 | 1.0 |
| AC-FT | 88 | 386 | 277 | 754 | 4,830 | 2,590 | 874 | 320 | 135 | 396 | 350 | 138 |

CAL YR 1973 TOTAL 5,616.10 MEAN 15.4 MAX 134 MIN .80 AC-FT 11,140
WTR YR 1973 TOTAL 5,374.78 MEAN 14.7 MAX 134 MIN .80 AC-FT 10,660

## 08316500 NICHOLS RESERVOIR NEAR SANTA FE, N. MEX.

LOCATION.--Lat 35°41'24", long 105°52'46", in SE¼NE¼ sec.21, T.17 N., R.10 E., Santa Fe County, in Santa Fe National Forest, on outlet tower at Nichols Dam on Santa Fe River, 0.6 mi (1.0 km) east of Twomile Reservoir, 3.3 mi (5.3 km) east of Santa Fe, and at mile 31.0 (49.9 km).

DRAINAGE AREA.--22.8 mi² (59.1 km²).

PERIOD OF RECORD.--March 1943 to September 1965 (monthend contents only), October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 7,313.2 ft (2,229.06 m) above mean sea level.

EXTREMES.--Current year: Maximum contents, 719 acre-ft (887,000 m³) May 20-23 (gage height, 168.1 ft or 51.24 m); minimum, 246 acre-ft (303,000 m³) Feb. 13 (gage height, 147.9 ft or 45.08 m).
Period of record: Maximum contents, 836 acre-ft (1.03 hm³) June 8, 1952 (gage height, 171.8 ft or 52.36 m); minimum, 16 acre-ft (19,700 m³) Feb. 11 to Mar 10, 1944, Feb. 1-19, 1948.

REMARKS.--Reservoir is formed by earthfill dam. No storage prior to Mar. 16, 1943. Capacity, 685 acre-ft (845,000 m³) between gage heights 121.2 ft (36.94 m), bottom of lower operational gate, and 167.0 ft (50.90 m), crest of spillway. Dead storage, 14 acre-ft (17,300 m³). Water is for municipal use of city of Santa Fe.

COOPERATION.--Supplementary stage readings and survey to compute capacity table furnished by Public Service Co. of New Mexico.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Public Service Co. of New Mexico in 1943)

| | | | |
|---|---|---|---|
| 145 | 202 | 160 | 491 |
| 150 | 279 | 165 | 625 |
| 155 | 375 | 170 | 776 |

CONTENTS, IN ACRE-FEET, AT 2400, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 352 | 277 | 375 | 561 | 710 | 710 | 704 | 698 | 458 | 456 | 468 | 504 |
| 2 | 350 | 276 | 371 | 566 | 707 | 710 | 704 | 698 | 454 | 465 | 458 | 504 |
| 3 | 348 | 271 | 369 | 571 | 704 | 710 | 701 | 698 | 452 | 475 | 449 | 504 |
| 4 | 346 | 266 | 369 | 577 | 704 | 710 | 701 | 698 | 449 | 475 | 449 | 507 |
| 5 | 344 | 260 | 382 | 579 | 710 | 710 | 701 | 698 | 449 | 463 | 461 | 512 |
| 6 | 342 | 254 | 410 | 585 | 710 | 710 | 701 | 698 | 449 | 452 | 468 | 518 |
| 7 | 340 | 251 | 421 | 595 | 707 | 710 | 698 | 698 | 452 | 452 | 479 | 523 |
| 8 | 338 | 251 | 426 | 606 | 707 | 710 | 698 | 698 | 452 | 458 | 486 | 528 |
| 9 | 338 | 250 | 426 | 614 | 707 | 710 | 698 | 698 | 454 | 468 | 491 | 534 |
| 10 | 336 | 250 | 426 | 622 | 713 | 710 | 698 | 698 | 458 | 479 | 504 | 536 |
| 11 | 335 | 248 | 431 | 631 | 719 | 713 | 698 | 698 | 461 | 477 | 512 | 534 |
| 12 | 331 | 248 | 438 | 646 | 719 | 713 | 698 | 698 | 463 | 463 | 523 | 528 |
| 13 | 327 | 246 | 447 | 661 | 716 | 713 | 698 | 698 | 463 | 449 | 531 | 526 |
| 14 | 323 | 248 | 452 | 670 | 713 | 713 | 698 | 698 | 465 | 444 | 542 | 523 |
| 15 | 319 | 254 | 458 | 679 | 713 | 710 | 698 | 692 | 468 | 456 | 550 | 520 |
| 16 | 315 | 263 | 458 | 676 | 710 | 710 | 698 | 676 | 472 | 468 | 555 | 518 |
| 17 | 312 | 274 | 456 | 670 | 710 | 707 | 698 | 667 | 475 | 479 | 561 | 512 |
| 18 | 310 | 285 | 456 | 667 | 710 | 707 | 698 | 655 | 477 | 477 | 566 | 510 |
| 19 | 308 | 296 | 461 | 661 | 716 | 707 | 698 | 637 | 477 | 465 | 566 | 507 |
| 20 | 306 | 308 | 470 | 655 | 719 | 707 | 698 | 614 | 470 | 458 | 569 | 504 |
| 21 | 304 | 319 | 482 | 652 | 719 | 707 | 698 | 593 | 447 | 449 | 563 | 502 |
| 22 | 302 | 329 | 496 | 646 | 719 | 707 | 698 | 569 | 428 | 447 | 552 | 502 |
| 23 | 300 | 336 | 510 | 646 | 716 | 704 | 698 | 547 | 424 | 456 | 544 | 502 |
| 24 | 298 | 346 | 512 | 646 | 713 | 704 | 698 | 531 | 431 | 472 | 534 | 499 |
| 25 | 294 | 350 | 518 | 649 | 710 | 704 | 698 | 523 | 435 | 470 | 523 | 494 |
| 26 | 292 | 350 | 523 | 652 | 710 | 704 | 698 | 510 | 449 | 454 | 515 | 494 |
| 27 | 290 | 352 | 531 | 652 | 710 | 704 | 698 | 494 | 454 | 438 | 510 | 494 |
| 28 | 288 | 365 | 536 | 701 | 707 | 704 | 698 | 484 | 447 | 435 | 507 | 491 |
| 29 | 285 | ------ | 544 | 710 | 707 | 704 | 701 | 475 | 442 | 447 | 504 | 489 |
| 30 | 283 | ------ | 550 | 710 | 707 | 704 | 701 | 470 | 444 | 456 | 504 | 484 |
| 31 | 281 | ------ | 555 | ------ | 710 | ------ | 701 | 463 | ------ | 468 | ------ | 482 |
| MAX | 352 | 365 | 555 | 710 | 719 | 713 | 704 | 698 | 477 | 479 | 569 | 536 |
| MIN | 281 | 246 | 369 | 561 | 704 | 704 | 698 | 463 | 424 | 435 | 449 | 482 |
| (†) | 150.1 | 154.5 | 162.4 | 167.8 | 167.8 | 167.6 | 167.5 | 158.8 | 158.0 | 159.0 | 160.5 | 159.6 |
| (‡) | -73 | +84 | +190 | +155 | 0 | -6 | -3 | -238 | -19 | +24 | +36 | -22 |

CAL YR 1973 MAX 719 MIN 246 ‡ +128
WTR YR 1973 MAX 719 MIN 246 ‡ + 58

† Gage height, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 08317200 SANTA FE RIVER ABOVE COCHITI LAKE, N. MEX.

LOCATION.--Lat 35°32'49", long 106°13'41", in NW¼ sec.8, T.15 N., R.7 E., Santa Fe County, in Mesita de Juana Lopez Grant, on right bank at foot of La Bajada Hill, 5.0 mi (8.0 km) upstream from Cochiti Dam, 6.3 mi (10.1 km) east of Pena Blanca, and at mile 8.2 (13.2 km).

DRAINAGE AREA.--231 mi² (598 km²).

PERIOD OF RECORD.--March 1970 to current year. Published as "above Cochiti Reservoir" prior to October 1970.

GAGE.--Water-stage recorder. Altitude of gage is 5,505 ft (1,678 m) from topographic map.

EXTREMES.--Current year: Maximum discharge, 880 ft³/s (24.9 m³/s) Sept. 11 (gage height, 3.78 ft or 1.152 m), from rating curve extended above 120 ft³/s (3.40 m³/s) on basis of slope-area measurements at gage heights 5.69 ft (1.734 m) and 9.58 ft (2.920 m); minimum, 0.70 ft³/s (0.020 m³/s) Aug. 24, 25.
Period of record: Maximum discharge, 11,400 ft³/s (323 m³/s) July 26, 1971 (gage height, 9.58 ft or 2.920 m), from rating curve extended above 120 ft³/s (3.40 m³/s) on basis of slope-area measurements at gage heights 5.69 ft (1.734 m) and 9.58 ft (2.920 m); no flow July 16-18, 1971.

REMARKS.--Records fair. Surface and ground-water diversions and returns for municipal supply of city of Santa Fe in upper part of basin. Diversions for irrigation of about 400 acres (1.6 km²) above station. See tabulation below for the results of discharge measurements made during year at point adjacent to gage of an unnamed ditch on right bank which diverts water 0.4 mi (0.6 km) upstream and bypasses gage; ditch flow not included in record.

REVISIONS (WATER YEARS).--WRD N. Mex., 1971: 1970(P).

DISCHARGE MEASUREMENTS, IN CUBIC FEET PER SECOND, OF DITCH

| Date | Discharge | Date | Discharge | Date | Discharge | Date | Discharge |
|---|---|---|---|---|---|---|---|
| Jan. 8 | 0 | May 4 | *0.70 | May 31 | *0.30 | Aug. 21 | 0 |
| 21 | 0 | 7 | *.25 | June 18 | 0 | Sept. 13 | 0 |
| Feb. 15 | 0 | 11 | *.09 | July 3 | .24 | Oct. 5 | 0 |
| Mar. 8 | 0 | 15 | 0 | 16 | *1.0 | 24 | 0 |
| Apr. 21 | 0 | 22 | 0 | Aug. 2 | 1.1 | Dec. 4 | 0 |
| 28 | 1.54 | 23 | 0 | 15 | 0 | 21 | 0 |

*Estimated

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11 | 9.8 | 10 | 9.5 | 65 | 53 | 19 | 2.7 | 4.7 | 3.5 | 5.8 | 7.5 |
| 2 | 12 | 9.6 | 9.1 | 11 | 50 | 61 | 15 | 2.3 | 4.0 | 3.1 | 5.8 | 7.5 |
| 3 | 11 | 8.8 | 9.2 | 10 | 42 | 51 | 12 | 2.4 | 3.3 | 4.4 | 5.4 | 7.7 |
| 4 | 14 | 9.3 | 8.8 | 9.9 | 45 | 45 | 9.9 | 2.9 | 3.1 | 4.6 | 5.9 | 7.9 |
| 5 | 14 | 11 | 8.8 | 9.0 | 61 | 40 | 7.8 | 2.9 | 2.1 | 4.9 | 5.7 | 7.4 |
| 6 | 13 | 11 | 8.3 | 8.8 | 79 | 37 | 7.2 | 2.0 | 2.1 | 4.4 | 5.1 | 7.1 |
| 7 | 13 | 9.4 | 8.4 | 7.8 | 65 | 37 | 6.6 | 1.8 | 2.6 | 4.8 | 5.5 | 7.5 |
| 8 | 9.5 | 8.7 | 8.6 | 9.1 | 49 | 38 | 6.5 | 2.1 | 2.1 | 4.9 | 5.7 | 7.9 |
| 9 | 9.1 | 9.8 | 8.8 | 8.7 | 51 | 38 | 6.3 | 2.1 | 2.9 | 3.7 | 5.5 | 8.1 |
| 10 | 9.4 | 10 | 8.8 | 8.3 | 71 | 42 | 6.0 | 2.7 | 8.4 | 6.0 | 5.3 | 8.0 |
| 11 | 8.9 | 9.7 | 9.1 | 9.1 | 111 | 48 | 5.8 | 2.4 | 185 | 6.4 | 5.5 | 8.5 |
| 12 | 8.1 | 10 | 8.5 | 10 | 137 | 51 | 6.2 | 3.8 | 6.5 | 6.5 | 5.8 | 8.7 |
| 13 | 8.6 | 10 | 9.0 | 9.8 | 135 | 55 | 6.1 | 3.6 | 5.0 | 6.2 | 5.6 | 8.9 |
| 14 | 9.0 | 9.6 | 8.4 | 16 | 103 | 72 | 7.5 | 3.8 | 5.2 | 5.8 | 5.1 | 9.6 |
| 15 | 9.0 | 9.3 | 8.0 | 16 | 72 | 45 | 9.0 | 2.5 | 4.2 | 5.6 | 5.1 | 9.6 |
| 16 | 11 | 9.8 | 7.8 | 16 | 59 | 40 | 16 | 3.2 | 4.2 | 5.4 | 5.9 | 9.2 |
| 17 | 13 | 9.7 | 7.0 | 13 | 51 | 37 | 23 | 3.0 | 4.0 | 4.8 | 5.8 | 9.5 |
| 18 | 14 | 9.5 | 6.0 | 13 | 50 | 34 | 24 | 2.2 | 3.2 | 5.0 | 5.8 | 10 |
| 19 | 14 | 9.1 | 6.4 | 13 | 66 | 32 | 17 | 2.4 | 3.8 | 4.6 | 5.7 | 10 |
| 20 | 14 | 9.4 | 6.6 | 12 | 93 | 29 | 11 | 2.7 | 3.8 | 4.9 | 6.0 | 10 |
| 21 | 10 | 9.0 | 8.1 | 9.6 | 98 | 26 | 9.5 | 2.2 | 3.5 | 5.6 | 5.6 | 9.9 |
| 22 | 9.0 | 9.9 | 8.3 | 8.8 | 99 | 23 | 9.2 | 2.8 | 3.3 | 5.7 | 4.7 | 9.9 |
| 23 | 8.9 | 10 | 8.2 | 7.7 | 83 | 22 | 7.0 | 2.1 | 3.1 | 6.2 | 6.0 | 10 |
| 24 | 9.2 | 10 | 8.9 | 7.0 | 68 | 21 | 6.5 | .98 | 3.4 | 5.2 | 6.2 | 9.8 |
| 25 | 9.4 | 9.8 | 9.5 | 8.2 | 64 | 20 | 6.0 | 1.6 | 2.4 | 6.0 | 6.4 | 9.6 |
| 26 | 9.8 | 9.6 | 7.1 | 14 | 62 | 17 | 25 | 1.6 | 3.5 | 5.9 | 7.1 | 9.0 |
| 27 | 9.9 | 9.6 | 6.7 | 16 | 54 | 18 | 3.7 | 1.7 | 3.1 | 5.7 | 6.9 | 9.2 |
| 28 | 9.4 | 10 | 8.2 | 19 | 46 | 25 | 3.2 | 1.7 | 3.8 | 5.4 | 6.6 | 10 |
| 29 | 9.6 | ------ | 9.7 | 45 | 40 | 23 | 3.0 | 2.1 | 3.6 | 5.3 | 6.8 | 10 |
| 30 | 10 | ------ | 12 | 71 | 38 | 21 | 2.9 | 19 | 3.4 | 4.5 | 7.1 | 10 |
| 31 | 11 | ------ | 12 | ------ | 42 | ------ | 2.6 | 12 | ------ | 5.3 | ------ | 8.8 |
| TOTAL | 331.8 | 271.4 | 264.3 | 426.3 | 2,149 | 1,101 | 300.5 | 101.28 | 293.3 | 160.3 | 175.4 | 276.8 |
| MEAN | 10.7 | 9.69 | 8.53 | 14.2 | 69.3 | 36.7 | 9.69 | 3.27 | 9.78 | 5.17 | 5.85 | 8.93 |
| MAX | 14 | 11 | 12 | 71 | 137 | 72 | 25 | 19 | 185 | 6.5 | 7.1 | 10 |
| MIN | 8.1 | 8.7 | 6.0 | 7.0 | 38 | 17 | 2.6 | .98 | 2.1 | 3.1 | 4.7 | 7.1 |
| AC-FT | 658 | 538 | 524 | 846 | 4,260 | 2,180 | 596 | 201 | 582 | 318 | 348 | 549 |

CAL YR 1973 TOTAL 5,851.38 MEAN 16.0 MAX 185 MIN .98 AC-FT 11,610
WTR YR 1973 TOTAL 6,062.68 MEAN 16.6 MAX 185 MIN .98 AC-FT 12,030

PEAK DISCHARGE (BASE, 300 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 9-11 | 0700 | 3.78 | 880 | | | | |

## 08317300 COCHITI LAKE NEAR COCHITI PUEBLO, N. MEX.

LOCATION.--Lat 35°38'11", long 106°19'05", in NW¼NW¼ sec.9, T.16 N., R.6 E., Sandoval County, in Pueblo de Cochiti Grant, on right bank 1.3 mi (2.1 km) north of control tower, 2.5 mi (4.0 km) northeast of Cochiti Pueblo, and at mile 1,589.2 (2,557.0 km).

DRAINAGE AREA.--14,900 mi² (38,590 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--November and December 1973.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Maximum contents during period, 5,830 acre-ft (7.19 hm³) Dec. 31 (elevation, 5,266.54 ft or 1,605.24 m); no contents Nov. 1-11.

REMARKS.--Lake is formed by an earthfill dam on Rio Grande and Santa Fe River; dam still under construction when storage began on Nov. 12, 1973. Capacity 498,100 acre-ft (614.0 hm³) between elevation 5,190.0 ft (1,581.91 m) and 5,450.0 ft (1,661.16 m), crest of service spillway. Dead storage 2,220 acre-ft (2.74 hm³) below elevation 5,255.0 ft (1,601.72 m), invert of outlet structure. Lake was created primarily for flood and sediment control. However, a 50,000 acre-ft (61.6 hm³) permanent pool has been authorized for recreational purposes.

COOPERATION.--Records furnished by Corps of Engineers.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Corps of Engineers in 1972)

| | |
|---|---|
| 5,247 | 759 |
| 5,250 | 1,210 |
| 5,255 | 2,220 |
| 5,260 | 3,560 |
| 5,270 | 7,250 |

CONTENTS, IN ACRE-FEET, AT 2400, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | 0 | 5,550 |
| 2 | | | | | | | | | | | 0 | 5,600 |
| 3 | | | | | | | | | | | 0 | 5,700 |
| 4 | | | | | | | | | | | 0 | 5,730 |
| 5 | | | | | | | | | | | 0 | 5,720 |
| 6 | | | | | | | | | | | 0 | 5,740 |
| 7 | | | | | | | | | | | 0 | 5,660 |
| 8 | | | | | | | | | | | 0 | 5,670 |
| 9 | | | | | | | | | | | 0 | 5,700 |
| 10 | | | | | | | | | | | 0 | 5,700 |
| 11 | | | | | | | | | | | 0 | 5,710 |
| 12 | | | | | | | | | | | 820 | 5,700 |
| 13 | | | | | | | | | | | 2,000 | 5,720 |
| 14 | | | | | | | | | | | 2,900 | 5,780 |
| 15 | | | | | | | | | | | 3,260 | 5,670 |
| 16 | | | | | | | | | | | 3,480 | 5,670 |
| 17 | | | | | | | | | | | 3,610 | 5,650 |
| 18 | | | | | | | | | | | 3,670 | 5,660 |
| 19 | | | | | | | | | | | 3,840 | 5,750 |
| 20 | | | | | | | | | | | 4,430 | 5,760 |
| 21 | | | | | | | | | | | 4,680 | 5,670 |
| 22 | | | | | | | | | | | 4,800 | 5,660 |
| 23 | | | | | | | | | | | 4,870 | 5,710 |
| 24 | | | | | | | | | | | 4,980 | 5,730 |
| 25 | | | | | | | | | | | 4,990 | 5,660 |
| 26 | | | | | | | | | | | 5,010 | 5,620 |
| 27 | | | | | | | | | | | 5,130 | 5,680 |
| 28 | | | | | | | | | | | 5,090 | 5,720 |
| 29 | | ------ | | | | | | | | | 5,260 | 5,740 |
| 30 | | ------ | | | | | | | | | 5,330 | 5,770 |
| 31 | | ------ | | ------ | | ------ | | | ------ | | ------ | 5,770 |
| MAX | - | - | - | - | - | - | - | - | - | - | 5,330 | 5,780 |
| MIN | - | - | - | - | - | - | - | - | - | - | 0 | 5,550 |
| (†) | - | - | - | - | - | - | - | - | - | - | 5,265.22 | 5,266.38 |
| (‡) | - | - | - | - | - | - | - | - | - | - | +5,330 | +440 |

CAL YR 1973 MAX 5,780 MIN 0

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 08317400 RIO GRANDE BELOW COCHITI DAM, N. MEX.

LOCATION.--Lat 35°37'04", long 106°19'26", in SW¼NE¼ sec.17, T.16 N., R.6 E., Sandoval County, in Pueblo de Cochiti Grant, on upstream end of pier near left bank, 1,000 ft (300 m) downstream from Cochiti Dam, 1.4 mi (2.3 km) northeast of Cochiti Pueblo, and at mile 1,589.0 (2,556.7 km). Prior to Nov. 14 at site 2.4 mi (3.9 km) downstream.

DRAINAGE AREA.--14,900 $mi^2$ (38,590 $km^2$), approximately, including 2,940 $mi^2$ (7,610 $km^2$) in closed basin in San Luis Valley, Colo.

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

GAGE.--Water-stage recorder. Datum of gage is 5,224.29 ft (1,592.364 m) above mean sea level (Corps of Engineers bench mark). Prior to Nov. 14, 1973, at site 2.4 mi (3.9 km) downstream at altitude 5,210 ft (1,588 m) from topographic map.

EXTREMES.--Current year: Maximum discharge, about 8,700 $ft^3/s$ (250 $m^3/s$) May 14; minimum, 8.1 $ft^3/s$ (0.23 $m^3/s$) Nov. 12, result of closure of Cochiti Dam.
Period of record: Maximum discharge 10,300 $ft^3/s$ (292 $m^3/s$) July 26, 1971 (gage height, 7.90 ft or 2.408 m), from rating curve extended above 2,600 $ft^3/s$ (73.6 $m^3/s$); minimum, 8.1 $ft^3/s$ (0.23 $m^3/s$) Nov. 12, 1973, result of closure of Cochiti Dam.
The flood of May 15, 1941, reached a discharge of 23,400 $ft^3/s$ (663 $m^3/s$) at a nearby site upstream from mouth of Santa Fe River. The flood of May 23, 1920, probably exceeded 23,400 $ft^3/s$ (663 $m^3/s$), and is likely the highest since 1905.

REMARKS.--Records fair. Discharges at present site include flow of Santa Fe River which will eventually be intercepted by Cochiti Dam and released through the combined outlet works. Flow regulated by Cochiti Dam since Nov.12, 1973. Diversions above station for irrigation of about 620,000 acres (2,510 $km^2$) in Colorado and about 81,000 acres (328 $km^2$) in New Mexico. Cochiti eastside main canal, on left bank, and Sili main canal, on right bank, head at Cochiti Dam and bypass gage for irrigation of about 6,000 acres (24.3 $km^2$) below station; see tabulation below for monthly and yearly diversion, as furnished by Bureau of Reclamation. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 651 | 672 | 770 | 1,180 | 3,630 | 5,200 | 4,700 | 2,830 | 1,010 | 773 | 821 | 1,420 |
| 2 | 666 | 725 | 890 | 1,140 | 3,400 | 5,600 | 4,600 | 2,630 | 973 | 747 | 786 | 1,490 |
| 3 | 628 | 648 | 1,060 | 1,090 | 2,940 | 5,800 | 4,400 | 2,530 | 968 | 690 | 757 | 1,530 |
| 4 | 755 | 648 | 1,220 | 1,070 | 2,980 | 5,900 | 4,200 | 2,430 | 1,010 | 671 | 761 | 1,580 |
| 5 | 729 | 725 | 1,090 | 980 | 3,420 | 5,600 | 4,000 | 2,270 | 1,030 | 657 | 777 | 1,580 |
| 6 | 751 | 734 | 936 | 985 | 3,710 | 5,100 | 3,900 | 2,210 | 994 | 694 | 770 | 1,580 |
| 7 | 697 | 698 | 864 | 1,150 | 3,550 | 4,800 | 3,600 | 2,170 | 987 | 659 | 760 | 1,560 |
| 8 | 722 | 734 | 870 | 1,190 | 3,710 | 4,700 | 3,600 | 2,130 | 988 | 682 | 738 | 1,510 |
| 9 | 730 | 743 | 853 | 1,020 | 3,660 | 4,500 | 3,500 | 2,100 | 964 | 714 | 718 | 1,510 |
| 10 | 734 | 727 | 917 | 955 | 4,080 | 4,700 | 3,300 | 2,080 | 1,000 | 760 | 683 | 1,530 |
| 11 | 707 | 734 | 860 | 996 | 5,120 | 5,000 | 3,200 | 2,040 | 1,770 | 807 | 652 | 1,550 |
| 12 | 680 | 827 | 943 | 1,160 | 5,700 | 5,200 | 3,200 | 2,000 | 1,500 | 793 | 238 | 1,550 |
| 13 | 656 | 781 | 978 | 1,520 | 7,000 | 5,600 | 3,400 | 2,000 | 914 | 742 | 44 | 1,530 |
| 14 | 716 | 736 | 1,020 | 2,090 | 7,900 | 5,700 | 2,800 | 2,060 | 774 | 743 | 170 | 1,560 |
| 15 | 707 | 773 | 1,020 | 2,660 | 6,600 | 5,600 | 2,000 | 2,030 | 1,050 | 699 | 400 | 1,550 |
| 16 | 698 | 794 | 949 | 2,820 | 5,700 | 5,500 | 1,700 | 995 | 1,320 | 683 | 444 | 1,550 |
| 17 | 689 | 766 | 1,000 | 2,070 | 5,400 | 5,000 | 2,000 | 666 | 1,260 | 682 | 496 | 1,550 |
| 18 | 714 | 766 | 1,040 | 1,860 | 5,600 | 4,600 | 2,300 | 794 | 1,130 | 656 | 532 | 1,510 |
| 19 | 743 | 740 | 1,160 | 2,480 | 6,100 | 4,500 | 2,100 | 900 | 929 | 712 | 560 | 1,550 |
| 20 | 734 | 700 | 1,310 | 2,020 | 6,800 | 4,100 | 2,000 | 990 | 821 | 753 | 890 | 1,560 |
| 21 | 698 | 695 | 1,370 | 1,700 | 7,500 | 3,800 | 2,200 | 1,060 | 822 | 798 | 1,090 | 1,550 |
| 22 | 716 | 765 | 1,550 | 1,550 | 7,800 | 3,900 | 3,000 | 1,140 | 807 | 863 | 1,120 | 1,530 |
| 23 | 680 | 689 | 1,440 | 1,580 | 8,100 | 4,200 | 3,200 | 950 | 764 | 860 | 1,180 | 1,550 |
| 24 | 648 | 689 | 1,330 | 1,850 | 7,700 | 4,200 | 3,400 | 945 | 735 | 844 | 1,230 | 1,580 |
| 25 | 672 | 716 | 1,310 | 2,070 | 7,200 | 4,200 | 3,300 | 948 | 750 | 774 | 1,260 | 1,580 |
| 26 | 648 | 689 | 1,160 | 2,260 | 6,600 | 4,300 | 3,900 | 979 | 755 | 790 | 1,260 | 1,550 |
| 27 | 680 | 672 | 1,130 | 2,470 | 6,400 | 4,500 | 3,300 | 988 | 750 | 776 | 1,320 | 1,560 |
| 28 | 716 | 698 | 1,130 | 2,700 | 6,100 | 4,700 | 3,300 | 950 | 744 | 726 | 1,320 | 1,600 |
| 29 | 689 | ------ | 1,170 | 3,210 | 5,800 | 5,000 | 3,200 | 949 | 774 | 702 | 1,340 | 1,640 |
| 30 | 707 | ------ | 1,140 | 3,530 | 5,500 | 4,800 | 3,200 | 1,220 | 793 | 702 | 1,360 | 1,650 |
| 31 | 743 | ------ | 1,190 | ------ | 5,200 | ------ | 3,180 | 1,050 | ------ | 773 | ------ | 1,650 |
| TOTAL | 21,704 | 20,284 | 33,670 | 53,356 | 170,900 | 146,300 | 99,680 | 49,034 | 29,086 | 22,925 | 24,477 | 48,190 |
| MEAN | 700 | 724 | 1,086 | 1,779 | 5,513 | 4,877 | 3,215 | 1,582 | 970 | 740 | 816 | 1,555 |
| MAX | 755 | 827 | 1,550 | 3,530 | 8,100 | 5,900 | 4,700 | 2,830 | 1,770 | 863 | 1,360 | 1,650 |
| MIN | 628 | 648 | 770 | 955 | 2,940 | 3,800 | 1,700 | 666 | 735 | 656 | 44 | 1,420 |
| AC-FT | 43,050 | 40,230 | 66,780 | 105,800 | 339,000 | 290,200 | 197,700 | 97,260 | 57,690 | 45,470 | 48,550 | 95,580 |
| (†) | 0 | 0 | 3,600 | 3,770 | 5,180 | 6,520 | 5,250 | 4,670 | 3,140 | 5,360 | 0 | 0 |
| (‡) | 0 | 0 | 1,180 | 1,370 | 2,820 | 2,630 | 2,390 | 1,560 | 1,270 | 2,300 | 0 | 0 |

CAL YR 1973 TOTAL 719,606 MEAN 1,972 MAX 8,100 MIN 44 AC-FT 1,427,000 † 37,480 ‡ 15,530
WTR YR 1973 TOTAL 694,997 MEAN 1,904 MAX 8,100 MIN 154 AC-FT 1,379,000 † 36,420 ‡ 14,340

PEAK DISCHARGE (BASE, 4,500 $FT^3/S$)

| DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|
| 5-14 | a0500 | - | a8,700 |
| 7-26 | 0100 | 7.12 | 5,800 |

a About.
† Diversion, in acre-ft, by Cochiti eastside main canal at head.
‡ Diversion, in acre-ft, by Sili main canal at head.
NOTE.--No gage-height record May 12 to July 30.

## 08317850 GALISTEO CREEK ABOVE GALISTEO RESERVOIR, N. MEX.

LOCATION.--Lat 35°26'58", long 106°09'08", in NE¼NW¼ sec.13, T.14 N., R.7 E., Santa Fe County, in Mesita de Juana Lopez Grant, on right bank at site of former railroad bridge at Waldo, 800 ft (240 m) downstream from Waldo Gulch, 1.8 mi (2.9 km) northwest of Cerrillos, 4.0 mi (6.4 km) upstream from Galisteo Dam, and at mile 15.8 (25.4 km).

DRAINAGE AREA.--567 mi² (1,469 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 5,595 ft (1,705 m) from topographic map.

EXTREMES.--Current year: Maximum discharge, 1,620 ft³/s (45.9 m³/s) Sept. 11 (gage height, 4.72 ft or 1.439 m), from rating curve extended above 200 ft³/s (5.66 m³/s); no flow part of each day June 6-8, 18, Sept. 2-9, 24.
Period of record: Maximum discharge, 7,460 ft³/s (211 m³/s) July 26, 1971 (gage height, 8.00 ft or 2.438 m), from rating curve extended above 200 ft³/s (5.66 m³/s); no flow part of each day June 6-8, 18, Sept. 2-9, 24, 1973.

REMARKS.--Records poor. Diversions for irrigation of about 50 acres (202,000 m²) above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.2 | 2.6 | 12 | 13 | 24 | 3.3 | .60 | 22 | 1.0 | .33 | .92 | 2.6 |
| 2 | 2.1 | 2.6 | 11 | 15 | 20 | 3.1 | .60 | 3.0 | .33 | .27 | 1.2 | 2.6 |
| 3 | 2.0 | 2.7 | 10 | 16 | 14 | 2.2 | 1.1 | 1.1 | .10 | .33 | 1.3 | 2.6 |
| 4 | 2.0 | 2.9 | 9.5 | 14 | 12 | .76 | .92 | 32 | .10 | .27 | 1.4 | 2.3 |
| 5 | 2.2 | 3.5 | 9.0 | 14 | 24 | .58 | .83 | 40 | .10 | 2.4 | 1.4 | 2.3 |
| 6 | 2.2 | 3.9 | 8.5 | 12 | 28 | .30 | .75 | 8.0 | .10 | 1.1 | 1.2 | 2.1 |
| 7 | 2.2 | 4.2 | 7.2 | 17 | 22 | .20 | .80 | .70 | .10 | .67 | 1.1 | 2.8 |
| 8 | 2.1 | 4.7 | 5.6 | 27 | 12 | .06 | 1.0 | .50 | .15 | .83 | 1.1 | 2.8 |
| 9 | 2.2 | 5.0 | 4.8 | 32 | 11 | .10 | 1.2 | 1.0 | 4.7 | 1.2 | 1.1 | 2.6 |
| 10 | 2.2 | 5.4 | 4.2 | 28 | 14 | .10 | 1.5 | 1.3 | 84 | 1.3 | 1.2 | 2.6 |
| 11 | 2.5 | 5.4 | 3.1 | 30 | 17 | .30 | .83 | 1.2 | 290 | 1.3 | 1.2 | 2.8 |
| 12 | 2.4 | 5.4 | 2.7 | 43 | 20 | .98 | .40 | 1.0 | 7.4 | 1.2 | 1.3 | 3.0 |
| 13 | 2.3 | 5.4 | 3.7 | 45 | 34 | 1.2 | 3.4 | .80 | 2.8 | 1.0 | 1.4 | 2.8 |
| 14 | 2.3 | 4.9 | 3.1 | 56 | 40 | 13 | 2.6 | .60 | 1.1 | 1.0 | 1.3 | 3.3 |
| 15 | 2.3 | 4.0 | 2.4 | 63 | 34 | 1.4 | 1.4 | .67 | .92 | 1.1 | 1.3 | 2.3 |
| 16 | 2.4 | 4.5 | 2.2 | 50 | 26 | .67 | 21 | .47 | .75 | 1.2 | 1.6 | 2.1 |
| 17 | 2.4 | 5.6 | 2.1 | 32 | 22 | .47 | 45 | .33 | .75 | 1.1 | 1.7 | 2.8 |
| 18 | 2.5 | 4.4 | 1.7 | 30 | 16 | .21 | 98 | .15 | .67 | 1.1 | 1.6 | 2.8 |
| 19 | 2.3 | 3.4 | 1.7 | 29 | 14 | .21 | 64 | .21 | .47 | 1.0 | 1.8 | 2.1 |
| 20 | 2.2 | 3.2 | 1.6 | 28 | 12 | .53 | 6.7 | .53 | .33 | 1.0 | 2.0 | 2.0 |
| 21 | 2.2 | 3.1 | 2.1 | 21 | 11 | .60 | .90 | .33 | .27 | .83 | 1.7 | 2.5 |
| 22 | 2.1 | 4.0 | 2.2 | 17 | 10 | 1.2 | .80 | .27 | .40 | .83 | 1.8 | 2.6 |
| 23 | 2.5 | 4.9 | 2.4 | 14 | 8.0 | 1.4 | .90 | .28 | .33 | .92 | 2.1 | 3.0 |
| 24 | 2.6 | 4.2 | 2.7 | 14 | 6.0 | 1.5 | .90 | .29 | .05 | 1.0 | 2.1 | 2.6 |
| 25 | 2.7 | 4.7 | 1.9 | 13 | 4.8 | 1.3 | .80 | .27 | .21 | .92 | 2.1 | 2.3 |
| 26 | 2.7 | 9.0 | 3.1 | 16 | 4.0 | 1.4 | 160 | .27 | .40 | 1.0 | 2.6 | 2.1 |
| 27 | 2.7 | 8.6 | 7.6 | 16 | 3.4 | .92 | 20 | .21 | .53 | 1.0 | 2.0 | 3.5 |
| 28 | 2.5 | 13 | 6.0 | 20 | 3.1 | .75 | .90 | .24 | .40 | 1.0 | 2.3 | 3.7 |
| 29 | 2.4 | ------ | 10 | 21 | 2.9 | .53 | .80 | .25 | .40 | 1.0 | 2.6 | 2.6 |
| 30 | 2.5 | ------ | 13 | 22 | 2.2 | .60 | .90 | 1.0 | .33 | .92 | 2.6 | 3.0 |
| 31 | 2.6 | ------ | 12 | ------ | 1.7 | ------ | 14 | 4.3 | ------ | .92 | ------ | 2.0 |
| TOTAL | 72.5 | 135.2 | 169.1 | 768 | 473.1 | 39.87 | 453.53 | 123.27 | 399.19 | 30.04 | 49.02 | 81.2 |
| MEAN | 2.34 | 4.83 | 5.45 | 25.6 | 15.3 | 1.33 | 14.6 | 3.98 | 13.3 | .97 | 1.63 | 2.62 |
| MAX | 2.7 | 13 | 13 | 63 | 40 | 13 | 160 | 40 | 290 | 2.4 | 2.6 | 3.7 |
| MIN | 2.0 | 2.6 | 1.6 | 12 | 1.7 | .06 | .40 | .15 | .05 | .27 | .92 | 2.0 |
| AC-FT | 144 | 268 | 335 | 1,520 | 938 | 79 | 900 | 245 | 792 | 60 | 97 | 161 |

CAL YR 1973 TOTAL 2,794.02 MEAN 7.65 MAX 290 MIN .05 AC-FT 5,540
WTR YR 1973 TOTAL 3,365.02 MEAN 9.22 MAX 290 MIN .05 AC-FT 6,670

PEAK DISCHARGE (BASE, 2,500 FT³/S).--No peak above base.

08317900 GALISTEO RESERVOIR NEAR CERRILLOS, N. MEX.

LOCATION.--Lat 35°27'44", long 106°12'30", in NW¼ sec.9, T.14 N., R.7 E., Santa Fe County, in Mesita de Juana Lopez Grant, at Galisteo Dam on Galisteo Creek, 5.0 mi (8.0 km) northwest of Cerrillos, and at mile 11.8 (19.0 km).

DRAINAGE AREA.--596 $mi^2$ (1,544 $km^2$).

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

GAGE.--Water-stage recorder above elevation 5,500.3 ft (1,676.49 m), nonrecording below. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum contents, about 70 acre-ft (86,300 $m^3$) Sept. 11 (elevation, 5,505.00 ft or 1,677.924 m), from floodmark); no storage most of time.
Period of record: Maximum contents, 2,510 acre-ft (3.09 $hm^3$) July 26, 1971 (elevation, 5,517.00 ft or 1,681.582 m); no storage most of time.

REMARKS.--Reservoir is formed by an earthfill dam, completed Oct. 11, 1970. Capacity 88,990 acre-ft (110 $hm^3$) between elevations 5,496.0 ft (1,675.18 m), sill of ungated outlet conduit, and 5,608.0 ft (1,709.32 m), crest of uncontrolled spillway. No dead storage. Reservoir is used for flood control.

COOPERATION.--Records furnished by Corps of Engineers.

NOTE.--No contents at 2400 hours each day during 1973 calendar year.

## 08317950 GALISTEO CREEK BELOW GALISTEO DAM, N. MEX.

LOCATION.--Lat 35°27'56", long 106°12'57", in SE¼SE¼ sec.5, T.14 N., R.7 E., Santa Fe County, in Mesita de Juana Lopez Grant, on right bank, 0.6 mi (1.0 km) downstream from Galisteo Dam, 5.5 mi (8.8 km) northwest of Cerrillos, and at mile 11.2 (18.0 km).

DRAINAGE AREA.--597 mi² (1,546 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 5,450 ft (1,661 m) from topographic map.

EXTREMES.--Current year: Maximum discharge, 850 ft³/s (24.1 m³/s) Sept. 11 (gage height, 5.11 ft or 1.558 m); no flow many days. Period of record: Maximum discharge, 2,000 ft³/s (56.6 m³/s) July 27, 1971 (gage height, 7.00 ft or 2.134 m); maximum gage height, 7.33 ft (2.234 m) July 20, 1971; no flow many days.

REMARKS.--Records poor. Flow regulated by Galisteo Reservoir 0.6 mi (1.0 km) upstream. Diversions for irrigation of about 50 acres (202,000 m²) above station. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.4 | 1.7 | 11 | 11 | 23 | 3.0 | 0 | 20 | .60 | 0 | .01 | 1.3 |
| 2 | 1.3 | 1.7 | 10 | 14 | 18 | 3.0 | 0 | .98 | 0 | 0 | 0 | 1.3 |
| 3 | 1.2 | 1.8 | 9.0 | 15 | 11 | 1.6 | 0 | 0 | 0 | 0 | .05 | 1.3 |
| 4 | 1.2 | 2.0 | 8.0 | 13 | 8.0 | .52 | 0 | 16 | 0 | 0 | .28 | 1.2 |
| 5 | 1.2 | 2.5 | 7.0 | 11 | 11 | 0 | 0 | 37 | 0 | 1.3 | .61 | 1.1 |
| 6 | 1.3 | 3.2 | 6.0 | 10 | 25 | 0 | 0 | 2.0 | 0 | 4.1 | .23 | 1.1 |
| 7 | 1.3 | 3.5 | 5.0 | 14 | 20 | 0 | 0 | 0 | 0 | 1.8 | .31 | 1.2 |
| 8 | 1.3 | 4.0 | 4.2 | 25 | 13 | 0 | 0 | 0 | 0 | .40 | .23 | 1.3 |
| 9 | 1.2 | 4.5 | 4.0 | 30 | 11 | 0 | .58 | 0 | 1.5 | 0 | .16 | 1.3 |
| 10 | 1.2 | 4.8 | 3.6 | 25 | 11 | 0 | 1.3 | 0 | 63 | .30 | .23 | 1.3 |
| 11 | 1.3 | 4.8 | 3.2 | 27 | 17 | 0 | .10 | 0 | 267 | 2.4 | .23 | 1.3 |
| 12 | 1.2 | 4.8 | 3.0 | 35 | 22 | 0 | 0 | 0 | 9.2 | 1.1 | .50 | 1.4 |
| 13 | 1.2 | 4.8 | 3.7 | 43 | 35 | 0 | 3.1 | 0 | 1.4 | .23 | .72 | 1.4 |
| 14 | 1.3 | 4.2 | 2.6 | 55 | 39 | 7.5 | 1.0 | 0 | .20 | .03 | .61 | 1.4 |
| 15 | 1.3 | 3.0 | 3.2 | 57 | 31 | 1.3 | 0 | 0 | 0 | .01 | .40 | 1.3 |
| 16 | 1.4 | 3.7 | 2.1 | 55 | 22 | 0 | 3.8 | 0 | 0 | 0 | .53 | 1.2 |
| 17 | 1.4 | 4.8 | 1.7 | 40 | 17 | 0 | 71 | 0 | 0 | 0 | .57 | 1.3 |
| 18 | 1.4 | 3.4 | 1.7 | 32 | 14 | 0 | 203 | 0 | 0 | 0 | .70 | 1.4 |
| 19 | 1.3 | 2.4 | 1.8 | 28 | 13 | 0 | 49 | 0 | 0 | 0 | 1.0 | 1.4 |
| 20 | 1.2 | 2.2 | 2.6 | 24 | 12 | 0 | 1.0 | 0 | 0 | 0 | .98 | 1.4 |
| 21 | 1.2 | 2.1 | 2.8 | 17 | 11 | 0 | 0 | 0 | 0 | 0 | .60 | 1.4 |
| 22 | 1.1 | 3.0 | 3.4 | 14 | 10 | 0 | 0 | 0 | 0 | 0 | .60 | 1.5 |
| 23 | 1.1 | 3.9 | 3.4 | 13 | 7.5 | 0 | 0 | 0 | 0 | 0 | 1.0 | 1.6 |
| 24 | 1.2 | 3.2 | 3.2 | 13 | 5.1 | 0 | 0 | 0 | 0 | 0 | 1.1 | 1.5 |
| 25 | 1.3 | 3.7 | 2.4 | 11 | 4.5 | 0 | 0 | 0 | 0 | 0 | 1.1 | 1.4 |
| 26 | 1.4 | 8.0 | 3.7 | 13 | 3.9 | 0 | 151 | 0 | 0 | 0 | 1.3 | 1.3 |
| 27 | 1.5 | 7.5 | 5.1 | 13 | 3.2 | 0 | 11 | 0 | 0 | 0 | 1.1 | 1.4 |
| 28 | 1.4 | 12 | 4.2 | 16 | 2.8 | 0 | 0 | 0 | 0 | 0 | 1.0 | 1.5 |
| 29 | 1.4 | ------ | 10 | 20 | 2.6 | 0 | 0 | 0 | 0 | .02 | 1.1 | 1.6 |
| 30 | 1.5 | ------ | 12 | 21 | 1.8 | 0 | 0 | 0 | 0 | 0 | 1.2 | 1.5 |
| 31 | 1.7 | ------ | 11 | ------ | 1.3 | ------ | 11 | 3.4 | ------ | .01 | ------ | .80 |
| TOTAL | 40.4 | 111.2 | 154.6 | 715 | 426.7 | 16.92 | 506.88 | 79.38 | 342.90 | 11.70 | 18.45 | 41.40 |
| MEAN | 1.30 | 3.97 | 4.99 | 23.8 | 13.8 | .56 | 16.4 | 2.56 | 11.4 | .38 | .62 | 1.34 |
| MAX | 1.7 | 12 | 12 | 57 | 39 | 7.5 | 203 | 37 | 267 | 4.1 | 1.3 | 1.6 |
| MIN | 1.1 | 1.7 | 1.7 | 10 | 1.3 | 0 | 0 | 0 | 0 | 0 | 0 | .80 |
| AC-FT | 80 | 221 | 307 | 1,420 | 846 | 34 | 1,010 | 157 | 680 | 23 | 37 | 82 |

CAL YR 1973 TOTAL 2,465.53 MEAN 6.75 MAX 267 MIN 0 AC-FT 4,890
WTR YR 1973 TOTAL 3,022.02 MEAN 8.28 MAX 267 MIN 0 AC-FT 5,990

## 08319000 RIO GRANDE AT SAN FELIPE, N. MEX.

LOCATION.--Lat 35°26'39", long 106°26'23", in SW¼NW¼ sec. 17, T.14 N., R.5E., Sandoval County, in San Felipe Grant, on right bank 200 ft (61 m) downstream from Tonque Arroyo, 1,700 ft (520 m) upstream from steel highway bridge, 0.8 mi (1.3 km) upstream from San Felipe Pueblo, 11 mi (18 km) northeast of Bernalillo, and at mile 1,572.7 (2,530.5 km).

DRAINAGE AREA.--16,100 mi² (41,670 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder. Datum of gage is 5,115.73 ft (1,559.275 m) above mean sea level. Prior to Sept. 27, 1957, at site 1,800 ft (550 m) downstream at datum 5.35 ft (1.63 m) lower, except period May 16, 1945 to Sept. 30, 1946 when it was 5.94 ft (1.81 m) lower then present datum.

AVERAGE DISCHARGE.--48 calendar years, 1,374 ft³/s (38.91 m³/s), 995,500 acre-ft/yr (1.23 km³/yr); 20 calendar year (1954-73), 1,116 ft³/s (31.61 m³/s), 808,500 acre-ft/yr (997 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 9,270 ft³/s (263 m³/s) July 26 (gage height, 7.28 ft or 2.219 m); minimum, 66 ft³/s (1.87 m³/s) Nov. 14.
Period of record: Maximum discharge, 27,300 ft³/s (773 m³/s) June 26, 1937 (gage height, 11.13 ft or 3.392 m, site and datum then in use), from rating curve extended above 15,000 ft³/s (425 m³/s); minimum, 32 ft³/s (0.906 m³/s) July 7, 1934.
Other major floods occurred in 1874, 1884, and 1904.

REMARKS.--Records good except those for May and June, which are fair. Diversions for irrigation of about 705,000 acres (2,850 km²) above station, some of which is irrigated below by Cochiti eastside main canal and San Felipe eastside acequia, which bypass station. Flow partly regulated by El Vado Reservoir (see sta 08285000) and Abiquiu Reservoir (see sta 08286900). Since April 1972 flow affected by release of transmountain water from Heron Reservoir (sta 08284510).

REVISIONS (WATER YEARS).--WSP 1312: 1926-30, WSP 1392: 1937(M), WSP 1512: 1931-32, 1933(M), 1934-36, 1938(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 696 | 669 | 741 | 1,240 | 4,030 | 5,340 | 4,820 | 3,040 | 1,140 | 903 | 913 | 1,390 |
| 2 | 687 | 687 | 834 | 1,270 | 3,660 | 5,550 | 4,840 | 2,750 | 1,080 | 844 | 880 | 1,500 |
| 3 | 636 | 628 | 1,010 | 1,180 | 3,020 | 5,930 | 4,600 | 2,660 | 1,060 | 781 | 843 | 1,530 |
| 4 | 732 | 636 | 1,210 | 1,190 | 2,930 | 6,130 | 4,340 | 2,550 | 1,090 | 721 | 841 | 1,580 |
| 5 | 741 | 705 | 1,050 | 1,000 | 3,490 | 5,830 | 4,150 | 2,440 | 1,120 | 715 | 872 | 1,620 |
| 6 | 750 | 770 | 1,010 | 1,040 | 3,940 | 5,440 | 3,930 | 2,300 | 1,080 | 730 | 867 | 1,520 |
| 7 | 669 | 714 | 910 | 1,140 | 3,780 | 5,140 | 3,800 | 2,220 | 1,070 | 728 | 855 | 1,520 |
| 8 | 678 | 714 | 915 | 1,200 | 3,730 | 5,070 | 3,860 | 2,180 | 1,070 | 709 | 837 | 1,490 |
| 9 | 714 | 714 | 877 | 1,090 | 3,810 | 4,940 | 3,790 | 2,120 | 1,030 | 716 | 821 | 1,480 |
| 10 | 723 | 714 | 985 | 1,000 | 4,040 | 4,930 | 3,600 | 2,050 | 1,140 | 795 | 792 | 1,580 |
| 11 | 760 | 696 | 912 | 1,050 | 4,770 | 5,130 | 3,440 | 1,980 | 2,270 | 828 | 746 | 1,520 |
| 12 | 723 | 810 | 969 | 1,180 | 5,280 | 5,430 | 3,390 | 1,900 | 1,670 | 849 | 490 | 1,540 |
| 13 | 660 | 800 | 992 | 1,670 | 7,240 | 6,130 | 3,590 | 1,890 | 1,090 | 773 | 165 | 1,540 |
| 14 | 687 | 760 | 1,060 | 2,200 | 8,620 | 6,040 | 2,930 | 1,850 | 760 | 785 | 116 | 1,530 |
| 15 | 741 | 780 | 1,090 | 2,620 | 7,220 | 5,740 | 2,090 | 1,840 | 620 | 742 | 312 | 1,580 |
| 16 | 732 | 800 | 948 | 2,620 | 5,970 | 5,730 | 1,930 | 1,700 | 860 | 713 | 431 | 1,570 |
| 17 | 696 | 760 | 1,060 | 1,920 | 5,680 | 5,330 | 2,070 | 800 | 1,310 | 708 | 458 | 1,550 |
| 18 | 750 | 790 | 1,070 | 1,900 | 5,830 | 4,840 | 2,620 | 725 | 1,310 | 695 | 481 | 1,630 |
| 19 | 714 | 780 | 1,160 | 2,380 | 6,230 | 4,740 | 2,390 | 890 | 1,170 | 715 | 489 | 1,610 |
| 20 | 723 | 696 | 1,320 | 2,000 | 7,220 | 4,220 | 2,050 | 983 | 920 | 774 | 662 | 1,640 |
| 21 | 705 | 705 | 1,350 | 1,660 | 7,500 | 4,000 | 2,160 | 1,000 | 850 | 795 | 997 | 1,620 |
| 22 | 741 | 770 | 1,540 | 1,560 | 7,770 | 4,020 | 3,080 | 1,220 | 790 | 905 | 1,100 | 1,640 |
| 23 | 705 | 696 | 1,490 | 1,530 | 8,040 | 4,510 | 3,390 | 1,050 | 790 | 905 | 1,210 | 1,620 |
| 24 | 636 | 669 | 1,330 | 1,800 | 7,900 | 4,460 | 3,530 | 1,010 | 750 | 926 | 1,290 | 1,570 |
| 25 | 687 | 723 | 1,330 | 2,140 | 7,460 | 4,480 | 3,460 | 1,050 | 854 | 830 | 1,330 | 1,650 |
| 26 | 696 | 687 | 1,140 | 2,450 | 6,740 | 4,540 | 4,520 | 1,070 | 853 | 843 | 1,350 | 1,610 |
| 27 | 687 | 669 | 1,130 | 2,590 | 6,340 | 4,550 | 3,280 | 1,100 | 898 | 854 | 1,380 | 1,620 |
| 28 | 741 | 676 | 1,190 | 2,960 | 6,340 | 4,960 | 3,270 | 1,080 | 854 | 807 | 1,370 | 1,650 |
| 29 | 687 | ------ | 1,260 | 3,370 | 6,040 | 5,180 | 3,200 | 1,050 | 872 | 791 | 1,370 | 1,670 |
| 30 | 678 | ------ | 1,240 | 3,770 | 5,740 | 4,990 | 3,220 | 1,340 | 903 | 776 | 1,390 | 1,740 |
| 31 | 723 | ------ | 1,290 | ------ | 5,440 | ------ | 3,250 | 1,180 | ------ | 822 | ------ | 1,740 |
| TOTAL | 21,898 | 20,218 | 34,413 | 54,720 | 175,800 | 153,320 | 104,590 | 51,018 | 31,274 | 24,478 | 25,658 | 49,050 |
| MEAN | 706 | 722 | 1,110 | 1,824 | 5,671 | 5,111 | 3,374 | 1,646 | 1,042 | 790 | 855 | 1,582 |
| MAX | 760 | 810 | 1,540 | 3,770 | 8,620 | 6,130 | 4,840 | 3,040 | 2,270 | 926 | 1,390 | 1,740 |
| MIN | 636 | 628 | 741 | 1,000 | 2,930 | 4,000 | 1,930 | 725 | 620 | 695 | 116 | 1,390 |
| AC-FT | 43,430 | 40,100 | 68,260 | 108,500 | 348,700 | 304,100 | 207,500 | 101,200 | 62,030 | 48,550 | 50,890 | 97,290 |
| (+) | 0 | 0 | 2,580 | 2,180 | 2,920 | 3,790 | 3,070 | 2,490 | 1,790 | 3,400 | 0 | 0 |

CAL YR 1973 TOTAL 746,437 MEAN 2,045 MAX 8,620 MIN 116 AC-FT 1,481,000 (+) 22,220
WTR YR 1973 TOTAL 722,111 MEAN 1,978 MAX 8,620 MIN 166 AC-FT 1,432,000 (+) 28,110

PEAK DISCHARGE (BASE, 5,000 FT³/S).--MAY 14 (0930) 9,130 FT³/S (7.26 FT); JULY 26 (0130) 9,270 FT³/S (7.28 FT).

(+) MONTHLY DIVERSION, IN ACRE-FT, OF COCHITI EASTSIDE CANAL; RECORD OF THIS FLOW IS FURNISHED BY BUREAU OF RECLAMATION.

## 08321500 JEMEZ RIVER BELOW EAST FORK, NEAR JEMEZ SPRINGS, N. MEX.

LOCATION.--Lat 35°49'39", long 106°38'52", in NW¼ sec.5, T.18 N., R.3E., Sandoval County, on left bank 0.4 mi (0.6 km) downstream from East Fork and boundary of Santa Fe National Forest, 5.3 mi (8.5 km) northeast of Jemez Springs, and at mile 43.0 (69.2 km).

DRAINAGE AREA.--173 mi² (448 km²).

PERIOD OF RECORD.--July 1949 to October 1950 (gaged separately above East Fork), May 1951 to September 1957 (irrigation seasons only), March 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,702.7 ft (2,042.98 m) above mean sea level. Prior to May 1951, at sites 3,000 ft (900 m) upstream, at different datums and on separate channels.

AVERAGE DISCHARGE.--15 calendar years (1958-73), 28.3 ft³/s (0.801 m³/s), 20,500 acre-ft/yr (25.3 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,430 ft³/s (40.5 m³/s) May 13 (gage height, 5.06 ft or 1.542 m); minimum, 3.2 ft³/s (0.091 m³/s) Mar. 6.
Period of record: Maximum discharge recorded, 2,500 ft³/s (71.4 m³/s) Apr. 21, 1958 (gage height, 7.35 ft or 2.240 m), from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of slope-area and contracted-opening measurements of peak flow; minimum, 0.91 ft³/s (0.026 m³/s) Jan. 24, 1969, result of freezup.

REMARKS.--Records good except for winter months, which are poor. No diversion above station.

REVISIONS (WATER YEARS).--WSP 1512: 1951-54(M), 1955, 1956(M). WSP 1712: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12 | 13 | 18 | 29 | 526 | 100 | 19 | 19 | 16 | 12 | 13 | 16 |
| 2 | 13 | 10 | 19 | 28 | 504 | 118 | 18 | 18 | 14 | 12 | 13 | 16 |
| 3 | 12 | 11 | 19 | 29 | 659 | 110 | 17 | 17 | 13 | 12 | 13 | 16 |
| 4 | 12 | 13 | 17 | 30 | 783 | 85 | 17 | 32 | 13 | 12 | 16 | 13 |
| 5 | 12 | 14 | 17 | 28 | 668 | 68 | 16 | 54 | 13 | 12 | 18 | 14 |
| 6 | 12 | 13 | 16 | 32 | 562 | 60 | 13 | 26 | 12 | 13 | 16 | 19 |
| 7 | 12 | 14 | 18 | 37 | 404 | 55 | 12 | 17 | 12 | 13 | 15 | 12 |
| 8 | 11 | 12 | 17 | 34 | 471 | 52 | 12 | 15 | 12 | 13 | 14 | 15 |
| 9 | 12 | 11 | 17 | 31 | 431 | 48 | 14 | 16 | 12 | 12 | 14 | 13 |
| 10 | 13 | 13 | 16 | 41 | 404 | 45 | 14 | 17 | 19 | 16 | 14 | 12 |
| 11 | 9.0 | 14 | 20 | 52 | 392 | 41 | 11 | 19 | 58 | 18 | 14 | 12 |
| 12 | 10 | 12 | 23 | 61 | 377 | 38 | 13 | 21 | 37 | 18 | 14 | 14 |
| 13 | 13 | 10 | 21 | 84 | 848 | 40 | 17 | 19 | 18 | 19 | 14 | 13 |
| 14 | 12 | 12 | 11 | 123 | 758 | 75 | 17 | 19 | 16 | 18 | 14 | 14 |
| 15 | 12 | 14 | 9.5 | 151 | 527 | 57 | 41 | 20 | 15 | 16 | 13 | 12 |
| 16 | 13 | 14 | 12 | 130 | 436 | 41 | 25 | 21 | 14 | 14 | 12 | 10 |
| 17 | 13 | 13 | 20 | 130 | 376 | 37 | 23 | 16 | 13 | 15 | 12 | 12 |
| 18 | 12 | 12 | 23 | 164 | 343 | 35 | 22 | 14 | 13 | 14 | 13 | 12 |
| 19 | 11 | 13 | 27 | 121 | 326 | 34 | 60 | 14 | 13 | 14 | 15 | 12 |
| 20 | 13 | 12 | 31 | 101 | 322 | 32 | 23 | 17 | 13 | 13 | 14 | 11 |
| 21 | 13 | 14 | 46 | 131 | 281 | 33 | 13 | 17 | 12 | 13 | 12 | 13 |
| 22 | 12 | 14 | 37 | 144 | 247 | 33 | 13 | 15 | 12 | 13 | 17 | 10 |
| 23 | 10 | 13 | 33 | 188 | 208 | 35 | 11 | 15 | 12 | 13 | 16 | 11 |
| 24 | 12 | 14 | 30 | 296 | 182 | 33 | 9.7 | 14 | 12 | 13 | 12 | 11 |
| 25 | 13 | 14 | 30 | 419 | 160 | 32 | 8.6 | 15 | 12 | 12 | 14 | 14 |
| 26 | 13 | 14 | 32 | 516 | 165 | 29 | 14 | 15 | 12 | 13 | 19 | 13 |
| 27 | 13 | 16 | 35 | 684 | 155 | 28 | 16 | 13 | 13 | 13 | 13 | 12 |
| 28 | 11 | 18 | 35 | 798 | 123 | 26 | 17 | 15 | 14 | 13 | 24 | 13 |
| 29 | 11 | ------ | 32 | 755 | 108 | 23 | 21 | 17 | 13 | 13 | 16 | 11 |
| 30 | 11 | ------ | 30 | 660 | 91 | 21 | 18 | 17 | 13 | 13 | 16 | 12 |
| 31 | 13 | ------ | 30 | ------ | 84 | ------ | 17 | 17 | ------ | 13 | ------ | 13 |
| TOTAL | 371.0 | 367 | 741.5 | 6,027 | 11,921 | 1,464 | 562.3 | 581 | 471 | 428 | 440 | 401 |
| MEAN | 12.0 | 13.1 | 23.9 | 201 | 385 | 48.8 | 18.1 | 18.7 | 15.7 | 13.8 | 14.7 | 12.9 |
| MAX | 13 | 18 | 46 | 798 | 848 | 118 | 60 | 54 | 58 | 19 | 24 | 19 |
| MIN | 9.0 | 10 | 9.5 | 28 | 84 | 21 | 8.6 | 13 | 12 | 12 | 12 | 10 |
| AC-FT | 736 | 728 | 1,470 | 11,950 | 23,650 | 2,900 | 1,120 | 1,150 | 934 | 849 | 873 | 795 |

CAL YR 1973 TOTAL 23,774.8 MEAN 65.1 MAX 848 MIN 8.6 AC-FT 47,160
WTR YR 1973 TOTAL 24,278.5 MEAN 66.5 MAX 848 MIN 8.0 AC-FT 48,160

PEAK DISCHARGE (BASE, 100 FT³/S).--MAY 13 (2130) 1,430 FT³/S (5.06 FT), AUG. 4 (1430) 230 FT³/S (2.48 FT).

## 08323000 RIO GUADALUPE AT BOX CANYON, NEAR JEMEZ, N. MEX.

LOCATION.--Lat 35°43'52", long 106°45'44", Sandoval County, in Canon de San Diego Grant, on left bank at downstream end of Guadalupe Box Canyon, 4.8 mi (7.7 km) upstream from mouth, 5 mi (8 km) southwest of Jemez Springs, and 7 mi (11 km) north of Jemez.

DRAINAGE AREA.--235 mi² (609 km²).

PERIOD OF RECORD.--May 1951 to September 1957 (irrigation seasons only), May 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,015.5 ft (1,833.52 m) above mean sea level.

AVERAGE DISCHARGE.--15 calendar years (1958-73), 35.7 ft³/s (1.011 m³/s), 25,860 acre-ft/yr (31.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge, about 1,400 ft³/s (39.6 m³/s) May 13 (gage height, unknown); minimum, 4.2 ft³/s (0.119 m³/s) Dec. 20.

Period of record: Maximum discharge determined, 1,440 ft³/s (40.8 m³/s) Apr. 21, 1958 (gage height, 7.6 ft or 2.32 m, from floodmarks), from rating curve extended above 750 ft³/s (21.2 m³/s) on basis of slope-area measurements of peak flow; minimum, 2.8 ft³/s (0.079 m³/s) Dec. 9, 1967.

The flood of May 13 or 14, 1941, exceeded all other observed floods at this location. The discharge for that flood was computed to be 3,190 ft³/s (90.3 m³/s) at a downstream station, Rio Guadalupe near Jemez Springs (drainage area, 239 mi² or 619 km²).

REMARKS.--Records good except those for winter period, and for May and June, which are poor. Flow regulated to some extent since October 1958 by San Gregorio Reservoir on Clear Creek, 24 mi (39 km) upstream (capacity, 345 acre-ft or 0.425 hm³), and by transmountain diversion into Rio Puerco Basin for irrigation of about 300 acres (121 hm²) in vicinity of Cuba.

REVISIONS.--WSP 1712: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10 | 16 | 23 | 54 | 470 | 370 | 30 | 26 | 16 | 11 | 11 | 14 |
| 2 | 11 | 15 | 25 | 54 | 396 | 320 | 28 | 25 | 16 | 11 | 11 | 14 |
| 3 | 11 | 12 | 26 | 45 | 403 | 280 | 27 | 27 | 13 | 10 | 11 | 15 |
| 4 | 11 | 14 | 26 | 46 | 506 | 260 | 27 | 21 | 13 | 10 | 12 | 14 |
| 5 | 12 | 17 | 27 | 50 | 666 | 240 | 25 | 21 | 12 | 11 | 14 | 12 |
| 6 | 11 | 17 | 26 | 56 | 600 | 220 | 24 | 20 | 12 | 12 | 13 | 13 |
| 7 | 11 | 16 | 26 | 73 | 470 | 220 | 23 | 18 | 12 | 12 | 13 | 13 |
| 8 | 10 | 16 | 26 | 61 | 458 | 220 | 22 | 17 | 11 | 12 | 12 | 13 |
| 9 | 11 | 16 | 28 | 58 | 587 | 230 | 23 | 16 | 11 | 11 | 12 | 12 |
| 10 | 11 | 14 | 27 | 71 | 710 | 240 | 24 | 16 | 13 | 12 | 12 | 12 |
| 11 | 11 | 16 | 25 | 98 | 940 | 220 | 23 | 16 | 23 | 13 | 12 | 13 |
| 12 | 11 | 16 | 29 | 132 | 1,100 | 200 | 22 | 16 | 27 | 14 | 12 | 12 |
| 13 | 9.2 | 16 | 35 | 188 | 1,350 | 190 | 24 | 17 | 19 | 13 | 12 | 12 |
| 14 | 7.9 | 15 | 29 | 288 | 1,300 | 250 | 22 | 18 | 16 | 12 | 12 | 13 |
| 15 | 8.2 | 16 | 28 | 330 | 1,000 | 190 | 25 | 18 | 14 | 12 | 12 | 11 |
| 16 | 8.8 | 16 | 32 | 258 | 800 | 160 | 32 | 21 | 13 | 12 | 12 | 11 |
| 17 | 9.6 | 16 | 37 | 252 | 720 | 140 | 35 | 16 | 13 | 12 | 12 | 12 |
| 18 | 9.4 | 16 | 43 | 315 | 760 | 120 | 39 | 14 | 13 | 11 | 12 | 11 |
| 19 | 9.8 | 14 | 48 | 248 | 800 | 110 | 64 | 13 | 12 | 11 | 13 | 11 |
| 20 | 10 | 15 | 57 | 201 | 850 | 69 | 37 | 14 | 12 | 11 | 13 | 12 |
| 21 | 11 | 17 | 87 | 179 | 800 | 62 | 27 | 14 | 12 | 11 | 12 | 12 |
| 22 | 11 | 17 | 72 | 181 | 660 | 56 | 25 | 14 | 11 | 11 | 14 | 12 |
| 23 | 12 | 17 | 70 | 237 | 580 | 54 | 21 | 14 | 11 | 11 | 14 | 11 |
| 24 | 15 | 17 | 61 | 296 | 540 | 51 | 19 | 13 | 11 | 11 | 14 | 11 |
| 25 | 14 | 14 | 55 | 342 | 510 | 48 | 18 | 13 | 11 | 11 | 14 | 11 |
| 26 | 13 | 17 | 58 | 400 | 490 | 43 | 17 | 13 | 11 | 11 | 15 | 13 |
| 27 | 13 | 19 | 67 | 497 | 360 | 41 | 18 | 12 | 11 | 11 | 14 | 12 |
| 28 | 12 | 21 | 58 | 596 | 330 | 40 | 17 | 12 | 12 | 11 | 14 | 12 |
| 29 | 12 | ------ | 61 | 618 | 350 | 36 | 18 | 13 | 11 | 11 | 15 | 13 |
| 30 | 12 | ------ | 57 | 593 | 380 | 32 | 20 | 16 | 12 | 11 | 14 | 13 |
| 31 | 14 | ------ | 56 | ------ | 400 | ------ | 21 | 17 | ------ | 11 | ------ | 13 |
| TOTAL | 342.9 | 448 | 1,325 | 6,817 | 20,286 | 4,712 | 797 | 521 | 404 | 354 | 383 | 383 |
| MEAN | 11.1 | 16.0 | 42.7 | 227 | 654 | 157 | 25.7 | 16.8 | 13.5 | 11.4 | 12.8 | 12.4 |
| MAX | 15 | 21 | 87 | 618 | 1,350 | 370 | 64 | 27 | 27 | 14 | 15 | 15 |
| MIN | 7.9 | 12 | 23 | 45 | 330 | 32 | 17 | 12 | 11 | 10 | 11 | 11 |
| AC-FT | 680 | 889 | 2,630 | 13,520 | 40,240 | 9,350 | 1,580 | 1,030 | 801 | 702 | 760 | 760 |

CAL YR 1973 TOTAL 36,772.9 MEAN 101 MAX 1,350 MIN 7.9 AC-FT 72,940
WTR YR 1973 TOTAL 38,117.3 MEAN 104 MAX 1,350 MIN 6.1 AC-FT 75,610

PEAK DISCHARGE (BASE, 100 FT³/S).--MAY 13 (UNKNOWN) ABOUT 1,400 FT³/S (UNKNOWN).

NOTE.--NO GAGE-HEIGHT RECORD MAY 10 TO JUNE 19.

## 08324000 JEMEZ RIVER NEAR JEMEZ, N. MEX.

LOCATION.--Lat 35°39'42", long 106°44'34", Sandoval County, in Canyon de San Diego Grant, on left bank 0.7 mi (1.1 km) downstream from Rio Guadalupe, 3.5 mi (5.6 km) north of Jemez, and at mile 29.5 (47.5 km).

DRAINAGE AREA.--470 mi² (1,220 km²).

PERIOD OF RECORD.--June 1936 to May 1941, August 1949 to October 1950, May 1951 to September 1952 (irrigation seasons only), March 1953 to current year. Monthly discharge only for some periods, published in WSP 1732. Published as Jemez Creek near Jemez, 1936-41.

GAGE.--Water-stage recorder. Concrete control since Dec. 6, 1965. Datum of gage is 5,622.3 ft (1,713.68 m) above mean sea level. June 22, 1936, to Mar. 11, 1937, at site 60 ft (20 m) upstream at datum 0.50 ft (0.152 m) higher. Mar. 12, 1937, to July 8, 1938, at present site at datum 0.7 ft (0.21 m) higher. July 9, 1938, to May 6,1941, at site 60 ft (20 m) upstream at datum 0.70 ft (0.213 m) higher.

AVERAGE DISCHARGE.--24 calendar years (1936-40, 1954-73), 69.9 ft³/s (1.980 m³/s), 50,640 acre-ft/yr (62.4 hm³/yr); 20 calendar years (1954-73), 68.5 ft³/s (1.940 m³/s) 49,630 acre-ft/yr (61.2 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,210 ft³/s (90.9 m³/s) May 13 (gage height, 9.38 ft or 2.859 m); minimum, 8.0 ft³/s (0.23 m³/s) Sept. 6.
Period of record: Maximum discharge, 5,900 ft³/s (167 m³/s) Apr. 21, 1958, from rating curve extended above 2,200 ft³/s (62.3 m³/s) on basis of contracted-opening measurement; maximum gage height, 8.6 ft or 2.62 m May 6, 1941, present datum; minimum discharge, 4.2 ft³/s (0.12 m³/s) Jan. 5, 1972, result of freezeup.
Maximum flood since at least 1890 occurred between May 6 and 15, 1941, after gage was destroyed (discharge probably exceeded 6,000 ft³/s or 170 m³/s), from information by local residents.

REMARKS.--Records good. Diversions for irrigation of about 300 acres (121 hm²) above station.

REVISIONS (WATER YEARS).--WSP 1712: Drainage area. WSP 1923, Vol. 2: 1957-58.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35 | 40 | 47 | 94 | 1,210 | 471 | 49 | 53 | 30 | 29 | 24 | 33 |
| 2 | 32 | 34 | 47 | 100 | 1,020 | 440 | 44 | 51 | 28 | 28 | 24 | 33 |
| 3 | 31 | 35 | 52 | 74 | 1,280 | 386 | 42 | 55 | 26 | 26 | 24 | 32 |
| 4 | 32 | 39 | 47 | 65 | 1,730 | 340 | 45 | 50 | 26 | 27 | 26 | 30 |
| 5 | 32 | 36 | 53 | 70 | 1,740 | 309 | 42 | 74 | 24 | 29 | 31 | 24 |
| 6 | 27 | 36 | 48 | 71 | 1,510 | 281 | 37 | 59 | 20 | 35 | 30 | 21 |
| 7 | 31 | 37 | 50 | 121 | 957 | 278 | 36 | 43 | 22 | 34 | 28 | 23 |
| 8 | 27 | 37 | 50 | 115 | 1,040 | 276 | 34 | 37 | 21 | 32 | 27 | 27 |
| 9 | 31 | 35 | 53 | 104 | 1,130 | 275 | 42 | 51 | 21 | 29 | 27 | 25 |
| 10 | 31 | 33 | 48 | 120 | 1,310 | 290 | 40 | 28 | 27 | 34 | 27 | 23 |
| 11 | 25 | 39 | 48 | 156 | 1,430 | 259 | 41 | 30 | 68 | 40 | 27 | 23 |
| 12 | 28 | 40 | 53 | 197 | 1,400 | 238 | 37 | 31 | 77 | 38 | 27 | 25 |
| 13 | 31 | 34 | 70 | 268 | 2,260 | 230 | 45 | 36 | 50 | 37 | 28 | 24 |
| 14 | 29 | 32 | 48 | 380 | 2,160 | 323 | 45 | 51 | 40 | 36 | 27 | 26 |
| 15 | 30 | 37 | 41 | 468 | 1,460 | 251 | 62 | 38 | 33 | 33 | 27 | 22 |
| 16 | 32 | 37 | 47 | 395 | 1,230 | 203 | 67 | 41 | 32 | 30 | 25 | 20 |
| 17 | 33 | 41 | 59 | 374 | 1,120 | 178 | 68 | 36 | 30 | 28 | 27 | 22 |
| 18 | 32 | 35 | 69 | 483 | 1,060 | 158 | 73 | 30 | 28 | 27 | 26 | 23 |
| 19 | 29 | 36 | 76 | 396 | 1,130 | 143 | 125 | 28 | 28 | 26 | 30 | 23 |
| 20 | 32 | 35 | 83 | 324 | 1,180 | 135 | 83 | 27 | 26 | 26 | 30 | 16 |
| 21 | 33 | 40 | 118 | 339 | 1,120 | 122 | 52 | 29 | 26 | 26 | 27 | 16 |
| 22 | 32 | 40 | 106 | 348 | 928 | 115 | 43 | 31 | 26 | 25 | 32 | 18 |
| 23 | 35 | 39 | 105 | 420 | 782 | 107 | 37 | 30 | 26 | 24 | 33 | 20 |
| 24 | 34 | 38 | 97 | 557 | 736 | 101 | 32 | 28 | 27 | 21 | 29 | 20 |
| 25 | 37 | 35 | 87 | 858 | 678 | 95 | 31 | 28 | 27 | 21 | 29 | 16 |
| 26 | 36 | 37 | 92 | 1,080 | 664 | 87 | 31 | 25 | 29 | 22 | 35 | 15 |
| 27 | 38 | 39 | 108 | 1,360 | 553 | 78 | 43 | 22 | 28 | 23 | 32 | 13 |
| 28 | 33 | 46 | 101 | 1,790 | 440 | 73 | 39 | 21 | 28 | 24 | 23 | 19 |
| 29 | 36 | ------ | 105 | 1,840 | 433 | 64 | 41 | 27 | 28 | 26 | 29 | 20 |
| 30 | 37 | ------ | 99 | 1,690 | 478 | 56 | 50 | 31 | 28 | 25 | 32 | 20 |
| 31 | 42 | ------ | 99 | ------ | 487 | ------ | 47 | 33 | ------ | 25 | ------ | 16 |
| TOTAL | 1,003 | 1,042 | 2,206 | 14,657 | 34,656 | 6,362 | 1,503 | 1,134 | 930 | 886 | 843 | 688 |
| MEAN | 32.4 | 37.2 | 71.2 | 489 | 1,118 | 212 | 48.5 | 36.6 | 31.0 | 28.6 | 28.1 | 22.2 |
| MAX | 42 | 46 | 118 | 1,840 | 2,260 | 471 | 125 | 74 | 77 | 40 | 35 | 33 |
| MIN | 25 | 32 | 41 | 65 | 433 | 56 | 31 | 21 | 20 | 21 | 23 | 13 |
| AC-FT | 1,990 | 2,070 | 4,380 | 29,070 | 68,740 | 12,620 | 2,980 | 2,250 | 1,840 | 1,760 | 1,670 | 1,360 |

CAL YR 1973 TOTAL 65,910 MEAN 181 MAX 2,260 MIN 13 AC-FT 130,700
WTR YR 1973 TOTAL 68,875 MEAN 189 MAX 2,260 MIN 20 AC-FT 136,600

PEAK DISCHARGE (BASE, 1,000 FT³/S).--MAY 13 (2200) 3,210 FT³/S (9.38 FT).

## 08328500 JEMEZ CANYON RESERVOIR NEAR BERNALILLO, N. MEX.

LOCATION.--Lat 35°23'40", long 106°32'50", in SW¼SW¼ sec.32, T.14 N., R.4 E., Sandoval County, at corner of outlet works control tower of Jemez Canyon Dam on Jemez River, 2.8 mi (4.5 km) upstream from mouth, and 6 mi (10 km) north of Bernalillo.

DRAINAGE AREA.--1,034 mi² (2,678 km²).

PERIOD OF RECORD.--October 1953 to September 1965 (monthend contents only), October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum contents, 25,750 acre-ft (31.7 hm³) May 27 (elevation, 5,189.23 ft or 1,581.677 m); no contents most of year.
Period of record: Maximum contents, 71,220 acre-ft (87.8 hm³) June 8, 1958 (elevation, 5,213.36 ft or 1,589.032m); no storage most of time.

REMARKS.--Reservoir is formed by earthfill dam, completed October 19, 1953. Capacity, 180,600 acre-ft (223 hm³), from capacity table adopted January 1, 1972, between elevations 5,125.0 ft (1,562.1 m) sill of outlet gates and 5,252.3 ft (1,600.90 m) operating deck of spillway. Capacity by original survey was 189,100 acre-ft (233 hm³). Maximum controlled capacity, 110,500 acre-ft (136 hm³) at elevation 5,232.0 ft or 1,594.71 m (floor of spillway which is located about 0.8 mi or 1.3 km south of dam). Original plan for reservoir operation was to desilt all flow above 30 ft³/s (0.85 m³/s) by storage for one day before releasing to Rio Grande, and for possible detention during flood stage on Rio Grande.

COOPERATION.--Records furnished by Corps of Engineers.

Capacity tables, (elevation, in feet, and contents, in acre-feet)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5,135 | 1 | 5,145 | 75 | 5,165 | 4,510 | 5,185 | 20,810 |
| 5,136 | 2 | 5,150 | 400 | 5,170 | 7,330 | 5,190 | 26,700 |
| 5,138 | 7 | 5,155 | 1,310 | 5,175 | 11,120 | 5,195 | 33,280 |
| 5,140 | 16 | 5,160 | 2,610 | 5,180 | 15,620 | 5,200 | 40,570 |

CONTENTS, IN ACRE-FEET, AT 0800, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 0 | 0 | 8,600 | 18,680 | 7.0 | 7.0 | 0 | | | 0 |
| 2 | | | 0 | 0 | 7,870 | 15,390 | 3.0 | 61 | 0 | | | 0 |
| 3 | | | 0 | 46 | 7,470 | 12,530 | 0 | 54 | 0 | | | 0 |
| 4 | | | 0 | 59 | 6,540 | 10,060 | 0 | 0 | 0 | | | 0 |
| 5 | | | 0 | 11 | 5,500 | 7,540 | 0 | 4.0 | 0 | | | 0 |
| 6 | | | 0 | 95 | 3,820 | 5,880 | 0 | 5.0 | 0 | | | 0 |
| 7 | | | 0 | 132 | 5,600 | 4,510 | 0 | 1.0 | 0 | | | 0 |
| 8 | | | 0 | 181 | 4,790 | 3,560 | 0 | 0 | 0 | | | 0 |
| 9 | | | 0 | 225 | 4,290 | 2,830 | 0 | 0 | 0 | | | 0 |
| 10 | | | 0 | 249 | 3,510 | 2,740 | 0 | 0 | 0 | | | 0 |
| 11 | | | 0 | 282 | 4,610 | 2,610 | 0 | 0 | 575 | | | 20 |
| 12 | | | 0 | 335 | 7,130 | 1,860 | 0 | 0 | 100 | | | 0 |
| 13 | | | 0 | 411 | 9,540 | 1,070 | 0 | 0 | 0 | | | 0 |
| 14 | | | 0 | 491 | 13,290 | 737 | 0 | 0 | 0 | | | 0 |
| 15 | | | 0 | 737 | 17,010 | 700 | 0 | 0 | 0 | | | 0 |
| 16 | | | 0 | 1,320 | 18,810 | 737 | 0 | 0 | 0 | | | 0 |
| 17 | | | 0 | 1,320 | 18,870 | 709 | 0 | 0 | 0 | | | 0 |
| 18 | | | 0 | 1,080 | 18,420 | 625 | 0 | 0 | 0 | | | 0 |
| 19 | | | 0 | 1,140 | 17,950 | 482 | 12 | 0 | 0 | | | 0 |
| 20 | | | 0 | 1,070 | 17,630 | 354 | 33 | 0 | 0 | | | 0 |
| 21 | | | 0 | 884 | 18,670 | 433 | 10 | 0 | 0 | | | 0 |
| 22 | | | 0 | 698 | 20,610 | 445 | 0 | 0 | 0 | | | 0 |
| 23 | | | 0 | 533 | 22,170 | 415 | 0 | 0 | 0 | | | 0 |
| 24 | | | 0 | 693 | 23,430 | 370 | 0 | 0 | 0 | | | 0 |
| 25 | | | 0 | 1,170 | 24,640 | 311 | 0 | 0 | 0 | | | 0 |
| 26 | | | 0 | 1,440 | 25,530 | 233 | 17 | 0 | 0 | | | 0 |
| 27 | | | 0 | 1,780 | 25,750 | 176 | 0 | 0 | 0 | | | 0 |
| 28 | | | 0 | 3,180 | 25,640 | 122 | 0 | 0 | 0 | | | 0 |
| 29 | | ------- | 0 | 4,700 | 24,740 | 69 | 0 | 0 | 0 | | | 0 |
| 30 | | ------- | 21 | 7,920 | 23,070 | 32 | 0 | 0 | 0 | | | 0 |
| 31 | | ------- | 0 | ------- | 21,420 | ------- | 15 | 0 | ------- | | ------- | 0 |
| MAX | 0 | 0 | 21 | 7,920 | 25,750 | 18,680 | 33 | 61 | 575 | 0 | 0 | 20 |
| MIN | 0 | 0 | 0 | 0 | 3,510 | 32 | 0 | 0 | 0 | 0 | 0 | 0 |
| (†) | 0 | 0 | 0 | 5,170.85 | 5,185.55 | 5,142.20 | 5,139.84 | 0 | 0 | 0 | 0 | 0 |
| (‡) | 0 | 0 | 0 | +7,920 | +13,500 | -21,388 | -17 | -15 | 0 | 0 | 0 | 0 |

CAL YR 1973 (†) 0 (†) ELEVATION, IN FEET, AT END OF MONTH
WTR YR 1973 (‡) 0 (‡) CHANGE IN CONTENTS, IN ACRE-FEET

## 08329000 JEMEZ RIVER BELOW JEMEZ CANYON DAM, N. MEX.

LOCATION.--Lat 35°23'24", long 106°32'03", in NE¼ sec.5, T.13 N., R.4 E., Sandoval County, on right bank 0.8 mi (1.3 km) downstream from Jemez Canyon Dam, 2.0 mi (3.2 km) upstream from mouth, and 6 mi (9.6 km) north of Bernalillo.

DRAINAGE AGEA.--1,038 mi² (2,688 km²).

PERIOD OF RECORD.--March 1936 to January 1938, March 1943 to current year. Published as "Jemez Creek" prior to 1948, and as "near Bernalillo" prior to 1954.

GAGE.--Water-stage recorder. Datum of gage is 5,095.60 ft (1,553.139 m) above mean sea level (Corps of Engineers bench mark). Prior to Apr. 24, 1951, at site 0.8 mi (1.3 km) upstream at datum 24.51 ft (7.471 m) higher. Apr. 24, 1951, to June 25, 1958, at site 37 ft (11 m) upstream at datum 4.40 ft (1.341 m) above present datum. Supplementary water-stage recorder at gages on Jemez Canyon Dam at datum 5,125.00 ft (1,562.100 m) above mean sea level (Corps of Engineers bench mark) used at times since January 1953.

AVERAGE DISCHARGE.--31 calendar years (1936-37, 1943-73), 53.7 ft³/s (1.521 m³/s), 38,910 acre-ft/yr (48.0 hm³/yr); 20 calendar years (1954-73), 56.8 ft³/s (1.609 m³/s), 41,150 acre-ft/yr (50.7 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,920 ft³/s (82.7 m³/s) May 5 (gage height, 9.92 ft or 3.024 m); minimum, 0.1 ft³/s (0.003 m³/s) at times.
Period of record: Maximum discharge, 16,300 ft³/s (462 m³/s) Aug. 29, 1943 (gage height, 5.62 ft or 1.713 m, site and datum then in use), from rating curve extented above 3,000 ft³/s (85.0 m³/s); no flow for many days most years.
A flood in 1900 was probably less than 16,000 ft³/s (453 m³/s), but highest observed outside period of record.

REMARKS.--Records poor. Subsequent to October 1953, flow at this station can be completely regulated by Jemez Canyon Reservoir (see sta 08328500). However, reservoir is designed essentially for desilting and flood control rather than storage. Diversions for irrigation of about 3,000 acres (1,210 hm²) above station.

REVISIONS (WATER YEARS).--WSP 1178: 1949. WSP 1212: 1950. WSP 1512: 1936, 1943, 1945, 1947-48, 1949(M), 1950. WSP 1732: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10 | 18 | 27 | 135 | 1,490 | 1,760 | 17 | 29 | 5.1 | .50 | 11 | 9.9 |
| 2 | 11 | 26 | 21 | 129 | 1,380 | 1,520 | 17 | 34 | 2.4 | .50 | 11 | 13 |
| 3 | 12 | 26 | 32 | 128 | 1,560 | 1,580 | 12 | 39 | .90 | .30 | 9.9 | 14 |
| 4 | 14 | 48 | 30 | 153 | 1,880 | 1,600 | 8.8 | 39 | .30 | .30 | 13 | 14 |
| 5 | 15 | 44 | 30 | 116 | 2,410 | 1,460 | 7.1 | 40 | .30 | .30 | 17 | 15 |
| 6 | 28 | 38 | 27 | 114 | 1,310 | 1,160 | 9.5 | 46 | .30 | .90 | 20 | 16 |
| 7 | 45 | 42 | 39 | 122 | 998 | 1,110 | 7.3 | 38 | .30 | 3.3 | 17 | 17 |
| 8 | 28 | 28 | 51 | 118 | 1,710 | 780 | 5.0 | 32 | .30 | 4.8 | 15 | 18 |
| 9 | 12 | 36 | 69 | 102 | 1,670 | 338 | 4.8 | 24 | .30 | 3.3 | 18 | 18 |
| 10 | 26 | 33 | 68 | 123 | 974 | 335 | 5.7 | 20 | 3.3 | 13 | 19 | 17 |
| 11 | 9.0 | 36 | 68 | 156 | 70 | 627 | 8.2 | 13 | 30 | 15 | 20 | 17 |
| 12 | 42 | 44 | 68 | 206 | 60 | 800 | 9.3 | 6.6 | 14 | 13 | 20 | 20 |
| 13 | 16 | 44 | 84 | 234 | 48 | 623 | 5.8 | 2.7 | 5.0 | 11 | 18 | 24 |
| 14 | 42 | 32 | 80 | 278 | 37 | 323 | 13 | 2.4 | 4.0 | 11 | 15 | 31 |
| 15 | 27 | 28 | 76 | 332 | 212 | 249 | 29 | 3.3 | 3.0 | 12 | 11 | 33 |
| 16 | 4.5 | 38 | 81 | 610 | 1,050 | 166 | 24 | 7.2 | 3.0 | 9.0 | 11 | 31 |
| 17 | 3.0 | 28 | 86 | 640 | 1,650 | 166 | 44 | 3.3 | 2.1 | 7.8 | 9.9 | 35 |
| 18 | 3.0 | 21 | 90 | 450 | 1,610 | 162 | 46 | 1.8 | .30 | 7.5 | 6.9 | 36 |
| 19 | 6.0 | 21 | 88 | 580 | 1,600 | 149 | 51 | 2.1 | .30 | 6.9 | 6.6 | 34 |
| 20 | 20 | 20 | 88 | 740 | 982 | 78 | 50 | 1.8 | .30 | 7.2 | 8.7 | 30 |
| 21 | 14 | 18 | 90 | 750 | 269 | 57 | 42 | 1.2 | .30 | 8.7 | 6.6 | 32 |
| 22 | 24 | 28 | 87 | 540 | 26 | 79 | 36 | .90 | .30 | 8.1 | 8.1 | 24 |
| 23 | 21 | 12 | 92 | 350 | 26 | 77 | 33 | .90 | .30 | 6.0 | 7.8 | 20 |
| 24 | 6.0 | 15 | 105 | 480 | 26 | 75 | 30 | .90 | .30 | 6.9 | 6.9 | 17 |
| 25 | 14 | 22 | 105 | 485 | 102 | 76 | 27 | 15 | .30 | 9.3 | 6.6 | 14 |
| 26 | 9.0 | 30 | 108 | 683 | 388 | 66 | 33 | 5.0 | .30 | 12 | 6.9 | 10 |
| 27 | 12 | 21 | 123 | 476 | 615 | 51 | 19 | .30 | .30 | 11 | 4.2 | 8.7 |
| 28 | 24 | 22 | 112 | 120 | 841 | 49 | 17 | .30 | .30 | 11 | 5.7 | 7.0 |
| 29 | 16 | ------ | 106 | 121 | 1,280 | 42 | 15 | .30 | .30 | 12 | 9.9 | 11 |
| 30 | 18 | ------ | 108 | 816 | 1,800 | 29 | 15 | .30 | .30 | 9.3 | 9.3 | 15 |
| 31 | 24 | ------ | 124 | ------ | 1,920 | ------ | 22 | 6.3 | ------ | 10 | ------ | 15 |
| TOTAL | 555.5 | 819 | 2,363 | 10,287 | 29,994 | 15,587 | 663.3 | 416.60 | 78.50 | 231.50 | 350.0 | 616.6 |
| MEAN | 17.9 | 29.3 | 76.2 | 343 | 968 | 520 | 21.4 | 13.4 | 2.62 | 7.47 | 11.7 | 19.9 |
| MAX | 45 | 48 | 124 | 816 | 2,410 | 1,760 | 51 | 46 | 30 | 15 | 20 | 36 |
| MIN | 3.0 | 12 | 21 | 102 | 26 | 29 | 4.8 | .30 | .30 | .30 | 4.2 | 7.0 |
| AC-FT | 1,100 | 1,620 | 4,690 | 20,400 | 59,490 | 30,920 | 1,320 | 826 | 156 | 459 | 694 | 1,220 |

CAL YR 1973 TOTAL 61,962.00 MEAN 170 MAX 2,410 MIN .30 AC-FT 122,900
WTR YR 1973 TOTAL 65,016.30 MEAN 178 MAX 2,410 MIN .30 AC-FT 129,000

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

LOCATION.--Lat 35°18'50", long 106°31'44", Sandoval County in Bernalillo Grant, in reservoir 0.3 mi (0.5 km) east of intersection of State Highway 44 and Interstate 25, and 1.5 mi (2.4 km) northeast of Bernalillo.

DRAINAGE AREA.--4.1 mi² (10.6 km²), of which 2.0 mi² (5.2 km²) has contouring, pitting and small dams to reduce runoff.

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

GAGE.--Water-stage recorder adjacent to outlet tower with fixed ports. Datum of gage is 5,169.98 ft (1,575.810 m) above mean sea level, levels by Soil Conservation Service. Since July 21, 1958, supplementary outflow gage 390 ft (120 m) below toe of dam, water-stage recorder and Parshall flume.

AVERAGE OUTFLOW.--17 calendar years, 0.010 ft³/s (0.0003 m³/s), 7.24 acre-ft/yr (8,930 m³/yr).

EXTREMES.--Current year: Maximum discharge, 15 ft³/s (0.42 m³/s) Sept. 11 (gage height, 0.78 ft or 0.238 m); no flow most of time. Period of record: Maximum outflow, 55 ft³/s (1.56 m³/s) July 19, 1956 (gage height, 11.23 ft or 3.423 m). Maximum inflow, 2,330 ft³/s (66.0 m³/s) July 19, 1956, average for 5-minute interval, computed from outflow and change in reservoir contents. No inflow or ourflow for most of time.

REMARKS.--Records poor. Records represent outflow from Piedra Lisa Reservoir, completed in 1955. Water quality records for the current year are published in Part 2 of this report.

Reservoir is formed by earthfill dam, completed in 1955. Capacity, 300 acre-ft (121 hm²) original survey, no dead storage. Gage height of spillway crest is 27 ft (8.2 m), crest of dam is 35 ft (10.7 m). Outlet tower has an inside opening 3 ft (0.91m) square and outlet pipe through dam is 2 ft (0.61 m) in diameter. A total of 9 port openings are spaced at 5-ft (1.5 m) vertical intervals on upstream and sides of tower. They are 2 ft (0.61 m) wide by 1 ft (0.30 m) high; sill of lowest upstream port is at gage height 4.8 ft (1.46 m) modified in 1963 and lowest side ports at gage height 6.3 ft (1.92).

Outflow during calendar year 1973

| Flow event | Date | Outflow (hours) | Maximum (ft³/s) | ft³/s-days | Runoff (acre-ft) |
|---|---|---|---|---|---|
| 31 | Aug. 2, 3 | 12 | 8.9 | 0.62 | 1.3 |
| 32 | Aug. 22 | 2 | 1.4 | 0.02 | 0.04 |
| 33 | Sept. 11 | 15 | 15 | 2.8 | 5.6 |

## 08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, N. MEX.

LOCATION.--Lat 35°11'58", long 106°35'53", Bernalillo County, in Elena Gallegos Grant, on left bank 0.5 mi (0.8 km) upstream from Edith Blvd., 1.1 mi (1.8 km) upstream from mouth, and 1.2 mi (1.9 km) northeast of Alameda.

PERIOD OF RECORD.--July 1968 to current year.

GAGE.--Water-stage recorder and concrete lined channel. Altitude of gage is 5,015 ft (1,528.6 m) from Corps of Engineers plan and profile map.

AVERAGE DISCHARGE.--5 calendar years, 5.17 $ft^3/s$ (0.146 $m^3/s$), 3,750 acre-ft/yr (4.62 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 4,060 $ft^3/s$ (115 $m^3/s$) Sept. 10 (gage height, 5.50 ft or 1.676 m); no flow most of time. Period of record: Maximum discharge, 5,000 $ft^3/s$ (142 $m^3/s$) July 26, 1971 (gage height, 6.30 ft or 1.920 m) from rating curve extended above 2,900 $ft^3/s$ (82.1 $m^3/s$); no flow most of time.

REMARKS.--Records poor. Floodway channel intercepts flow of numerous arroyos in northeast Albuquerque and discharges into the Rio Grande at a point 1.6 mi (2.6 km) north of Alameda.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2.0 | 0 | 3.4 | 0 | 20 | 0 | 26 | 1.9 | 0 | 0 | 2.7 |
| 2 | 0 | 0 | 0 | 74 | 0 | 5.8 | 2.1 | 3.0 | 0 | 0 | 0 | 1.8 |
| 3 | 0 | 0 | 0 | 108 | 0 | 0 | 0 | .75 | 0 | 0 | 0 | 1.8 |
| 4 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 2.9 | 0 |
| 5 | 0 | 0 | 0 | 9.0 | 28 | 0 | 0 | 0 | 0 | 0 | 2.4 | 0 |
| 6 | 0 | 10 | 0 | 1.8 | 48 | 0 | 10 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 5.0 | 0 | 1.0 | 0 | 0 | .75 | 0 | 0 | 0 | 0 | 0 |
| 8 | 5.0 | 1.0 | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 10 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 10 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 150 | 25 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 4.5 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 16 | 2.0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 20 | 0 | 20 | 152 | 0 | 6.3 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 5.0 | 0 | 4.1 | 23 | 96 | .26 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 2.0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 103 | 0 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 20 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 2.0 | 0 | 0 | 3.4 | 0 |
| 20 | 0 | 0 | 0 | 19 | 0 | 0 | 62 | 0 | 0 | 0 | 1.2 | 0 |
| 21 | 0 | 20 | 0 | 0 | 0 | 0 | 62 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 15 | 0 | 0 | 0 | 0 | 57 | 1.2 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 5.0 | 0 | 0 | 0 | 7.6 | .90 | 0 | 0 | 0 | 1.0 |
| 24 | 0 | 0 | 15 | 0 | 0 | 0 | 1.5 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 1.0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5.2 | 0 |
| 28 | 0 | 5.0 | 15 | 0 | 0 | 0 | 0 | 9.8 | 0 | 0 | 0 | 0 |
| 29 | 0 | ------ | 139 | 0 | 0 | 0 | 0 | 1.4 | 0 | 0 | 5.7 | 0 |
| 30 | 0 | ------ | 113 | 0 | 0 | 0 | 5.0 | 10 | 0 | 0 | 2.7 | 0 |
| 31 | 25 | ------ | .60 | ------ | 0 | ------ | 2.0 | 6.2 | ------ | 0 | ------ | 0 |
| TOTAL | 50.0 | 58.0 | 434.60 | 236.2 | 110.1 | 200.8 | 667.95 | 103.81 | 204.9 | 29.5 | 23.5 | 7.3 |
| MEAN | 1.61 | 2.07 | 14.0 | 7.87 | 3.55 | 6.69 | 21.5 | 3.35 | 6.83 | .95 | .78 | .24 |
| MAX | 25 | 20 | 139 | 108 | 48 | 152 | 103 | 26 | 150 | 25 | 5.7 | 2.7 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 99 | 115 | 862 | 469 | 218 | 398 | 1,320 | 206 | 406 | 59 | 47 | 14 |

CAL YR 1973 TOTAL 2,126.66 MEAN 5.83 MAX 152 MIN 0 AC-FT 4,220
WTR YR 1973 TOTAL 2,942.86 MEAN 8.06 MAX 265 MIN 0 AC-FT 5,840

## 08330000 RIO GRANDE AT ALBUQUERQUE, N. MEX.

LOCATION.--Lat 35°05'21", long 106°40'48", Bernalillo County, in Atrisco Grant, at downstream side of Old Town bridge on U.S. Highway 66 at Albuquerque, and at mile 1,540.0 (2,477.9 km).

DRAINAGE AREA.--17,440 mi² (45,170 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder. Datum of gages is 4,946.16 ft (1,507.590 m) above mean sea level. Prior to Sept. 18, 1947, at various sites at datum about 2.00 ft (0.610 m) higher; Sept. 18, 1947, to Apr. 12, 1959, at site 550 ft (170 m) to the left of present site; Apr. 13, 1959, to June 29, 1960, at site 150 ft (46 m) to the right of present site. Supplemental water-stage recorders at sites 75 ft (23 m) and 150 (46 m) to right of present site used at various times since 1964.

AVERAGE DISCHARGE.--32 calendar years, 1,058 ft³/s (29.96 m³/s), 766,500 acre-ft/yr (945 hm³/yr); 20 calendar years (1954-73), 969 ft³/s (27.44 m³/s), 702,000 acre-ft/yr (866 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 8,570 ft³/s (243 m³/s) May 14 (gage height, 7.35 ft or 2.240 m); minimum, 102 ft³/s (2.89 m³/s) Nov. 16.
Period of record: Maximum discharge, 25,000 ft³/s (708 m³/s) Apr. 24, 1942, from rating curve extended above 13,900 ft³/s (394 m³/s); maximum gage height, 7.82 ft or 2.384 m Aug. 10, 1967; no flow at times.

REMARKS.--Records good. Possible regulation by operation of reservoirs on Rio Chama and by flood-and-silt-detention reservoir on Jemez River (see sta 08285000, 08286900, 08328500). Since April 1972 flow affected by release of transmountain water from Heron Reservoir (sta 08284510). Diversions above station for irrigation of about 718,000 acres (2,910 km²), several hundred of which are below station. Water quality records for the current year are published in Part 2 of this report.

COOPERATION.--Records for Albuqueruqe Riverside drain and Arenal, Armijo, and Atrisco canals furnished by Bureau of Reclamation.

REVISIONS (WATER YEARS).--WSP 1312: 1946(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 785 | 715 | 797 | 1,210 | 5,080 | 6,300 | 4,610 | 3,010 | 813 | 455 | 932 | 1,350 |
| 2 | 720 | 564 | 837 | 1,320 | 4,980 | 6,900 | 4,480 | 2,610 | 714 | 428 | 910 | 1,460 |
| 3 | 650 | 600 | 976 | 1,380 | 4,560 | 7,260 | 4,360 | 2,460 | 629 | 390 | 836 | 1,630 |
| 4 | 686 | 594 | 1,140 | 1,450 | 4,480 | 7,240 | 3,970 | 2,190 | 600 | 352 | 819 | 1,640 |
| 5 | 693 | 607 | 944 | 1,230 | 5,490 | 7,260 | 3,700 | 2,170 | 634 | 295 | 846 | 1,690 |
| 6 | 613 | 673 | 927 | 1,140 | 5,930 | 6,160 | 3,430 | 2,050 | 651 | 330 | 870 | 1,740 |
| 7 | 591 | 717 | 865 | 1,260 | 4,520 | 5,920 | 3,100 | 1,810 | 549 | 342 | 862 | 1,630 |
| 8 | 614 | 705 | 904 | 1,380 | 4,840 | 5,700 | 3,060 | 1,700 | 532 | 377 | 875 | 1,560 |
| 9 | 582 | 748 | 964 | 1,330 | 4,900 | 4,990 | 3,110 | 1,730 | 496 | 364 | 909 | 1,620 |
| 10 | 669 | 750 | 1,140 | 1,280 | 4,660 | 5,070 | 3,140 | 1,670 | 1,010 | 416 | 916 | 1,690 |
| 11 | 690 | 770 | 1,020 | 1,300 | 4,840 | 5,630 | 2,960 | 1,700 | 2,040 | 625 | 895 | 1,710 |
| 12 | 616 | 756 | 1,070 | 1,480 | 5,810 | 6,050 | 2,860 | 1,590 | 1,650 | 658 | 840 | 1,720 |
| 13 | 514 | 754 | 1,220 | 1,870 | 6,730 | 6,620 | 3,070 | 1,580 | 872 | 675 | 634 | 1,780 |
| 14 | 585 | 695 | 1,170 | 1,910 | 8,040 | 6,150 | 3,150 | 1,690 | 552 | 534 | 161 | 1,840 |
| 15 | 643 | 718 | 1,260 | 2,440 | 7,490 | 5,980 | 1,940 | 1,960 | 398 | 556 | 113 | 1,900 |
| 16 | 705 | 776 | 972 | 2,940 | 6,570 | 5,760 | 1,670 | 1,990 | 620 | 459 | 226 | 1,760 |
| 17 | 719 | 824 | 1,110 | 2,710 | 6,610 | 5,360 | 1,760 | 800 | 1,060 | 416 | 354 | 1,750 |
| 18 | 664 | 876 | 1,120 | 2,440 | 6,690 | 4,860 | 2,480 | 267 | 1,070 | 412 | 394 | 1,670 |
| 19 | 732 | 894 | 1,080 | 2,950 | 6,940 | 4,720 | 2,170 | 237 | 916 | 366 | 456 | 1,660 |
| 20 | 785 | 876 | 1,190 | 2,930 | 7,690 | 4,310 | 1,980 | 540 | 694 | 367 | 501 | 1,730 |
| 21 | 785 | 778 | 1,280 | 2,320 | 7,440 | 3,640 | 1,590 | 610 | 552 | 391 | 850 | 1,660 |
| 22 | 720 | 768 | 1,320 | 2,090 | 7,740 | 3,140 | 2,430 | 669 | 563 | 443 | 1,150 | 1,620 |
| 23 | 720 | 699 | 1,390 | 1,860 | 7,790 | 3,710 | 3,110 | 823 | 590 | 519 | 1,210 | 1,650 |
| 24 | 733 | 605 | 1,410 | 1,680 | 7,990 | 3,810 | 2,960 | 542 | 541 | 525 | 1,160 | 1,610 |
| 25 | 733 | 627 | 1,400 | 2,150 | 7,590 | 3,910 | 2,580 | 510 | 467 | 539 | 1,240 | 1,650 |
| 26 | 746 | 697 | 1,140 | 2,530 | 6,990 | 3,920 | 3,820 | 584 | 473 | 429 | 1,200 | 1,670 |
| 27 | 720 | 778 | 1,160 | 2,800 | 6,610 | 3,990 | 3,260 | 588 | 504 | 416 | 1,220 | 1,660 |
| 28 | 759 | 771 | 1,200 | 2,510 | 6,570 | 4,400 | 3,060 | 578 | 453 | 450 | 1,290 | 1,650 |
| 29 | 707 | ------ | 1,250 | 3,160 | 6,530 | 4,820 | 3,230 | 603 | 408 | 452 | 1,350 | 1,780 |
| 30 | 632 | ------ | 1,290 | 3,970 | 6,490 | 4,940 | 3,310 | 888 | 450 | 403 | 1,460 | 1,880 |
| 31 | 702 | ------ | 1,360 | ------ | 6,410 | ------ | 3,100 | 1,190 | ------ | 454 | ------ | 1,750 |
| TOTAL | 21,213 | 20,335 | 34,906 | 61,020 | 195,000 | 158,520 | 93,450 | 41,339 | 21,501 | 13,838 | 25,479 | 52,110 |
| MEAN | 684 | 726 | 1,126 | 2,034 | 6,290 | 5,284 | 3,015 | 1,334 | 717 | 446 | 849 | 1,681 |
| MAX | 785 | 894 | 1,410 | 3,970 | 8,040 | 7,260 | 4,610 | 3,010 | 2,040 | 675 | 1,460 | 1,900 |
| MIN | 514 | 564 | 797 | 1,140 | 4,480 | 3,140 | 1,590 | 237 | 398 | 295 | 113 | 1,350 |
| AC-FT | 42,080 | 40,330 | 69,240 | 121,000 | 386,800 | 314,400 | 185,400 | 82,000 | 42,650 | 27,450 | 50,540 | 103,400 |
| (†) | 940 | 803 | 5,580 | 9,390 | 14,700 | 13,660 | 15,230 | 14,160 | 13,020 | 12,880 | 1,200 | 996 |

CAL YR 1973 TOTAL 738,711.00 MEAN 2,024 MAX 8,040 MIN 113 AC-FT 1,465,000 (†) 102,600
WTR YR 1973 TOTAL 716,305.00 MEAN 1,962 MAX 8,040 MIN .0 AC-FT 1,421,000 (†) 101,500

PEAK DISCHARGE (BASE, 4,000 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-14 | 1800 | 7.35 | 8,570 | 9-11 | 1000 | 6.67 | 4,840 |
| 7-26 | 0830 | 7.10 | 7,440 | | | | |

(†) COMBINED FLOW, IN ACRE-FT, OF ALBUQUERQUE RIVERSIDE DRAIN AND ARENAL, ARMIJO, AND ARTISCO CANALS. THIS FLOW WHICH BYPASSES RIVER GAGE, CAN BE ADDED TO RIVER RECORDS TO GET ENTIRE SURFACE FLOW IN VALLEY CROSS-SECTION.

## 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, 0.2 mi (0.3 km) south of U.S. Highway 60, 1.8 mi (2.9 km) east of Bernardo, about 3 mi (5 km) upstream from floodway, and 4 mi (6 km) upstream from Rio Puerco.

PERIOD OF RECORD.--June 1936 to September 1937, October 1964 to current year. July 1943 to September 1964, included in composite flow of "Rio Grande near Bernardo." October 1960 to September 1964, monthly acre-feet published in WSP 1923 (daily records available in district files). Beginning October 1952 flow in conveyance channel represents controlled diversion from Rio Grande. Prior to October 1952, records called "San Francisco Riverside drain near Bernardo," not equivalent.

GAGE.--Water-stage recorder with concrete control. Datum of gage is 4,720.00 ft (1,438.656 m) above mean sea level. Prior to October 1964, 0.2 mi (0.3 km) upstream at various datums.

AVERAGE DISCHARGE.--21 calendar years (1953-73), 515 $ft^3/s$ (14.58 $m^3/s$), 373,100 acre-ft/yr (460 $hm^3/yr$); 20 calendar years (1954-73) 521 $ft^3/s$ (14.75 $m^3/s$), 377,500 acre-ft/yr (465 $hm^3/yr$).

EXTREMES.--Period of record: Maximum daily discharge, 2,220 $ft^3/s$ (62.9 $m^3/s$) Apr. 22, 1958; no flow many days most years.

REMARKS.--Records good except those for April through June, which are fair. Conveyance channel is 1 of 4 channels (see sta 08332010, 08332030, and 08332050) carrying flow in valley cross section. Original design and plan was for conveyance channel to carry flows up to about 2,000 $ft^3/s$ (56.6 $m^3/s$). For combined monthly flow in acre-ft of this channel, floodway, Bernardo interior drain and Lower San Juan Riverside drain see tabulation below daily table for sta 08332010. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 775 | 811 | 641 | 1,330 | 1,620 | 1,180 | 1,540 | 1,950 | 797 | 232 | 658 | 1,490 |
| 2 | 703 | 743 | 555 | 1,390 | 1,480 | 965 | 1,500 | 2,050 | 686 | 262 | 879 | 1,490 |
| 3 | 662 | 695 | 735 | 1,620 | 1,200 | 1,200 | 1,470 | 2,010 | 596 | 231 | 855 | 1,540 |
| 4 | 654 | 667 | 958 | 1,350 | 1,080 | 1,680 | 1,460 | 1,890 | 532 | 257 | 875 | 1,590 |
| 5 | 695 | 603 | 1,330 | 1,330 | 785 | 1,940 | 1,500 | 1,870 | 420 | 236 | 868 | 1,610 |
| 6 | 732 | 635 | 964 | 908 | 748 | 1,770 | 1,570 | 1,760 | 406 | 276 | 780 | 1,630 |
| 7 | 770 | 792 | 880 | 771 | 980 | 1,750 | 1,560 | 1,630 | 418 | 265 | 800 | 1,600 |
| 8 | 738 | 738 | 671 | 1,130 | 1,060 | 1,800 | 1,520 | 1,460 | 294 | 278 | 871 | 1,590 |
| 9 | 734 | 762 | 587 | 1,270 | 1,290 | 1,750 | 1,650 | 1,200 | 223 | 318 | 824 | 1,550 |
| 10 | 777 | 787 | 1,170 | 802 | 1,210 | 1,680 | 1,880 | 1,140 | 499 | 287 | 785 | 1,530 |
| 11 | 796 | 765 | 1,200 | 851 | 976 | 1,870 | 1,910 | 1,050 | 1,300 | 369 | 761 | 1,520 |
| 12 | 804 | 763 | 698 | 677 | 1,210 | 1,900 | 1,790 | 956 | 1,690 | 535 | 760 | 1,550 |
| 13 | 759 | 769 | 762 | 821 | 1,500 | 1,870 | 1,790 | 961 | 1,480 | 604 | 748 | 1,550 |
| 14 | 687 | 839 | 1,110 | 1,450 | 1,560 | 1,740 | 1,830 | 993 | 1,180 | 539 | 668 | 1,580 |
| 15 | 728 | 775 | 898 | 1,940 | 1,510 | 1,700 | 1,760 | 896 | 833 | 483 | 395 | 1,640 |
| 16 | 793 | 767 | 1,000 | 1,640 | 1,450 | 1,760 | 1,620 | 1,040 | 642 | 419 | 311 | 1,680 |
| 17 | 815 | 808 | 717 | 1,620 | 1,410 | 1,820 | 1,690 | 998 | 558 | 389 | 308 | 1,680 |
| 18 | 785 | 796 | 821 | 1,390 | 1,400 | 1,680 | 1,710 | 492 | 809 | 332 | 521 | 1,730 |
| 19 | 777 | 777 | 854 | 1,490 | 1,260 | 1,330 | 1,800 | 196 | 741 | 306 | 547 | 1,710 |
| 20 | 814 | 809 | 929 | 1,490 | 1,330 | 1,240 | 1,570 | 139 | 629 | 290 | 609 | 1,680 |
| 21 | 758 | 766 | 1,070 | 1,170 | 1,290 | 1,600 | 1,350 | 139 | 455 | 245 | 627 | 1,620 |
| 22 | 758 | 758 | 1,200 | 1,060 | 1,250 | 1,830 | 1,300 | 229 | 269 | 260 | 839 | 1,510 |
| 23 | 751 | 849 | 1,430 | 1,080 | 1,080 | 1,910 | 1,490 | 273 | 200 | 285 | 1,190 | 1,510 |
| 24 | 712 | 823 | 1,550 | 949 | 1,000 | 1,870 | 1,690 | 375 | 194 | 305 | 1,260 | 1,510 |
| 25 | 691 | 687 | 1,440 | 1,070 | 1,140 | 1,660 | 1,770 | 281 | 177 | 346 | 1,330 | 1,480 |
| 26 | 680 | 671 | 1,200 | 1,310 | 1,370 | 1,650 | 1,940 | 188 | 191 | 352 | 1,360 | 1,440 |
| 27 | 732 | 744 | 1,060 | 1,500 | 1,390 | 1,620 | 1,990 | 181 | 219 | 270 | 1,400 | 1,510 |
| 28 | 675 | 719 | 997 | 1,410 | 1,520 | 1,600 | 1,930 | 214 | 245 | 225 | 1,460 | 1,640 |
| 29 | 732 | ------ | 1,080 | 1,340 | 1,510 | 1,820 | 2,010 | 162 | 233 | 265 | 1,460 | 1,590 |
| 30 | 714 | ------ | 1,470 | 1,540 | 1,320 | 1,750 | 1,900 | 313 | 188 | 265 | 1,460 | 1,590 |
| 31 | 734 | ------ | 1,510 | ------ | 1,090 | ------ | 1,910 | 551 | ------ | 260 | ------ | 1,600 |
| TOTAL | 22,935 | 21,118 | 31,487 | 37,699 | 39,019 | 49,935 | 52,400 | 27,587 | 17,104 | 9,986 | 26,209 | 48,940 |
| MEAN | 740 | 754 | 1,016 | 1,257 | 1,259 | 1,665 | 1,690 | 890 | 570 | 322 | 874 | 1,579 |
| MAX | 815 | 849 | 1,550 | 1,940 | 1,620 | 1,940 | 2,010 | 2,050 | 1,690 | 604 | 1,460 | 1,730 |
| MIN | 654 | 603 | 555 | 677 | 748 | 965 | 1,300 | 139 | 177 | 225 | 308 | 1,440 |
| AC-FT | 45,490 | 41,890 | 62,450 | 74,780 | 77,390 | 99,050 | 103,900 | 54,720 | 33,930 | 19,810 | 51,990 | 97,070 |

CAL YR 1973 TOTAL 384,419.00 MEAN 1,053 MAX 2,050 MIN 139 AC-FT 762,500
WTR YR 1973 TOTAL 371,264.10 MEAN 1,017 MAX 2,050 MIN .0 AC-FT 736,400

## 08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, N. MEX.

LOCATION.--Lat 34°25'01", long 106°48'00", Socorro County, in Belen or Sevilleta Grant on downstream side of bridge on U.S. Highway 60, 5 mi (8 km) downstream from heading of conveyance channel, 2 mi (3 km) east of Bernardo, and at mile 1,487.2 (2,392.9 km).

DRAINAGE AREA.--19,230 mi² (49,810 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--June 1936 to January 1939, October 1941 to current year. Monthly discharge only October 1942 to June 1943 published in WSP 1312, and October 1960 to September 1964, published in WSP 1923 (daily records available in district files). Published as "Rio Grande near Bernardo" prior to October 1964. Prior to October 1952, flow of Bernardo interior drain was included only when it carried river overflow, the entire flow has been included from October 1952 to September 1964. Flow in the conveyance channel, formerly San Francisco Riverside drain, has been included in record prior to October 1964.

GAGE.--Water-stage recorder. Datum of gage is 4,722.55 ft (1,439.433 m) above mean sea level.

AVERAGE DISCHARGE.--19 calendar years (1936-38, 1941-58), 1,125 ft³/s (31.86 m³/s), 815,100 acre-ft/yr (1,000 hm³/yr). Includes flow of floodway, conveyance channel, and Bernardo interior drain.
15 calendar years (1958-73) 260 ft³/s (7.363 m³/s), 188,400 acre-ft/yr (232 hm³/yr), floodway only.
15 calendar years (1958-73) 899 ft³/s (25.46 m³/s), 651,300 acre-ft/yr (803 hm³/yr), includes flow of floodway, conveyance channel, Bernardo interior drain, and lower San Juan Riverside drain.

EXTREMES.--Current year: Maximum discharge, about 8,500 ft³/s (241 m³/s) May 16 (gage height, 6.78 ft or 2.067 m); no flow most of time.
1936-39, 1941 to current year: Maximum discharge, 21,000 ft³/s (595 m³/s) Apr. 25, 1942 (gage height, 6.90 ft or 2.103 m); no flow for many days most years.

REMARKS.--Records poor. Floodway is 1 of 4 channels (see sta 08331990, 08332030, and 08332050) carring flow in valley cross section. For combined monthly flow in acre-ft of floodway, conveyance channel, Bernardo interior drain and Lower San Juan Riverside drain see tabulation below. Normal plan is for floodway to carry flow when capacity of conveyance channel (about 2,000 ft³/s or 56.6 m³/s) is exceeded. Diversions for irrigation of about 740,000 acres (2,990 km²) above station. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | 0 | 1,910 | 5,790 | 2,410 | 392 | 0 | | 0 | 5.0 |
| 2 | | | | 0 | 2,440 | 6,200 | 2,290 | 543 | 0 | | 0 | 10 |
| 3 | | | | 0 | 2,440 | 6,140 | 2,350 | 238 | 0 | | 0 | 46 |
| 4 | | | | 0 | 2,470 | 6,380 | 2,350 | 128 | 0 | | 0 | 37 |
| 5 | | | | 0 | 2,820 | 5,420 | 2,180 | 74 | 0 | | 0 | 74 |
| 6 | | | | 0 | 3,940 | 5,190 | 1,830 | 5.0 | 0 | | 0 | 32 |
| 7 | | | | 0 | 4,420 | 4,440 | 1,410 | 0 | 0 | | 0 | 56 |
| 8 | | | | 0 | 2,900 | 4,140 | 1,370 | 0 | 0 | | 0 | 60 |
| 9 | | | | 0 | 2,900 | 3,640 | 1,170 | 0 | 0 | | 0 | 50 |
| 10 | | | | 0 | 3,050 | 3,100 | 1,030 | 0 | 0 | | 0 | 50 |
| 11 | | | | 0 | 3,050 | 3,100 | 982 | 0 | 81 | | 0 | 52 |
| 12 | | | | 0 | 2,900 | 3,250 | 728 | 0 | 1,010 | | 0 | 82 |
| 13 | | | | 0 | 3,400 | 3,940 | 904 | 0 | 227 | | 0 | 36 |
| 14 | | | | 0 | 4,860 | 5,050 | 1,030 | 0 | 1.0 | | 0 | 44 |
| 15 | | | | 160 | 6,800 | 4,510 | 865 | 0 | 0 | | 0 | 32 |
| 16 | | | | 680 | 6,100 | 4,040 | 160 | 0 | 0 | | 0 | 58 |
| 17 | | | | 865 | 5,320 | 3,780 | 182 | 0 | 0 | | 0 | 40 |
| 18 | | | | 581 | 5,350 | 3,510 | 260 | 0 | 0 | | 0 | 44 |
| 19 | | | | 800 | 5,680 | 3,400 | 839 | 0 | 0 | | 0 | 56 |
| 20 | | | | 1,100 | 5,980 | 2,700 | 440 | 0 | 0 | | 0 | 30 |
| 21 | | | | 904 | 6,050 | 1,850 | 120 | 0 | 0 | | 0 | 85 |
| 22 | | | | 561 | 6,190 | 1,200 | 94 | 0 | 0 | | 0 | 336 |
| 23 | | | | 432 | 6,460 | 1,090 | 620 | 0 | 0 | | 0 | 344 |
| 24 | | | | 97 | 6,630 | 1,470 | 680 | 0 | 0 | | 0 | 368 |
| 25 | | | | 233 | 6,190 | 1,530 | 603 | 0 | 0 | | 27 | 384 |
| 26 | | | | 588 | 5,570 | 1,470 | 791 | 0 | 0 | | 48 | 448 |
| 27 | | | | 1,290 | 5,560 | 1,570 | 954 | 0 | 0 | | 30 | 172 |
| 28 | | | | 1,160 | 5,780 | 1,850 | 368 | 0 | 0 | | 0 | 90 |
| 29 | | ------ | | 1,260 | 5,580 | 2,150 | 352 | 0 | 0 | | 2.0 | 110 |
| 30 | | ------ | | 1,590 | 5,670 | 2,410 | 254 | 0 | 0 | | 2.5 | 174 |
| 31 | | ------ | | ------ | 5,900 | ------ | 314 | 0 | ------ | | ------ | 232 |
| TOTAL | 0 | 0 | 0 | 12,301 | 144,310 | 104,310 | 29,930 | 1,380.0 | 1,319.0 | 0 | 109.5 | 3,637.0 |
| MEAN | 0 | 0 | 0 | 410 | 4,655 | 3,477 | 965 | 44.5 | 44.0 | 0 | 3.65 | 117 |
| MAX | 0 | 0 | 0 | 1,590 | 6,800 | 6,380 | 2,410 | 543 | 1,010 | 0 | 48 | 448 |
| MIN | 0 | 0 | 0 | 0 | 1,910 | 1,090 | 94 | 0 | 0 | 0 | 0 | 5.0 |
| AC-FT | 0 | 0 | 0 | 24,400 | 286,200 | 206,900 | 59,370 | 2,740 | 2,620 | 0 | 217 | 7,210 |
| (†) | 50,100 | 45,490 | 72,630 | 109,300 | 377,700 | 317,600 | 174,600 | 68,820 | 48,270 | 32,760 | 57,760 | 109,800 |

CAL YR 1973 TOTAL 297,296.50 MEAN 815 MAX 6,800 MIN 0 AC-FT 589,700 (†) MEAN 2,023 AC-FT 1,465,000
WTR YR 1973 TOTAL 293,959.70 MEAN 805 MAX 6,800 MIN 0 AC-FT 583,100 (†) MEAN 1,974 AC-FT 1,429,000

(†) COMBINED FLOW, IN ACRE-FT AND MEAN, IN FT³/S, OF FLOODWAY, CONVEYANCE CHANNEL, BERNARDO INTERIOR DRAIN, AND LOWER SAN JUAN RIVERSIDE DRAIN.

## 08332030 LOWER SAN JUAN RIVERSIDE DRAIN NEAR BERNARDO, N. MEX.

LOCATION.--Lat 34°24'51", long 106°47'34", in SE¼NW¼ sec.12, T.2 N., R.1 E., Socorro County, on right bank, 1,400 ft (430 m) downstream from bridge on U.S. Highway 60, and 2.5 mi (4.0 km) east of Bernardo.

PERIOD OF RECORD.--June 1936 to September 1937, August 1954 to current year. Monthly discharge only August 1955 to September 1960, published in WSP 1732, and October 1960 to September 1964, published in WSP 1923 (daily records available in district files). Records collected under name of "La Joya Eastside drain" are equivalent.

GAGE.--Water-stage recorder. Datum of gage is 4,722.35 ft (1,439.372 m) above mean sea level.

EXTREMES.--Period of record: Maximum daily discharge, 205 ft³/s (5.81 m³/s) May 24, 26, 1973; no flow for several days during 1963.

REMARKS.--This drain is 1 of 4 channels (see sta 08331990, 08332010 and 08332050) carrying flow in valley cross section. For combined flow in acre-ft of this drain, conveyance channel, floodway, and Bernardo interior drain see tabulation below daily table for station 08332010.

COOPERATION.--Since July 1958 records for this station or La Joya Eastside drain (records equivalent) furnished by Bureau of Reclamation.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 45 | 40 | 58 | 123 | 108 | 149 | 144 | 123 | 145 | 131 | 96 | 58 |
| 2 | 45 | 40 | 79 | 117 | 128 | 157 | 143 | 159 | 143 | 156 | 66 | 58 |
| 3 | 45 | 40 | 89 | 79 | 133 | 171 | 126 | 155 | 125 | 135 | 65 | 58 |
| 4 | 45 | 39 | 77 | 76 | 138 | 158 | 144 | 161 | 149 | 145 | 63 | 59 |
| 5 | 44 | 39 | 104 | 93 | 137 | 142 | 131 | 153 | 122 | 153 | 63 | 60 |
| 6 | 45 | 39 | 98 | 106 | 143 | 158 | 138 | 154 | 125 | 152 | 62 | 60 |
| 7 | 45 | 39 | 124 | 99 | 157 | 147 | 139 | 158 | 137 | 139 | 61 | 60 |
| 8 | 51 | 39 | 135 | 76 | 139 | 150 | 139 | 166 | 147 | 149 | 60 | 60 |
| 9 | 53 | 39 | 151 | 79 | 172 | 148 | 145 | 148 | 120 | 154 | 60 | 60 |
| 10 | 51 | 39 | 153 | 87 | 168 | 153 | 126 | 146 | 152 | 93 | 60 | 60 |
| 11 | 50 | 39 | 126 | 112 | 129 | 150 | 130 | 143 | 139 | 135 | 60 | 60 |
| 12 | 50 | 39 | 121 | 92 | 155 | 158 | 123 | 143 | 156 | 116 | 58 | 60 |
| 13 | 51 | 39 | 149 | 131 | 187 | 150 | 137 | 147 | 155 | 121 | 58 | 60 |
| 14 | 46 | 38 | 152 | 118 | 142 | 150 | 147 | 126 | 135 | 128 | 57 | 60 |
| 15 | 44 | 38 | 159 | 143 | 119 | 142 | 152 | 140 | 133 | 136 | 57 | 60 |
| 16 | 40 | 38 | 142 | 117 | 179 | 151 | 140 | 145 | 148 | 142 | 56 | 60 |
| 17 | 41 | 38 | 132 | 120 | 195 | 167 | 134 | 148 | 163 | 148 | 56 | 60 |
| 18 | 41 | 38 | 128 | 124 | 190 | 160 | 122 | 101 | 155 | 152 | 55 | 60 |
| 19 | 41 | 38 | 120 | 127 | 185 | 129 | 124 | 118 | 151 | 166 | 54 | 60 |
| 20 | 41 | 38 | 106 | 120 | 197 | 114 | 134 | 133 | 144 | 161 | 55 | 60 |
| 21 | 41 | 38 | 118 | 117 | 185 | 119 | 134 | 123 | 142 | 163 | 54 | 60 |
| 22 | 40 | 40 | 117 | 120 | 182 | 111 | 121 | 134 | 139 | 168 | 55 | 61 |
| 23 | 40 | 40 | 113 | 132 | 188 | 131 | 111 | 101 | 135 | 172 | 55 | 61 |
| 24 | 40 | 38 | 135 | 90 | 205 | 138 | 130 | 103 | 152 | 155 | 55 | 61 |
| 25 | 40 | 38 | 130 | 115 | 204 | 120 | 131 | 101 | 120 | 159 | 56 | 60 |
| 26 | 40 | 38 | 130 | 116 | 205 | 99 | 115 | 113 | 136 | 161 | 56 | 60 |
| 27 | 40 | 38 | 117 | 121 | 202 | 99 | 142 | 114 | 151 | 150 | 57 | 60 |
| 28 | 39 | 38 | 109 | 110 | 149 | 106 | 92 | 103 | 154 | 143 | 57 | 60 |
| 29 | 40 | ------ | 132 | 117 | 152 | 111 | 99 | 149 | 144 | 146 | 56 | 59 |
| 30 | 40 | ------ | 137 | 135 | 155 | 121 | 122 | 142 | 144 | 156 | 57 | 59 |
| 31 | 40 | ------ | 124 | ------ | 149 | ------ | 91 | 145 | ------ | 161 | ------ | 58 |
| TOTAL | 1,354 | 1,084 | 3,765 | 3,312 | 5,077 | 4,159 | 4,006 | 4,195 | 4,261 | 4,546 | 1,780 | 1,852 |
| MEAN | 43.7 | 38.7 | 121 | 110 | 164 | 139 | 129 | 135 | 142 | 147 | 59.3 | 59.7 |
| MAX | 53 | 40 | 159 | 143 | 205 | 171 | 152 | 166 | 163 | 172 | 96 | 61 |
| MIN | 39 | 38 | 58 | 76 | 108 | 99 | 91 | 101 | 120 | 93 | 54 | 58 |
| AC-FT | 2,690 | 2,150 | 7,470 | 6,570 | 10,070 | 8,250 | 7,950 | 8,320 | 8,450 | 9,020 | 3,530 | 3,670 |

CAL YR 1973 TOTAL 39,391 MEAN 108 MAX 205 MIN 38 AC-FT 78,130
WTR YR 1973 TOTAL 36,648 MEAN 100 MAX 205 MIN 38 AC-FT 72,690

## 08332050 BERNARDO INTERIOR DRAIN NEAR BERNARDO, N. MEX.

LOCATION.--Lat 34°24'56", long 106°49'15", Socorro County, on downstream side of bridge on U.S. Highway 60, and 1.0 mi (1.6 km) east of Bernardo.

PERIOD OF RECORD.--June 1936 to May 1937, October 1943 to current year. Monthly discharge only June 1936 to May 1937, published in WSP 828. October 1943 to September 1960 included in composite records for station 08332000 "Rio Grande near Bernardo." October 1960 to September 1964 monthly acre-ft published in WSP 1923. Daily records available in district files beginning October 1943.

GAGE.--Water-stage recorder. Datum of gage is 4,713.99 ft (1,436.824 m) above mean sea level. June 4, 1936 to May 17, 1937, staff gage 150 ft (46 m) downstream at datum 2.77 ft (0.844 m) higher.

EXTREMES.--Period of record: Maximum daily discharge, 187 $ft^3/s$ (5.30 $m^3/s$) Aug. 7, 1970; no flow at times. Prior to 1952, drain was subject to overflow from floodway.

REMARKS.--Records good. This drain is 1 of 4 channels (see sta 08331990, 08332010, and 08332030) carrying flow in valley cross section. For combined monthly flow in acre-ft of this drain, conveyance channel, floodway, and Lower San Juan Riverside drain see tabulation below daily table for sta 08332010.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30 | 28 | 24 | 75 | 61 | 80 | 54 | 58 | 46 | 65 | 38 | 30 |
| 2 | 32 | 28 | 24 | 77 | 61 | 76 | 52 | 62 | 67 | 58 | 38 | 30 |
| 3 | 32 | 28 | 25 | 74 | 78 | 93 | 45 | 43 | 60 | 57 | 36 | 30 |
| 4 | 34 | 28 | 25 | 70 | 66 | 86 | 65 | 51 | 46 | 58 | 36 | 30 |
| 5 | 34 | 26 | 28 | 75 | 58 | 96 | 48 | 57 | 56 | 62 | 36 | 29 |
| 6 | 34 | 26 | 38 | 58 | 82 | 85 | 45 | 53 | 53 | 61 | 36 | 29 |
| 7 | 34 | 26 | 43 | 63 | 68 | 61 | 58 | 54 | 52 | 57 | 36 | 29 |
| 8 | 34 | 28 | 57 | 38 | 45 | 58 | 53 | 54 | 56 | 65 | 35 | 29 |
| 9 | 33 | 28 | 53 | 32 | 62 | 53 | 44 | 46 | 59 | 62 | 35 | 29 |
| 10 | 33 | 28 | 56 | 46 | 60 | 49 | 62 | 36 | 67 | 61 | 35 | 29 |
| 11 | 32 | 28 | 40 | 51 | 64 | 47 | 63 | 45 | 48 | 65 | 34 | 28 |
| 12 | 32 | 27 | 28 | 60 | 64 | 41 | 58 | 57 | 50 | 67 | 34 | 28 |
| 13 | 32 | 26 | 29 | 63 | 84 | 41 | 64 | 56 | 55 | 66 | 34 | 28 |
| 14 | 32 | 26 | 32 | 68 | 80 | 62 | 64 | 48 | 71 | 72 | 34 | 28 |
| 15 | 31 | 26 | 40 | 74 | 73 | 52 | 65 | 59 | 67 | 67 | 33 | 28 |
| 16 | 30 | 26 | 38 | 60 | 77 | 54 | 42 | 54 | 69 | 67 | 33 | 30 |
| 17 | 30 | 26 | 39 | 55 | 71 | 58 | 39 | 48 | 60 | 68 | 32 | 30 |
| 18 | 30 | 26 | 50 | 60 | 62 | 46 | 42 | 43 | 63 | 69 | 32 | 30 |
| 19 | 31 | 25 | 46 | 36 | 74 | 41 | 55 | 42 | 58 | 68 | 32 | 29 |
| 20 | 32 | 25 | 55 | 40 | 80 | 41 | 50 | 45 | 55 | 69 | 32 | 30 |
| 21 | 31 | 25 | 56 | 55 | 74 | 40 | 39 | 45 | 54 | 67 | 32 | 30 |
| 22 | 30 | 26 | 53 | 74 | 76 | 42 | 49 | 40 | 42 | 58 | 32 | 31 |
| 23 | 30 | 25 | 48 | 67 | 68 | 44 | 63 | 62 | 46 | 53 | 34 | 31 |
| 24 | 30 | 25 | 46 | 62 | 64 | 55 | 58 | 52 | 40 | 53 | 34 | 31 |
| 25 | 30 | 24 | 42 | 56 | 66 | 61 | 49 | 52 | 45 | 56 | 34 | 32 |
| 26 | 30 | 24 | 43 | 55 | 56 | 42 | 47 | 55 | 47 | 50 | 33 | 32 |
| 27 | 30 | 24 | 42 | 66 | 50 | 47 | 50 | 46 | 50 | 64 | 32 | 32 |
| 28 | 29 | 24 | 51 | 66 | 55 | 56 | 64 | 38 | 60 | 70 | 32 | 32 |
| 29 | 29 | ------ | 67 | 54 | 59 | 48 | 74 | 35 | 54 | 77 | 32 | 34 |
| 30 | 28 | ------ | 70 | 52 | 53 | 42 | 67 | 48 | 54 | 74 | 32 | 34 |
| 31 | 28 | ------ | 76 | ------ | 60 | ------ | 64 | 47 | ------ | 76 | ------ | 34 |
| TOTAL | 967 | 732 | 1,364 | 1,782 | 2,051 | 1,697 | 1,692 | 1,531 | 1,650 | 1,982 | 1,018 | 936 |
| MEAN | 31.2 | 26.1 | 44.0 | 59.4 | 66.2 | 56.6 | 54.6 | 49.4 | 55.0 | 63.9 | 33.9 | 30.2 |
| MAX | 34 | 28 | 76 | 77 | 84 | 96 | 74 | 62 | 71 | 77 | 38 | 34 |
| MIN | 28 | 24 | 24 | 32 | 45 | 40 | 39 | 35 | 40 | 50 | 32 | 28 |
| AC-FT | 1,920 | 1,450 | 2,710 | 3,530 | 4,070 | 3,370 | 3,360 | 3,040 | 3,270 | 3,930 | 2,020 | 1,860 |

CAL YR 1973 TOTAL 17,402 MEAN 47.7 MAX 96 MIN 24 AC-FT 34,520
WTR YR 1973 TOTAL 18,480 MEAN 50.6 MAX 137 MIN 24 AC-FT 36,660

## 08334000 RIO PUERCO ABOVE ARROYO CHICO, NEAR GUADALUPE, N. MEX.

LOCATION.--Lat 35°38'08", long 107°09'56", in SW¼ sec.21, T.16 N., R.3 W., Sandoval County, on right bank 1.6 mi (2.6 km) upstream from Arroyo Chico, 5.5 mi (8.8 km) northeast of village of Guadalupe, and at mile 106.8 (171.8 km).

DRAINAGE AREA.--420 mi² (1,090 km²), approximately.

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,950 ft (1,813.6 m) above mean sea level. Prior to July 14, 1966 at datum 1.01 ft (0.308 m) higher.

AVERAGE DISCHARGE.--22 calendar years, 14.3 ft³/s (0.405 m³/s), 10,360 acre-ft/yr (12.8 hm³/yr); 20 calendar years (1954-73), 15.0 ft³/s (0.425 m³/s), 10,870 acre-ft/yr (13.4 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 694 ft³/s (19.7 m³/s) July 14 (gage height, 5.01 ft or 1.527 m); no flow for many days.
Period of record: Maximum discharge, 6,940 ft³/s (197 m³/s) July 29, 1967 (gage hieght, 13.53 ft or 4.124 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of slope-area measurements at gage heights 7.75 ft (2.362 m) and 10.60 ft (3.231 m); no flow for many days most years.
Flood of June 29, 1943, probably exceeded 5,000 ft³/s (142 m³/s) based on records for stations above and below.

REMARKS.--Records poor. Diversions for irrigation of about 3,700 acre (1,500 hm²) above station in past years, but present diversion negligible.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .50 | 30 | 128 | 70 | 200 | 240 | 7.4 | 1.0 | 3.0 | 0 | | 0 |
| 2 | .50 | 38 | 174 | 60 | 159 | 200 | 6.2 | 3.0 | .30 | 0 | | 0 |
| 3 | .50 | 40 | 204 | 80 | 139 | 190 | 4.9 | 12 | 0 | 0 | | .20 |
| 4 | .50 | 46 | 162 | 100 | 155 | 180 | 5.7 | 35 | 0 | 0 | | .10 |
| 5 | .50 | 43 | 111 | 80 | 194 | 170 | 2.4 | 10 | 0 | .02 | | .02 |
| 6 | 1.0 | 24 | 42 | 60 | 250 | 160 | 0 | 7.6 | 0 | .08 | | .10 |
| 7 | 1.0 | 35 | 32 | 50 | 198 | 150 | 0 | 6.1 | 0 | .08 | | .10 |
| 8 | 1.0 | 28 | 36 | 40 | 160 | 140 | 2.8 | 3.7 | 0 | .02 | | .10 |
| 9 | 1.0 | .30 | 39 | 34 | 160 | 130 | 5.8 | 2.4 | 0 | .04 | | .16 |
| 10 | 1.0 | 3.0 | 30 | 32 | 224 | 120 | 8.0 | 1.5 | .52 | .08 | | .20 |
| 11 | 2.0 | 4.2 | 19 | 75 | 314 | 118 | 6.7 | 0 | 13 | 0 | | .35 |
| 12 | 2.0 | 4.0 | 10 | 85 | 340 | 112 | 3.0 | 0 | 25 | 0 | | .20 |
| 13 | 2.0 | 6.9 | 94 | 99 | 290 | 109 | 8.1 | 0 | 3.7 | 0 | | .14 |
| 14 | 2.0 | 8.0 | 42 | 125 | 280 | 123 | 30 | 0 | .60 | 0 | | .01 |
| 15 | 2.0 | 8.6 | 42 | 137 | 280 | 92 | 1.9 | 0 | .14 | 0 | | .02 |
| 16 | 2.0 | 8.6 | 26 | 88 | 280 | 78 | 1.1 | 6.0 | .06 | 0 | | .09 |
| 17 | 2.0 | 9.8 | 65 | 67 | 270 | 63 | 1.2 | 1.0 | .02 | 0 | | .09 |
| 18 | 2.0 | 15 | 86 | 90 | 260 | 57 | 2.4 | 0 | 0 | 0 | | 0 |
| 19 | 2.0 | 14 | 69 | 90 | 250 | 59 | 9.6 | 0 | 0 | 0 | | .02 |
| 20 | 2.0 | 7.2 | 72 | 65 | 240 | 53 | 6.9 | 0 | 0 | 0 | | 0 |
| 21 | 2.2 | 5.3 | 141 | 57 | 230 | 54 | 4.2 | 0 | 0 | 0 | | 0 |
| 22 | 2.5 | 4.6 | 110 | 48 | 220 | 54 | 1.5 | 0 | 0 | 0 | | 0 |
| 23 | 3.0 | 2.6 | 100 | 63 | 232 | 53 | .40 | 0 | 0 | 0 | | 0 |
| 24 | 3.0 | 5.3 | 90 | 83 | 248 | 52 | .12 | 5.4 | 0 | 0 | | 0 |
| 25 | 3.5 | 23 | 74 | 96 | 254 | 52 | 0 | 18 | 0 | 0 | | 0 |
| 26 | 4.0 | 77 | 60 | 113 | 256 | 45 | 0 | .06 | 0 | 0 | | 0 |
| 27 | 6.0 | 85 | 50 | 131 | 256 | 35 | 0 | 0 | 0 | 0 | | 0 |
| 28 | 8.0 | 142 | 45 | 160 | 246 | 29 | 0 | 0 | 0 | 0 | | .95 |
| 29 | 15 | ------ | 50 | 176 | 244 | 25 | 0 | 0 | 0 | 0 | | 1.5 |
| 30 | 20 | ------ | 60 | 186 | 244 | 9.5 | 5.3 | 1.5 | 0 | 0 | | .94 |
| 31 | 25 | ------ | 80 | ------ | 242 | ------ | 1.0 | 6.6 | ------ | 0 | ------ | .50 |
| TOTAL | 119.70 | 718.40 | 2,343 | 2,640 | 7,315 | 2,952.5 | 126.62 | 120.86 | 46.34 | .32 | 0 | 5.79 |
| MEAN | 3.86 | 25.7 | 75.6 | 88.0 | 236 | 98.4 | 4.08 | 3.90 | 1.54 | .010 | 0 | .19 |
| MAX | 25 | 142 | 204 | 186 | 340 | 240 | 30 | 35 | 25 | .08 | 0 | 1.5 |
| MIN | .50 | .30 | 10 | 32 | 139 | 9.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 237 | 1,420 | 4,650 | 5,240 | 14,510 | 5,860 | 251 | 240 | 92 | .6 | 0 | 11 |

CAL YR 1973 TOTAL 16,388.53 MEAN 44.9 MAX 340 MIN 0 AC-FT 32,510
WTR YR 1973 TOTAL 17,747.02 MEAN 48.6 MAX 340 MIN 0 AC-FT 35,200

PEAK DISCHARGE (BASE, 1,000 FT³/S).--NO PEAK ABOVE BASE.

## 08340500 ARROYO CHICO NEAR GUADALUPE, N. MEX.

LOCATION.--Lat 35°35'33", long 107°11'19", in NE¼ sec.30, T.16 N., R.3 W., Sandoval County, on left bank 0.2 mi (0.3 km) upstream from mouth, 4.1 mi (6.6 km) northwest of Guadalupe, and 5.5 mi (8.8 km) southwest of Cabezon.

DRAINAGE AREA.--1,390 mi² (3,600 km²), approximately.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,921 ft (1,804.7 m) above mean sea level. Prior to June 21, 1968 at site 500 ft (150 m) upstream at datum 2.00 ft (0.610 m) higher.

AVERAGE DISCHARGE.--30 calendar years, 23.3 ft³/s (0.660 m³/s) 16,880 acre-ft/yr (20.8 hm³/yr); 20 calendar years (1954-73), 25.0 ft³/s (0.708 m³/s), 18,110 acre-ft/yr (22.3 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,340 ft³/s (94.6 m³/s) July 14 (gage height, 7.90 ft or 2.408 m); no flow for many days. Period of record: Maximum discharge, 15,200 ft³/s (430 m³/s) Sept. 12, 1972 (gage height, 17.5 ft or 5.33 m, from floodmarks), from rating curve extended above 2,900 ft³/s (82.1 m³/s) on basis of slope-measurements at gage heights 11.6 ft (3.536 m) and 14.8 ft (4.511 m); no flow for many days each year.

REMARKS.--Records poor. Diversions for irrigation of about 100 acres (40 hm²) above station.

REVISIONS (WATER YEARS).--WSP 1282: 1944-50.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .50 | .80 | 169 | 27 | 43 | 17 | 0 | 1.1 | 15 | 0 | .01 | .06 |
| 2 | .50 | .70 | 272 | 20 | 21 | 3.8 | 0 | 1.7 | 2.0 | 0 | .01 | .06 |
| 3 | .50 | .70 | 295 | 37 | 10 | 1.0 | 0 | 2.8 | 1.0 | .10 | .01 | .07 |
| 4 | .50 | .80 | 169 | 94 | 5.0 | 0 | 46 | 161 | 1.0 | .30 | .01 | .07 |
| 5 | .50 | 1.0 | 130 | 62 | 4.0 | 0 | .27 | 47 | 1.0 | .30 | .01 | .05 |
| 6 | .50 | 1.4 | 68 | 30 | 3.0 | 0 | .05 | 5.0 | 1.0 | .27 | .01 | .04 |
| 7 | .50 | 2.0 | 62 | 10 | 2.0 | 0 | 0 | 1.0 | 1.0 | .15 | .01 | .04 |
| 8 | .50 | 1.5 | 71 | 3.0 | 1.0 | 0 | 0 | 1.0 | 1.0 | .11 | .01 | .02 |
| 9 | .50 | 1.0 | 77 | 1.2 | .80 | 0 | 0 | 1.0 | 1.0 | .15 | .01 | .02 |
| 10 | .50 | 1.5 | 88 | 1.1 | .70 | 0 | 2.2 | 1.0 | 1.0 | .13 | .01 | .02 |
| 11 | .50 | 2.0 | 77 | .80 | .70 | 0 | .61 | 1.0 | 1.0 | .06 | .01 | .02 |
| 12 | .50 | 3.0 | 50 | .99 | .70 | 0 | .05 | 10 | 5.0 | .05 | .01 | .02 |
| 13 | .50 | 4.0 | 40 | .89 | 26 | .01 | 1.3 | 149 | 6.4 | .04 | .01 | .03 |
| 14 | .50 | 6.0 | 20 | 19 | 81 | .08 | 383 | 13 | 1.7 | .03 | .01 | .02 |
| 15 | .50 | 7.0 | 15 | 150 | 8.0 | 0 | 322 | 6.4 | .21 | .02 | .02 | .02 |
| 16 | .70 | 7.0 | 9.8 | 143 | 3.0 | 0 | 245 | 1.0 | 0 | .02 | .04 | .03 |
| 17 | .80 | 8.0 | 15 | 130 | 1.0 | 0 | 116 | 0 | 0 | .02 | .04 | .04 |
| 18 | .89 | 10 | 12 | 164 | 1.0 | 0 | 147 | 0 | 0 | .02 | .05 | .01 |
| 19 | .99 | 8.0 | 11 | 128 | 1.0 | 0 | 223 | 0 | 0 | .02 | .05 | .02 |
| 20 | .89 | 6.0 | 8.0 | 120 | .80 | 0 | 33 | 0 | 0 | .02 | .03 | .04 |
| 21 | .99 | 5.0 | 12 | 112 | .80 | 0 | 15 | 0 | 0 | .02 | .05 | .04 |
| 22 | 1.1 | 4.0 | 15 | 104 | .80 | 0 | 4.0 | 53 | 0 | .02 | .06 | .05 |
| 23 | 1.2 | 3.5 | 18 | 98 | .06 | 0 | 1.0 | 6.0 | 0 | .02 | .05 | .01 |
| 24 | 1.6 | 7.2 | 21 | 90 | .01 | 0 | 1.0 | 8.0 | 0 | .01 | .06 | .01 |
| 25 | 1.4 | 19 | 24 | 140 | 0 | 0 | 1.0 | 10 | 0 | .01 | .06 | .01 |
| 26 | 1.3 | 74 | 42 | 167 | .10 | 0 | 10 | 47 | 0 | .02 | .06 | .01 |
| 27 | .99 | 112 | 30 | 135 | .04 | 0 | 4.0 | 3.0 | 0 | .02 | .05 | .01 |
| 28 | .99 | 205 | 20 | 107 | 0 | 0 | 1.0 | 1.0 | .45 | .02 | .05 | .01 |
| 29 | .99 | ------ | 20 | 94 | 0 | 0 | 8.0 | .27 | .21 | .02 | .06 | .01 |
| 30 | .99 | ------ | 55 | 57 | 0 | 0 | 1.6 | 114 | .09 | .01 | .06 | .01 |
| 31 | .80 | ------ | 63 | ------ | 0 | ------ | 16 | 198 | ------ | .01 | ------ | .01 |
| TOTAL | 24.12 | 502.10 | 1,978.8 | 2,245.98 | 215.51 | 21.89 | 1,582.08 | 843.27 | 40.06 | 1.99 | .93 | .88 |
| MEAN | .78 | 17.9 | 63.8 | 74.9 | 6.95 | .73 | 51.0 | 27.2 | 1.34 | .064 | .031 | .028 |
| MAX | 1.6 | 205 | 295 | 167 | 81 | 17 | 383 | 198 | 15 | .30 | .06 | .07 |
| MIN | .50 | .70 | 8.0 | .80 | 0 | 0 | 0 | 0 | 0 | 0 | .01 | .01 |
| AC-FT | 48 | 996 | 3,920 | 4,450 | 427 | 43 | 3,140 | 1,670 | 79 | 3.9 | 1.8 | 1.7 |

CAL YR 1973 TOTAL 7,457.61 MEAN 20.4 MAX 383 MIN 0 AC-FT 14,790
WTR YR 1973 TOTAL 9,176.93 MEAN 25.1 MAX 546 MIN 0 AC-FT 18,200

PEAK DISCHARGE (BASE, 2,500 FT³/S).--JULY 14 (2145) 3,340 FT³/S (7.90 FT).

## 08341400 BLUEWATER LAKE NEAR BLUEWATER, N. MEX.

LOCATION.--Lat 35°17'31", long 108°06'40", in SE¼ sec.9, T.12 N., R.12 W., Valencia County, at left end of Bluewater Dam on Bluewater Creek, 9.5 mi (15.2 km) west of Bluewater.

DRAINAGE AREA.--201 $mi^2$ (521 $km^2$).

PERIOD OF RECORD.--June 1927 to December 1950 (monthend contents only, published in WSP 1732), April 1958 to current year (monthend contents only).

GAGE.--Water-stage recorder. Datum of gage is 7,345.57 ft (2,238.930 m) above mean sea level. July 1958 to January 1961, nonrecording gage at nearby site, same datum. Gage heights have been converted to sea-level elevations.

EXTREMES.--Current year: Maximum contents, 37,420 acre-ft (46.1 $hm^3$) May 31 (elevation, 7,402.0 ft or 2,256.13 m); minimum, 3,120 acre-ft (3.85 $hm^3$) Jan. 1 (elevation, 7,364.6 ft or 2,244.73 m).
Period of record: Maximum contents determined, 47,100 acre-ft (58.1 $hm^3$) Apr. 30, 1941. Contents may have been greater on Apr. 28, 1941 when peak discharge of 800 $ft^3/s$ (22.7 $m^3/s$) occurred at station 8 mi (13 km) downstream; no storage at times prior to 1947.

REMARKS.--Records fair. Reservoir is formed by concrete arch dam. Storage began in 1927. Capacity, 38,500 acre-ft (47.5 $hm^3$) at elevation 7,402.6 ft (2,256.31 m) crest of uncontrolled siphon spillway which is vented to avoid drawdown below crest, and 44,200 acre-ft (54.5 $hm^3$) at elevation 7,405.6 ft (2,257.23 m) crest of ungated spillway over dam. Dead storage, 3.4 acre-ft (4,190 $m^3$) at elevation 7,345.4 ft (2,238.88 m) sill of lower outlet tube. Lake not usually drawn below conservation pool level (elevation, 7,365.36 ft or 2,244.962 m), below which ownership is by State Game and Fish Department. Above this level, water is owned and used by Bluewater-Toltec Irrigation Co. Figures given herein represent total contents at 2400 hours.

MONTH-END ELEVATIONS AND CONTENTS, CALENDAR YEAR 1973

| DATE | ELEVATION-(FEET) | CONTENTS (ACRE-FEET) | CHANGE IN CONTENTS (ACRE-FEET) |
|---|---|---|---|
| DEC. 31 | 7,364.6 | 3,120 | -- |
| JAN. 31 | 7,365.5 | 3,400 | +280 |
| FEB. 28 | 7,368.0 | 4,230 | +830 |
| MAR. 31 | 7,378.6 | 9,890 | +5,660 |
| APR. 30 | 7,399.1 | 32,620 | +22,730 |
| MAY 31 | 7,402.0 | 37,420 | +4,800 |
| JUN. 30 | 7,400.6 | 35,010 | -2,410 |
| JUL. 31 | 7,399.1 | 32,620 | -2,390 |
| AUG. 31 | 7,397.6 | 30,400 | -2,220 |
| SEPT. 30 | 7,396.0 | 28,140 | -2,260 |
| OCT. 31 | 7,395.1 | 26,920 | -1,220 |
| NOV. 30 | 7,394.8 | 26,520 | -400 |
| DEC. 31 | 7,394.9 | 26,650 | +130 |
| CALENDAR YEAR 1973 | - | - | +23,530 |

## 08343000 RIO SAN JOSE AT GRANTS, N. MEX.

LOCATION.--Lat 35°09'16", long 107°52'11", in SW¼NW¼ sec.26, T.11 N., R.10 W., Valencia County, on right bank at bridge on State Highway 53 at Grants, 0.2 mi (0.3 km) south of U. S. Highway 66, and at mile 67.8 (109.1 km).

DRAINAGE AREA.--1,020 mi² (2,640 km²), approximately.

PERIOD OF RECORD.--October 1912 to February 1914, June 1914, October 1914 to February 1915, May 1915 to June 1921, September 1921 to June 1923, October 1923 to May 1926, September to December 1926, May 1949 to September 1966, June 1968 to current year. Monthly discharge only for some periods published in WSP 1312. Prior to October 1967, published as Bluewater Creek at Grants.

GAGE.--Water-stage recorder. Datum of gage is 6,468.34 ft (1,971.550 m) above mean sea level (levels by Corps of Engineers). See WSP 1732 or 1923 for history of changes prior to Jan. 1, 1926.

AVERAGE DISCHARGE.--31 calendar years (1912-13, 1914-20, 1921-22, 1923-25, 1949-66, 1968-73), 3.71 ft³/s (0.105 m³/s), 2,690 acre-ft/yr (3.32 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2 ft³/s (0.057 m³/s) Mar. 26 (gage height, 1.45 ft or 0.442 m); no flow most of time.
1949-66, 1968-73: Maximum discharge recorded, 1,760 ft³/s (49.8 m³/s) Aug. 28, 1952 (gage height, 5.35 ft or 1.631 m), from rating curve extended above 300 ft³/s (8.50 m³/s) on basis of velocity-area studies; no flow for long periods.
Maximum flood observed occurred Sept. 6 or 7, 1909, when Bluewater Dam washed out. A flood in July 1919 probably exceeded the one in 1952.

REMARKS.--Records fair. Flow partly regulated by Bluewater Lake 24 mi (39 km) upstream (see sta 08341400). Diversions and groundwater withdrawals for irrigation of about 4,500 acres (1,820 hm²) above station.

REVISIONS (WATER YEARS).--WSP 1512: 1913-14. WSP 1712: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 0 | | | | | 0 | | | | |
| 2 | | | 0 | | | | | 0 | | | | |
| 3 | | | 0 | | | | | 0 | | | | |
| 4 | | | 0 | | | | | 0 | | | | |
| 5 | | | 0 | | | | | 0 | | | | |
| 6 | | | 0 | | | | | 0 | | | | |
| 7 | | | 0 | | | | | 0 | | | | |
| 8 | | | 0 | | | | | .10 | | | | |
| 9 | | | 0 | | | | | .10 | | | | |
| 10 | | | 0 | | | | | 0 | | | | |
| 11 | | | 0 | | | | | 0 | | | | |
| 12 | | | 0 | | | | | 0 | | | | |
| 13 | | | 0 | | | | | 0 | | | | |
| 14 | | | 0 | | | | | 0 | | | | |
| 15 | | | 0 | | | | | 0 | | | | |
| 16 | | | 0 | | | | | 0 | | | | |
| 17 | | | 0 | | | | | 0 | | | | |
| 18 | | | 0 | | | | | 0 | | | | |
| 19 | | | 0 | | | | | 0 | | | | |
| 20 | | | 0 | | | | | 0 | | | | |
| 21 | | | 0 | | | | | 0 | | | | |
| 22 | | | 0 | | | | | 0 | | | | |
| 23 | | | .06 | | | | | 0 | | | | |
| 24 | | | .92 | | | | | 0 | | | | |
| 25 | | | 1.2 | | | | | 0 | | | | |
| 26 | | | .72 | | | | | 0 | | | | |
| 27 | | | 0 | | | | | 0 | | | | |
| 28 | | | 0 | | | | | 0 | | | | |
| 29 | | ------ | 0 | | | | | 0 | | | | |
| 30 | | ------ | 0 | | | | | 0 | | | | |
| 31 | | ------ | 0 | ------ | | ------ | | 0 | ------ | | ------ | |
| TOTAL | 0 | 0 | 2.90 | 0 | 0 | 0 | 0 | .20 | 0 | 0 | 0 | 0 |
| MEAN | 0 | 0 | .094 | 0 | 0 | 0 | 0 | .007 | 0 | 0 | 0 | 0 |
| MAX | 0 | 0 | 1.2 | 0 | 0 | 0 | 0 | .10 | 0 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 5.8 | 0 | 0 | 0 | 0 | .4 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 3.10 MEAN .0090 MAX 1.2 MIN 0 AC-FT 6.1
WTR YR 1973 TOTAL 36.08 MEAN .099 MAX 30 MIN 0 AC-FT 72

PEAK DISCHARGE (BASE, 200 FT³/S).--NO PEAK ABOVE BASE.

## 08343100 GRANTS CANYON AT GRANTS, N. MEX.

LOCATION.--Lat 35°09'39", long 107°50'15", in NE¼NE¼ sec.25, T.11 N., R.10 W., Valencia County, at Roosevelt Avenue, in the town of Grants, 0.2 mi (0.3 km) east of intersection of Roosevelt and First Avenue, and 1.1 mi (1.8 km) upstream from confluence with Rio San Jose (formerly Bluewater Creek).

DRAINAGE AREA.--13.0 mi² (33.7 km²).

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

GAGE.--Water-stage recorder and culvert control. Altitude of gage is 6,450 ft (1,966.0 m) from topographic map.

AVERAGE DISCHARGE.--12 calendar years, 0.216 ft³/s (0.006 m³/s), 156 acre-ft/yr (192,000 m³/yr).

EXTREMES.--Current year: Maximum discharge, 47 ft³/s (1.33 m³/s) May 12 (gage height, 0.90 ft or 0.274 m); no flow most of time.
Period of record: Maximum discharge, 1,550 ft³/s ( 43.9 m³/s) Aug. 26, 1963, (gage height, 5.10 ft or 1.554 m), from rating curve extended above 220 ft³/s (6.23 m³/s) on basis of slope-area measurements at gage heights 3.17 ft (0.966 m), 5.10 ft (1.554 m), and 5.38 ft (1.640 m); maximum gage height, 5.38 ft (1.640 m) Sept. 8, 1967; no flow for most of time.

REMARKS.--Records poor.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | 0 | | | 0 | | | | |
| 2 | | | | | 0 | | | 0 | | | | |
| 3 | | | | | 0 | | | 0 | | | | |
| 4 | | | | | 0 | | | 0 | | | | |
| 5 | | | | | 0 | | | 0 | | | | |
| 6 | | | | | 0 | | | 0 | | | | |
| 7 | | | | | 0 | | | 0 | | | | |
| 8 | | | | | 0 | | | 0 | | | | |
| 9 | | | | | 0 | | | 0 | | | | |
| 10 | | | | | 0 | | | 0 | | | | |
| 11 | | | | | 0 | | | 0 | | | | |
| 12 | | | | | .82 | | | 0 | | | | |
| 13 | | | | | 0 | | | 0 | | | | |
| 14 | | | | | 0 | | | 0 | | | | |
| 15 | | | | | 0 | | | 0 | | | | |
| 16 | | | | | 0 | | | 0 | | | | |
| 17 | | | | | 0 | | | 0 | | | | |
| 18 | | | | | 0 | | | 0 | | | | |
| 19 | | | | | 0 | | | 1.2 | | | | |
| 20 | | | | | 0 | | | 0 | | | | |
| 21 | | | | | 0 | | | 0 | | | | |
| 22 | | | | | 0 | | | 0 | | | | |
| 23 | | | | | 0 | | | 0 | | | | |
| 24 | | | | | 0 | | | 0 | | | | |
| 25 | | | | | 0 | | | 0 | | | | |
| 26 | | | | | 0 | | | 0 | | | | |
| 27 | | | | | 0 | | | 0 | | | | |
| 28 | | | | | 0 | | | 0 | | | | |
| 29 | | ------ | | | 0 | | | 0 | | | | |
| 30 | | ------ | | | 0 | | | 0 | | | | |
| 31 | | ------ | | ------ | 0 | ------ | | 0 | ------ | | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | .82 | 0 | 0 | 1.2 | 0 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | .027 | 0 | 0 | .039 | 0 | 0 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | .82 | 0 | 0 | 1.2 | 0 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 1.6 | 0 | 0 | 2.4 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 2.02 MEAN .006 MAX 1.2 MIN 0 AC-FT 4
WTR YR 1973 TOTAL 72.82 MEAN .20 MAX 43 MIN 0 AC-FT 144
PEAK DISCHARGE (BASE, 175 FT³/S).--NO PEAK ABOVE BASE.

08343500 RIO SAN JOSE NEAR GRANTS, N. MEX.

LOCATION.--Lat 35°04'27", long 107°45'01", in SE¼SE¼ sec.23, T.10 N., R.9 W., Valencia County, on right bank at west boundary of Acoma Pueblo Grant, 8.5 mi (13.7 km) southeast of Grants, and at mile 57.4 (92.4 km).

DRAINAGE AREA.--2,300 mi² (5,960 km²), approximately, of which 1,130 mi² (2,930 km²) does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1936 to current year. Prior to October 1955, published as San Jose River near Grants.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 6,269.47 ft (1,910.934 m) above mean sea level.

AVERAGE DISCHARGE.--37 calendar years, 6.50 ft³/s ( 0.184 m³/s), 4,710 acre-ft/yr (5.81 hm³/yr); 20 calendar years (1954-73), 6.19 ft³/s (0.175 m³/s), 4,480 acre-ft/yr (5.52 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 140 ft³/s (3.96 m³/s) Sept. 10 (gage height, 2.46 ft or 0.750 m); minimum, 1.9 ft³/s (0.054 m³/s) Feb. 21.

Period of record: Maximum discharge, 1,400 ft³/s (39.6 m³/s) Sept. 20, 1963 (gage height, 4.87 ft or 1.484 m), from rating curve extended above 450 ft³/s (12.7 m³/s) on basis of slope-area measurements at gage heights 3.19 ft (0.972 m) and 4.87 ft (1.484 m); minimum, 1.9 ft³/s (0.054 m³/s) Feb. 21, 1973.

Maximum flood probably occurred Sept. 6 or 7, 1909, following destruction of Bluewater dam. The peak of Sept. 20, 1963 may have been exceeded by those of July 1919, August and September 1929, and August 1935.

REMARKS.--Records good except those for September through November, which are fair and those for August and December, which are poor. Flow partly regulated by Bluewater Lake, 34.4 mi (55 km) upstream (see sta 08341400). Diversions and ground-water withdrawal for irrigation of about 5,100 acres (2,060 hm ) above station.

REVISIONS (WATER YEARS).--WSP 898: 1936-39(M). WSP 1512: 1943. WSP 1712: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.8 | 4.8 | 8.3 | 4.8 | 5.2 | 5.1 | 3.9 | 4.4 | 5.7 | 5.6 | 4.9 | 4.1 |
| 2 | 4.7 | 4.9 | 6.5 | 5.0 | 5.1 | 4.7 | 3.8 | 4.4 | 4.0 | 5.4 | 4.9 | 4.1 |
| 3 | 4.7 | 5.2 | 5.3 | 4.7 | 5.2 | 4.6 | 3.9 | 4.5 | 3.2 | 5.4 | 4.6 | 3.9 |
| 4 | 5.1 | 5.8 | 4.7 | 4.7 | 5.2 | 4.6 | 4.1 | 4.8 | 2.8 | 5.3 | 4.6 | 3.8 |
| 5 | 5.6 | 5.8 | 4.6 | 5.0 | 5.7 | 4.4 | 4.1 | 4.8 | 3.4 | 4.9 | 4.6 | 3.5 |
| 6 | 5.3 | 5.5 | 4.6 | 4.9 | 6.4 | 4.4 | 4.1 | 4.8 | 3.3 | 4.9 | 4.6 | 3.2 |
| 7 | 5.3 | 5.9 | 4.3 | 4.8 | 5.2 | 4.5 | 4.1 | 4.8 | 3.3 | 5.3 | 4.6 | 3.1 |
| 8 | 5.4 | 5.1 | 4.5 | 4.8 | 5.1 | 4.3 | 4.1 | 4.8 | 3.3 | 5.3 | 4.3 | 3.2 |
| 9 | 5.4 | 5.1 | 4.9 | 5.1 | 5.0 | 4.3 | 4.1 | 5.3 | 3.7 | 4.6 | 4.0 | 3.3 |
| 10 | 5.5 | 5.5 | 5.7 | 5.2 | 4.6 | 4.5 | 4.2 | 5.3 | 20 | 4.9 | 3.7 | 3.4 |
| 11 | 5.7 | 5.4 | 4.4 | 5.3 | 4.5 | 4.2 | 4.1 | 5.3 | 17 | 4.6 | 4.0 | 7.2 |
| 12 | 5.5 | 5.5 | 4.1 | 5.5 | 4.7 | 4.2 | 4.1 | 5.3 | 5.5 | 4.6 | 4.3 | 3.6 |
| 13 | 5.1 | 6.4 | 4.3 | 5.5 | 5.1 | 4.4 | 4.4 | 5.3 | 3.7 | 4.6 | 4.3 | 4.0 |
| 14 | 6.1 | 5.8 | 4.2 | 5.6 | 4.8 | 4.9 | 5.3 | 5.7 | 3.5 | 4.6 | 4.0 | 3.8 |
| 15 | 6.5 | 5.5 | 4.1 | 5.7 | 4.7 | 4.6 | 4.3 | 5.7 | 3.6 | 4.3 | 4.0 | 3.1 |
| 16 | 6.9 | 5.3 | 4.1 | 5.8 | 4.8 | 4.0 | 4.2 | 5.7 | 3.7 | 4.3 | 3.7 | 4.3 |
| 17 | 6.9 | 5.2 | 3.8 | 5.5 | 4.6 | 4.2 | 4.6 | 5.7 | 4.0 | 4.3 | 3.7 | 4.3 |
| 18 | 6.4 | 4.8 | 3.9 | 5.7 | 4.6 | 4.0 | 5.8 | 5.7 | 4.0 | 4.6 | 3.2 | 3.7 |
| 19 | 6.6 | 4.7 | 4.0 | 5.7 | 4.5 | 3.8 | 5.9 | 6.1 | 4.4 | 4.6 | 3.4 | 3.7 |
| 20 | 5.3 | 4.9 | 4.3 | 5.8 | 4.7 | 3.9 | 5.0 | 6.6 | 4.6 | 4.6 | 3.4 | 3.7 |
| 21 | 4.7 | 4.5 | 4.5 | 5.9 | 4.8 | 4.0 | 4.4 | 6.6 | 4.6 | 4.6 | 3.2 | 3.7 |
| 22 | 4.7 | 5.6 | 4.5 | 5.6 | 4.9 | 3.8 | 4.4 | 6.7 | 4.9 | 4.6 | 3.2 | 4.0 |
| 23 | 4.8 | 5.7 | 4.8 | 5.4 | 5.1 | 4.0 | 4.4 | 6.6 | 5.3 | 4.6 | 3.2 | 4.0 |
| 24 | 4.7 | 5.1 | 6.3 | 5.6 | 5.1 | 4.1 | 4.3 | 7.4 | 5.4 | 4.6 | 3.4 | 4.3 |
| 25 | 5.1 | 4.7 | 4.6 | 5.6 | 5.3 | 3.7 | 4.4 | 7.0 | 5.7 | 4.3 | 5.3 | 4.3 |
| 26 | 5.4 | 4.7 | 4.0 | 5.3 | 5.4 | 3.7 | 4.3 | 6.9 | 6.1 | 4.6 | 4.9 | 4.3 |
| 27 | 5.0 | 4.8 | 4.2 | 5.0 | 4.9 | 3.8 | 4.4 | 6.9 | 6.1 | 4.9 | 4.6 | 4.3 |
| 28 | 5.0 | 5.1 | 4.5 | 5.0 | 4.9 | 3.7 | 4.4 | 6.5 | 5.5 | 4.9 | 4.6 | 4.3 |
| 29 | 4.6 | ------ | 4.9 | 4.8 | 4.8 | 3.8 | 4.4 | 7.1 | 5.3 | 4.9 | 4.6 | 4.3 |
| 30 | 4.9 | ------ | 4.9 | 4.9 | 4.5 | 3.8 | 4.4 | 7.2 | 5.3 | 4.9 | 4.3 | 4.3 |
| 31 | 5.2 | ------ | 4.6 | ------ | 4.7 | ------ | 4.4 | 7.3 | ------ | 4.9 | ------ | 4.3 |
| TOTAL | 166.9 | 147.3 | 146.4 | 158.2 | 154.1 | 126.0 | 136.3 | 181.2 | 160.9 | 148.5 | 124.1 | 123.1 |
| MEAN | 5.38 | 5.26 | 4.72 | 5.27 | 4.97 | 4.20 | 4.40 | 5.85 | 5.36 | 4.79 | 4.14 | 3.97 |
| MAX | 6.9 | 6.4 | 8.3 | 5.9 | 6.4 | 5.1 | 5.9 | 7.4 | 20 | 5.6 | 5.3 | 7.2 |
| MIN | 4.6 | 4.5 | 3.8 | 4.7 | 4.5 | 3.7 | 3.8 | 4.4 | 2.8 | 4.3 | 3.2 | 3.1 |
| AC-FT | 331 | 292 | 290 | 314 | 306 | 250 | 270 | 359 | 319 | 295 | 246 | 244 |

CAL YR 1973 TOTAL 1,773.0 MEAN 4.86 MAX 20 MIN 2.8 AC-FT 3,520
WTR YR 1973 TOTAL 2,262.1 MEAN 6.20 MAX 123 MIN 2.8 AC-FT 4,490

PEAK DISCHARGE (BASE 100 FT³/S).--SEPT. 10 (1700) 140 FT³/S (2.46 FT).

## 08351500 RIO SAN JOSE AT CORREO, N. MEX.

LOCATION.--Lat 34°58'05", long 107°11'11", in NE¼ sec.31, T.9 N., R.3 W., Valencia County, on right bank 0.7 mi (1.1 km) upstream from State Highway 6, 0.8 mi (1.3 km) northwest of Correo, and 14 mi (23 km ) upstream from mouth.

DRAINAGE AREA.--3,660 mi² (9,480 km²), approximately, of which about 1,130 mi² (2,930 km²) does not contribute directly to surface runoff.

PERIOD OF RECORD.--April 1943 to current year. Prior to October 1955, published as San Jose River at Correo.

GAGE.--Water-stage recorder. Datum of gage is 5,492.43 ft (1,674.093 m) above mean sea level. Prior to Oct. 1, 1958, water-stage recorder and concrete control at site 1 mi (1.6 km) downstream at datum 17.55 ft (5.349 m) lower.

AVERAGE DISCHARGE.--30 calendar years, 12.3 ft³/s (0.348 m³/s), 8,910 acre-ft/yr (11.0 hm³/yr); 20 calendar years (1954-73), 14.5 ft³/s (0.411 m³/s), 10,510 acre-ft/yr (13.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,550 ft³/s (72.2 m³/s) Sept. 11 (gage height, 4.83 ft or 1.472 m), from rating curve extended above 700 ft³/s (19.8 m³/s) on basis of slope-area measurement at a gage height of 4.28 ft (1.305 m); no flow for many days.

Period of record: Maximum discharge, 7,150 ft³/s ( 202 m³/s) Aug. 11, 1955; maximum gage height, 20.7 ft (6.31 m), Aug. 22, 1958, backwater from dam (site and datum then in use); no flow for many days.

A flood which probably occurred Aug. 21, 1935, reached a stage of 15.4 ft (4.69 m), from floodmarks, former site and datum (discharge, about 11,000 ft³/s or 312 m³/s), but was probably exceeded by the flood of Sept. 23, 1929 (discharge not determined), based on study of records for Rio Puerco at Rio Puerco.

REMARKS.--Records poor. Flow regulated to some extent since 1927 by Bluewater Lake 77.8 mi (125 km)upstream (see sta 08341400).

REVISIONS (WATER YEARS).--WSP 1442: 1944, 1945(M), 1946-48, 1949(M), 1950 ,1951(P), 1952. WSP 1732: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.5 | 8.0 | 250 | 7.4 | 70 | | 0 | 0 | 0 | | | 0 |
| 2 | 8.5 | 7.0 | 100 | 12 | 50 | | 0 | 0 | 0 | | | 0 |
| 3 | 7.5 | 7.0 | 50 | 16 | 30 | | 0 | 0 | 0 | | | 0 |
| 4 | 8.0 | 7.5 | 30 | 12 | 14 | | 0 | 0 | 0 | | | 0 |
| 5 | 8.5 | 8.0 | 35 | 8.8 | 12 | | 0 | 0 | 0 | | | 0 |
| 6 | 8.5 | 8.5 | 30 | 16 | 18 | | 0 | 0 | 0 | | | 0 |
| 7 | 9.0 | 9.0 | 25 | 14 | 14 | | 0 | 0 | 0 | | | 0 |
| 8 | 9.5 | 8.0 | 20 | 28 | 9.6 | | 0 | 0 | 0 | | | 0 |
| 9 | 9.5 | 6.5 | 30 | 12 | 8.8 | | 0 | 0 | 0 | | | 0 |
| 10 | 11 | 6.0 | 15 | 12 | 6.2 | | 0 | 0 | 22 | | | 0 |
| 11 | 10 | 5.7 | 20 | 35 | 4.8 | | 0 | 0 | 777 | | | 0 |
| 12 | 11 | 7.4 | 18 | 86 | 4.0 | | 0 | 0 | 163 | | | 0 |
| 13 | 11 | 7.4 | 15 | 187 | 439 | | 0 | 0 | 28 | | | 0 |
| 14 | 11 | 6.2 | 16 | 300 | 100 | | 0 | 0 | 5.7 | | | 0 |
| 15 | 11 | 4.8 | 17 | 312 | 50 | | 66 | 0 | 1.5 | | | 0 |
| 16 | 11 | 5.2 | 16 | 126 | 20 | | .67 | 0 | .30 | | | 0 |
| 17 | 12 | 6.8 | 15 | 110 | 30 | | .20 | 0 | 0 | | | 0 |
| 18 | 10 | 5.7 | 20 | 151 | 27 | | 8.0 | 0 | 0 | | | .74 |
| 19 | 9.0 | 4.4 | 30 | 46 | 21 | | 19 | 0 | 0 | | | 2.0 |
| 20 | 9.5 | 6.8 | 50 | 23 | 12 | | .24 | 0 | 0 | | | 1.0 |
| 21 | 9.0 | 8.0 | 80 | 21 | 8.8 | | 0 | 0 | 0 | | | 1.0 |
| 22 | 9.0 | 12 | 126 | 6.8 | 8.0 | | 0 | 0 | 0 | | | 1.0 |
| 23 | 8.0 | 16 | 52 | 12 | 6.8 | | 0 | 0 | 0 | | | 1.0 |
| 24 | 8.5 | 14 | 36 | 83 | 5.2 | | 0 | 0 | 0 | | | 1.0 |
| 25 | 9.0 | 14 | 23 | 110 | 3.6 | | 0 | 6.4 | 0 | | | 1.0 |
| 26 | 9.0 | 12 | 18 | 150 | 3.6 | | 0 | .12 | 0 | | | 1.0 |
| 27 | 9.0 | 11 | 18 | 191 | .43 | | 0 | .03 | 0 | | | 1.0 |
| 28 | 8.5 | 10 | 18 | 166 | .24 | | 0 | 0 | 0 | | | 1.0 |
| 29 | 8.2 | ------ | 18 | 125 | .19 | | 0 | 0 | 0 | | | 3.0 |
| 30 | 8.0 | ------ | 18 | 100 | .06 | | 0 | 0 | 0 | | | 4.0 |
| 31 | 8.2 | ------ | 12 | ------ | .04 | ------ | 0 | 0 | ------ | | ------ | 1.0 |
| TOTAL | 288.4 | 232.9 | 1,221 | 2,479.0 | 977.36 | 0 | 94.11 | 6.55 | 997.50 | 0 | 0 | 19.74 |
| MEAN | 9.30 | 8.32 | 39.4 | 82.6 | 31.5 | 0 | 3.04 | .21 | 33.3 | 0 | 0 | .64 |
| MAX | 12 | 16 | 250 | 312 | 439 | 0 | 66 | 6.4 | 777 | 0 | 0 | 4.0 |
| MIN | 7.5 | 4.4 | 12 | 6.8 | .04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 572 | 462 | 2,420 | 4,920 | 1,940 | 0 | 187 | 13 | 1,980 | 0 | 0 | 39 |

CAL YR 1973 TOTAL 6,316.56 MEAN 17.3 MAX 777 MIN 0 AC-FT 12,530
WTR YR 1973 TOTAL 10,697.52 MEAN 29.3 MAX 1,350 MIN 0 AC-FT 21,220

PEAK DISCHARGE (BASE, 800 FT³/S).--MAY 13 (0230) 1,560 FT³/S (3.84 FT), SEPT. 11 (0345) 2,550 FT³/S (4.83 FT).

## 08352500 RIO PUERCO AT RIO PUERCO, N. MEX.

LOCATION.--Lat 34°47'38", long 106°59'20", in NW¼ sec.31, T.7 N., R.1 W., Valencia County, in San Clemente Grant, on downstream end of pier nearest left abutment of the Atchison, Topeka and Santa Fe Railway Co. bridge, and 7 mi (11 km) downstream from Rio San Jose, and at mile 36.2 (58.2 km).

DRAINAGE AREA.--6,590 mi² (17,070 km²), approximately, of which at least 1,130 mi² (2,930 km²) does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1909 to December 1912 (records fragmentary, gage heights only), March 1934 to current year. Records for January 1913 to December 1914 published in WSP 358, 388, and 408 have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,008.59 ft (1,526.618 m) above mean sea level.

AVERAGE DISCHARGE.--39 calendar years (1934-73), 59.5 ft³/s (1.685 m³/s), 43,110 acre-ft/yr (53.2 hm³/yr); 20 calendar years (1954-73), 55.7 ft³/s (1.577 m³/s), 40,350 acre-ft/yr (49.8 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 5,080 ft³/s (144 m³/s) July 15 (gage height, 3.55 ft or 1.082 m); no flow for many days.

Period of record: Maximum discharge, 28,000 ft³/s (793 m³/s) Aug. 21, 1935 (gage height, 7.24 ft or 2.207 m), by computation of peak flow over dam; no flow many days.

The damaging flood of Sept. 23, 1929, is the greatest since about 1880; it reached a stage of 18 ft (5.5 m) conditions prior to destruction of railroad bridge. Discharge, 37,700 ft³/s (1,070 m³/s), by weir formula, from reports of State Engineer. The flood of Aug. 12, 1929, reached a stage of about 16 ft or 4.9 m (discharge, 31,300 ft³/s or 886 m³/s, by weir formula, from reports of State Engineer). A flood on Oct. 4, 1913, reached a stage of 9.5 ft or 2.90 m (discharge not determined) prior to construction of the concrete control.

REMARKS.--Records poor. Diversions for irrigation of about 11,500 acres (4,650 hm²) above station (includes 3,700 acres or 1,500 hm² irrigated partly or entirely from wells).

REVISIONS (WATER YEARS).--WSP 1512: 1937 (calendar year figures only), 1941, 1944. WSP 1712: 1958. WSP 1732: Drainage area. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.3 | 14 | 312 | 128 | 198 | 144 | 0 | 0 | 184 | | | 0 |
| 2 | 2.4 | 11 | 276 | 112 | 176 | 176 | 0 | 127 | 2.6 | | | 0 |
| 3 | 3.3 | 6.4 | 360 | 84 | 124 | 148 | 0 | 10 | .10 | | | 0 |
| 4 | .82 | 8.4 | 300 | 76 | 88 | 128 | 0 | 1.0 | .10 | | | 0 |
| 5 | .10 | 10 | 200 | 80 | 104 | 92 | 0 | 23 | .10 | | | 0 |
| 6 | 5.1 | 9.3 | 150 | 76 | 160 | 80 | 0 | 6.4 | .10 | | | 0 |
| 7 | 7.2 | 7.6 | 100 | 46 | 172 | 68 | 0 | 0 | .10 | | | 0 |
| 8 | 7.6 | 7.6 | 120 | 124 | 136 | 57 | 0 | 0 | .17 | | | 0 |
| 9 | 12 | 8.4 | 150 | 92 | 116 | 54 | 0 | 0 | .13 | | | 0 |
| 10 | 13 | 19 | 70 | 64 | 116 | 57 | 0 | 0 | .35 | | | 0 |
| 11 | 10 | 24 | 100 | 64 | 156 | 68 | 0 | 0 | 752 | | | 0 |
| 12 | 10 | 26 | 85 | 120 | 246 | 92 | 0 | 0 | 360 | | | 0 |
| 13 | 11 | 24 | 90 | 282 | 690 | 72 | 0 | 0 | 12 | | | 0 |
| 14 | 18 | 15 | 90 | 444 | 500 | 92 | 28 | 11 | 0 | | | 0 |
| 15 | 16 | 16 | 60 | 530 | 300 | 84 | 699 | 29 | 0 | | | 0 |
| 16 | 21 | 19 | 40 | 428 | 280 | 116 | 500 | 14 | 0 | | | 0 |
| 17 | 26 | 18 | 30 | 294 | 280 | 54 | 270 | 9.3 | 0 | | | 0 |
| 18 | 27 | 19 | 38 | 234 | 282 | 35 | 270 | 5.7 | 0 | | | 0 |
| 19 | 24 | 15 | 112 | 294 | 270 | 25 | 282 | 3.5 | 0 | | | 0 |
| 20 | 22 | 21 | 104 | 234 | 288 | 20 | 184 | 2.0 | 0 | | | 0 |
| 21 | 8.4 | 18 | 104 | 136 | 300 | 10 | 120 | .44 | 0 | | | 0 |
| 22 | 9.3 | 15 | 222 | 88 | 282 | 5.1 | 80 | .05 | 0 | | | 0 |
| 23 | 6.8 | 13 | 160 | 72 | 258 | 2.4 | 50 | .07 | 0 | | | 0 |
| 24 | 7.6 | 10 | 96 | 88 | 216 | .21 | 25 | .03 | 0 | | | 0 |
| 25 | 7.6 | 6.4 | 68 | 164 | 204 | .07 | 0 | 2.8 | 0 | | | 0 |
| 26 | 8.4 | 4.5 | 35 | 270 | 186 | 0 | 0 | 5.7 | 0 | | | 0 |
| 27 | 9.3 | 96 | 72 | 342 | 180 | 0 | 0 | 15 | 0 | | | 0 |
| 28 | 6.8 | 100 | 84 | 300 | 164 | 0 | 0 | 16 | 0 | | | .02 |
| 29 | 4.0 | ------ | 72 | 234 | 120 | 0 | 0 | 7.6 | 0 | | | 2.8 |
| 30 | 3.1 | ------ | 72 | 222 | 108 | 0 | 0 | 35 | 0 | | | 5.4 |
| 31 | 14 | ------ | 80 | ------ | 116 | ------ | 0 | 170 | ------ | | ------ | .55 |
| TOTAL | 325.12 | 561.6 | 3,852 | 5,722 | 6,816 | 1,679.78 | 2,508 | 494.59 | 1,311.75 | 0 | 0 | 8.77 |
| MEAN | 10.5 | 20.1 | 124 | 191 | 220 | 56.0 | 80.9 | 16.0 | 43.7 | 0 | 0 | .28 |
| MAX | 27 | 100 | 360 | 530 | 690 | 176 | 699 | 170 | 752 | 0 | 0 | 5.4 |
| MIN | .10 | 4.5 | 30 | 46 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 645 | 1,110 | 7,640 | 11,350 | 13,520 | 3,330 | 4,970 | 981 | 2,600 | 0 | 0 | 17 |

CAL YR 1973 TOTAL 23,279.61 MEAN 63.8 MAX 752 MIN 0 AC-FT 46,180
WTR YR 1973 TOTAL 34,184.84 MEAN 93.7 MAX 2,630 MIN 0 AC-FT 67,810

PEAK DISCHARGE (BASE, 2,500 FT³/S).--JULY 15 (1800) 5,080 FT³/S (3.55 FT).

## 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, on bridge on former U.S. Highway 85 and 0.2 mi (0.3 km) upstream from Interstate Highway 25, 1.2 mi (1.9 km) southwest of Bernardo, 3 mi (4.8 km) upstream from mouth, and 18 mi (29 km) south of Belen.

DRAINAGE AREA.--7,350 mi² (19,040 km²), approximately, of which at least 1,130 mi² (2,930 km²) does not contribute directly to surface runoff.

PERIOD OF RECORD.--November 1939 to current year. Fragmentary gage height record and footnotes concerning no flow for the period September 1910 to August 1914, published in WSP 358 and 388, are in error and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 4,722.34 ft (1,439.369 m) above mean sea level. Prior to Jan. 24, 1969, at datum 3.10 ft (0.945 m) higher.

AVERAGE DISCHARGE.--34 calendar years (1940-73), 51.4 ft³/s (1.456 m³/s), 37,240 acre-ft/yr (45.9 hm³/yr); 20 calendar years (1954-73), 52.1 ft³/s (1.475 m³/s), 37,750 acre-ft/yr (46.5 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,920 ft³/s (111 m³/s) July 16 (gage height, 11.08 ft or 3.377 m); no flow for extended periods.

Period of record: Maximum discharge, 18,800 ft³/s (532 m³/s) Sept. 23, 1941, from rating curve extended above 7,800 ft³/s (221 m³/s); maximum gage height, 16.9 ft (5.15 m) present datum, Aug. 12, 1955; no flow for extended periods.

The greatest flood since about 1880 occurred Sept. 23, 1929, from information by local residents (discharge, about 35,000 ft³/s or 991 m³/s, estimated on basis of peak at Rio Puerco). Another flood occurred Aug. 12, 1929 (discharge, 30,600 ft³/s or 867 m³/s, by slope-area method, from reports of State Engineer).

REMARKS.--Records poor. Diversions for irrigation of about 11,500 acres (4,650 hm²) above station (includes 3,700 acres or 1,500 hm² irrigated wholly or partly from wells). Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1512: 1941-42, 1944-45, 1946(P), 1947-49. WSP 1632: 1957. WSP 1732: Drainage area. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 189 | 50 | 250 | 100 | 0 | 0 | 276 | | | |
| 2 | 0 | 0 | 130 | 50 | 215 | 120 | 0 | 200 | 100 | | | |
| 3 | 0 | 0 | 272 | 50 | 218 | 140 | 22 | 108 | 20 | | | |
| 4 | 0 | 0 | 346 | 50 | 200 | 130 | 20 | 50 | 1.0 | | | |
| 5 | 0 | 0 | 200 | 53 | 188 | 120 | 0 | 40 | 0 | | | |
| 6 | 0 | 0 | 150 | 55 | 178 | 100 | 0 | 30 | 0 | | | |
| 7 | 0 | 0 | 140 | 55 | 192 | 90 | 0 | 10 | 0 | | | |
| 8 | 0 | 0 | 74 | 50 | 100 | 80 | 0 | 5.0 | 0 | | | |
| 9 | 0 | 0 | 47 | 83 | 70 | 70 | 0 | 0 | 0 | | | |
| 10 | 0 | 0 | 50 | 25 | 51 | 60 | 0 | 0 | 60 | | | |
| 11 | 0 | 0 | 40 | 20 | 72 | 50 | 0 | 0 | 82 | | | |
| 12 | 0 | 4.4 | 40 | 20 | 118 | 45 | 0 | 1.0 | 480 | | | |
| 13 | 0 | 10 | 30 | 128 | 329 | 40 | 0 | 0 | 200 | | | |
| 14 | 0 | 12 | 25 | 248 | 348 | 35 | 0 | 0 | 30 | | | |
| 15 | 0 | 10 | 70 | 383 | 320 | 30 | 0 | 0 | 10 | | | |
| 16 | 0 | 6.4 | 80 | 410 | 370 | 20 | 10 | 0 | 1.0 | | | |
| 17 | 0 | 7.2 | 100 | 299 | 344 | 10 | 316 | 0 | 0 | | | |
| 18 | 0 | 9.5 | 110 | 270 | 308 | 7.0 | 569 | 0 | 0 | | | |
| 19 | 3.7 | 8.5 | 120 | 266 | 302 | 5.0 | 231 | 0 | 0 | | | |
| 20 | 6.8 | 8.0 | 140 | 250 | 254 | 3.5 | 290 | 0 | 0 | | | |
| 21 | 4.5 | 10 | 160 | 200 | 239 | 2.5 | 80 | 0 | 0 | | | |
| 22 | 1.5 | 15 | 168 | 170 | 225 | 1.0 | 30 | 0 | 0 | | | |
| 23 | .52 | 18 | 188 | 150 | 212 | 0 | 16 | 0 | 0 | | | |
| 24 | .08 | 19 | 180 | 170 | 212 | 0 | 10 | 0 | 0 | | | |
| 25 | 0 | 18 | 170 | 180 | 198 | 0 | 5.0 | 0 | 0 | | | |
| 26 | 0 | 12 | 160 | 272 | 192 | 0 | 1.0 | 0 | 0 | | | |
| 27 | 0 | 13 | 155 | 327 | 178 | 0 | 0 | 0 | 0 | | | |
| 28 | 0 | 133 | 150 | 394 | 150 | 0 | 0 | 0 | 0 | | | |
| 29 | 0 | ------ | 90 | 355 | 124 | 0 | 0 | 0 | 0 | | | |
| 30 | 0 | ------ | 50 | 338 | 105 | 0 | 0 | 1.0 | 0 | | | |
| 31 | 0 | ------ | 50 | ------ | 88 | ------ | 0 | 5.0 | ------ | | ------ | |
| TOTAL | 17.10 | 314.0 | 3,874 | 5,371 | 6,350 | 1,259.0 | 1,600.0 | 450.0 | 1,260.0 | 0 | 0 | 0 |
| MEAN | .55 | 11.2 | 125 | 179 | 205 | 42.0 | 51.6 | 14.5 | 42.0 | 0 | 0 | 0 |
| MAX | 6.8 | 133 | 346 | 410 | 370 | 140 | 569 | 200 | 480 | 0 | 0 | 0 |
| MIN | 0 | 0 | 25 | 20 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 34 | 623 | 7,680 | 10,650 | 12,600 | 2,500 | 3,170 | 893 | 2,500 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 20,495.10 MEAN 56.2 MAX 569 MIN 0 AC-FT 40,650
WTR YR 1973 TOTAL 30,405.60 MEAN 83.3 MAX 1,620 MIN 0 AC-FT 60,310

PEAK DISCHARGE (BASE, 2,000 FT³/S).--JULY 16 (2300) 3,920 FT³/S (11.08 FT).

## 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 former bridge site 0.3 mi (0.5 km) upstream from bridge on Interstate Highway 25, 3.1 mi (5.0 km) upstream from mouth, 2.9 mi (4.7 km) north of San Acacia, and 15 mi (24 km) north of Socorro.

DRAINAGE AREA.--1,380 mi² (3,570 km²), approximately.

PERIOD OF RECORD.--October 1947 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,765 ft (1,452.4 m) from topographic map. Prio to Sept. 14, 1966 at site 1.7 mi (2.7 km) downstream at different datum.

AVERAGE DISCHARGE.--26 calendar years, 16.9 ft³/s (0.479 m³/s), 12,240 acre-ft/yr (15.1 hm³/yr); 20 calendar years (1954-73), 19.2 ft³/s (0.544 m³/s), 13,910 acre-ft/yr (17.2 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 4,650 ft³/s (132 m³/s) Sept. 18 (gage height, 3.37 ft or 1.027 m), from rating curve extended as explained below; no flow most of time.
Period of record: Maximum discharge, 36,200 ft³/s (1,030 m³/s) July 31, 1965 (gage height, 5.54 ft or 1.689 m, from floodmarks, present site and datum), from rating curve extended above 900 ft³/s (25.5 m³/s) on basis of slope-area measurement of peak flow; no flow most of time.
Another flood occurred Aug. 12, 1929 (discharge, 27,400 ft³/s or 776 m³/s, by slope-area method), from reports of State Engineer.

REMARKS.--Records poor. Diversions for irrigation of about 100 acres (40.5 hm²) above station. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1512: 1948-49, 1955. WSP 1632: 1953.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 2 | | | | | 0 | | 0 | 348 | 0 | 0 | | |
| 3 | | | | | 0 | | 0 | 1.0 | 0 | 0 | | |
| 4 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 5 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 6 | | | | | 0 | | 0 | 0 | 0 | 7.0 | | |
| 7 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 8 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 9 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 10 | | | | | 0 | | 0 | 0 | 48 | 0 | | |
| 11 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 12 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 13 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 14 | | | | | 1.5 | | 0 | 0 | 0 | 0 | | |
| 15 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 16 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 17 | | | | | 0 | | 20 | 0 | 0 | 0 | | |
| 18 | | | | | 0 | | 2.8 | 0 | 467 | 0 | | |
| 19 | | | | | 0 | | 0 | 0 | 50 | 0 | | |
| 20 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 21 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 22 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 23 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 24 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 25 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 26 | | | | | 0 | | 0 | 0 | 0 | 0 | | |
| 27 | | | | | 0 | | 65 | 0 | 0 | 0 | | |
| 28 | | | | | 0 | | 10 | 0 | 0 | 0 | | |
| 29 | | ------ | | | 0 | | 1.0 | 17 | 0 | 0 | | |
| 30 | | ------ | | | 0 | | 0 | 133 | 0 | 0 | | |
| 31 | | ------ | | ------ | 0 | ------ | 0 | 21 | ------ | 0 | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | 1.5 | 0 | 98.8 | 520.0 | 565 | 7.0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | .048 | 0 | 3.19 | 16.8 | 18.8 | .23 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | 1.5 | 0 | 65 | 348 | 467 | 7.0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 3.0 | 0 | 196 | 1,030 | 1,120 | 14 | 0 | 0 |

CAL YR 1973 TOTAL 1,192.30 MEAN 3.27 MAX 467 MIN 0 AC-FT 2,360
WTR YR 1973 TOTAL 9,422.30 MEAN 25.8 MAX 2,590 MIN 0 AC-FT 18,690

PEAK DISCHARGE (BASE, 3,000 FT³/S).--SEPT. 18 (1730) 4,650 FT³/S (3.37 FT).

## 08354500 SOCORRO MAIN CANAL NORTH AT SAN ACACIA, N. MEX.

LOCATION.--Lat 34°15'17", long 106°53'43", in SE¼NW¼ sec.1, T.1 S., R.1 W., Socorro County, on right bank at San Acacia, and 0.5 mi (0.8 km) downstream from point of diversion.

PERIOD OF RECORD.--April 1936 to September 1964 (monthly discharge only), October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,660.16 ft (1,420.417 m) above mean sea level. Prior to Mar. 8, 1958, at site 300 ft (90 m) upstream (in old channel) at datum 0.42 ft (0.128 m) lower.

EXTREMES.--Period of record: Maximum daily discharge, 251 $ft^3/s$ (7.11 $m^3/s$) July 30, 1965; no flow at times.

REMARKS.--Records fair. This canal is 1 of 3 channels (see sta 08354800, 08354900) carrying flow in valley cross section. For combined monthly flow in acre-ft of this canal, conveyance channel, and floodway see tabulation below daily table for sta 08354900. Canal diverts water from right bank of Rio Grande for irrigation of about 8,000 acres (3,240 $hm^2$). Alamillo Acequia and 3 other smaller ditches divert water from canal above station for irrigation of about 400 acres (162 $hm^2$). Discharge records collected at the canal heading October 1964 to September 1965, indicate 7,770 acre-ft (9.58 $hm^3$) or 9% of the initial canal flow was diverted before reaching the regular gaging station.

REVISIONS (WATER YEARS).--WSP 1242: 1951.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 0 | 144 | 188 | 153 | 169 | 205 | 176 | 186 | | |
| 2 | | | 0 | 145 | 189 | 141 | 153 | 180 | 158 | 175 | | |
| 3 | | | 0 | 148 | 215 | 140 | 162 | 178 | 179 | 175 | | |
| 4 | | | 0 | 175 | 211 | 188 | 172 | 189 | 166 | 173 | | |
| 5 | | | 0 | 176 | 186 | 190 | 189 | 188 | 209 | 174 | | |
| 6 | | | 0 | 175 | 150 | 187 | 192 | 199 | 228 | 167 | | |
| 7 | | | 0 | 186 | 159 | 189 | 201 | 196 | 232 | 170 | | |
| 8 | | | 0 | 186 | 180 | 202 | 218 | 199 | 238 | 169 | | |
| 9 | | | 0 | 182 | 183 | 207 | 223 | 200 | 234 | 173 | | |
| 10 | | | 0 | 179 | 176 | 193 | 227 | 198 | 227 | 178 | | |
| 11 | | | 24 | 171 | 175 | 192 | 244 | 200 | 206 | 180 | | |
| 12 | | | 86 | 167 | 147 | 193 | 222 | 204 | 192 | 178 | | |
| 13 | | | 104 | 162 | 124 | 185 | 223 | 200 | 165 | 180 | | |
| 14 | | | 138 | 152 | 127 | 205 | 229 | 200 | 183 | 178 | | |
| 15 | | | 152 | 147 | 124 | 210 | 224 | 201 | 197 | 178 | | |
| 16 | | | 162 | 134 | 151 | 203 | 196 | 197 | 197 | 180 | | |
| 17 | | | 134 | 162 | 161 | 183 | 200 | 200 | 191 | 185 | | |
| 18 | | | 122 | 180 | 168 | 165 | 199 | 202 | 192 | 183 | | |
| 19 | | | 127 | 156 | 159 | 187 | 198 | 210 | 182 | 182 | | |
| 20 | | | 127 | 147 | 181 | 204 | 192 | 207 | 186 | 182 | | |
| 21 | | | 135 | 170 | 209 | 193 | 197 | 212 | 187 | 179 | | |
| 22 | | | 125 | 211 | 201 | 179 | 206 | 218 | 176 | 169 | | |
| 23 | | | 112 | 220 | 199 | 186 | 225 | 216 | 171 | 179 | | |
| 24 | | | 125 | 226 | 218 | 180 | 211 | 216 | 174 | 178 | | |
| 25 | | | 124 | 218 | 219 | 185 | 214 | 209 | 177 | 175 | | |
| 26 | | | 124 | 224 | 185 | 190 | 216 | 218 | 186 | 177 | | |
| 27 | | | 114 | 221 | 167 | 188 | 204 | 215 | 185 | 177 | | |
| 28 | | | 125 | 194 | 184 | 185 | 206 | 210 | 186 | 179 | | |
| 29 | | ------ | 139 | 158 | 178 | 172 | 206 | 212 | 183 | 179 | | |
| 30 | | ------ | 147 | 175 | 178 | 171 | 198 | 200 | 172 | 177 | | |
| 31 | | ------ | 143 | ------ | 167 | ------ | 195 | 196 | ------ | 133 | ------ | |
| TOTAL | 0 | 0 | 2,589 | 5,291 | 5,459 | 5,546 | 6,311 | 6,275 | 5,735 | 5,448 | 0 | 0 |
| MEAN | 0 | 0 | 83.5 | 176 | 176 | 185 | 204 | 202 | 191 | 176 | 0 | 0 |
| MAX | 0 | 0 | 162 | 226 | 219 | 210 | 244 | 218 | 238 | 186 | 0 | 0 |
| MIN | 0 | 0 | 0 | 134 | 124 | 140 | 153 | 178 | 158 | 133 | 0 | 0 |
| AC-FT | 0 | 0 | 5,140 | 10,490 | 10,830 | 11,000 | 12,520 | 12,450 | 11,380 | 10,810 | 0 | 0 |

CAL YR 1973 TOTAL 42,654.00 MEAN 117 MAX 244 MIN 0 AC-FT 84,600
WTR YR 1973 TOTAL 38,866.00 MEAN 106 MAX 244 MIN 0 AC-FT 77,090

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

LOCATION.--Lat 34°14'54", long 106°54'04", in SW¼ sec.1, T.1 S., R.1 W., Socorro County, on right bank 75 ft (23 m) upstream from railway crossing, 0.5 mi (0.8 km) south of San Acacia, and 1.2 mi (1.9 km) downstream from San Acacia diversion dam.

PERIOD OF RECORD.--October 1958 to September 1964 included in composite flow of station "08355000 Rio Grande at San Acacia," October 1960 to September 1964 (monthly discharge published in WSP 1923 with records for station 08355000), October 1964 to current year. Daily records 1958-64 are available in files at district office.

GAGE.--Water-stage recorder. Datum of gage is 4,652.5 ft (1,418.08 m) above mean sea level (Bureau of Reclamation datum).

AVERAGE DISCHARGE.--15 calendar years, 556 ft³/s (15.75 m³/s), 402,800 acre-ft/yr (497 hm³/yr).

EXTREMES.--Period or record: Maximum daily discharge, 1,950 ft³/s (55.2 m³/s) May 12, 13, 1966; no flow at times.

REMARKS.--Records fair. Conveyance channel, constructed in 1958, is 1 of 3 channels (see sta 08354500, 08354900) carrying flow in valley cross section. Original design and plan was for conveyance channel to carry all flows up to about 2,000 ft³/s (56.6 m³/s). For combined monthly flow in acre-ft of this channel, floodway, and Socorro main canal north see tabulation below daily table for station 08354900. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 846 | 918 | 174 | 1,290 | 1,410 | 1,470 | 1,460 | 1,600 | 880 | 149 | 675 | 1,520 |
| 2 | 786 | 911 | 106 | 1,300 | 1,410 | 1,460 | 1,440 | 1,600 | 830 | 215 | 975 | 1,500 |
| 3 | 744 | 828 | 606 | 1,600 | 1,360 | 1,470 | 1,430 | 1,600 | 626 | 215 | 1,020 | 1,610 |
| 4 | 729 | 828 | 1,020 | 1,340 | 1,400 | 1,460 | 1,440 | 1,590 | 511 | 250 | 945 | 1,700 |
| 5 | 708 | 735 | 1,470 | 1,290 | 1,490 | 1,460 | 1,450 | 1,580 | 352 | 232 | 873 | 1,730 |
| 6 | 771 | 756 | 1,280 | 1,020 | 1,450 | 1,470 | 1,440 | 1,600 | 220 | 265 | 760 | 1,760 |
| 7 | 807 | 864 | 1,120 | 741 | 1,540 | 1,430 | 1,440 | 1,610 | 245 | 232 | 899 | 1,760 |
| 8 | 774 | 912 | 864 | 965 | 1,470 | 1,440 | 1,500 | 1,430 | 172 | 238 | 909 | 1,750 |
| 9 | 786 | 924 | 750 | 1,360 | 1,460 | 1,430 | 1,520 | 1,240 | 52 | 167 | 904 | 1,720 |
| 10 | 816 | 921 | 1,070 | 848 | 1,420 | 1,460 | 1,530 | 1,140 | 133 | 174 | 914 | 1,710 |
| 11 | 849 | 854 | 1,400 | 848 | 1,400 | 1,440 | 1,520 | 1,050 | 777 | 250 | 912 | 1,730 |
| 12 | 866 | 833 | 774 | 651 | 1,400 | 1,430 | 1,510 | 988 | 1,430 | 333 | 905 | 1,750 |
| 13 | 831 | 845 | 752 | 766 | 1,400 | 1,430 | 1,510 | 1,040 | 1,450 | 498 | 868 | 1,740 |
| 14 | 757 | 889 | 1,110 | 1,250 | 1,470 | 1,420 | 1,530 | 1,050 | 978 | 465 | 828 | 1,770 |
| 15 | 771 | 860 | 1,110 | 1,650 | 1,470 | 1,370 | 1,530 | 981 | 678 | 465 | 519 | 1,790 |
| 16 | 827 | 830 | 1,090 | 1,380 | 1,430 | 1,400 | 1,420 | 1,030 | 513 | 390 | 390 | 1,830 |
| 17 | 867 | 851 | 857 | 1,400 | 1,440 | 1,450 | 1,430 | 987 | 420 | 374 | 354 | 1,800 |
| 18 | 852 | 878 | 823 | 1,400 | 1,470 | 1,500 | 1,460 | 585 | 716 | 354 | 480 | 1,790 |
| 19 | 828 | 832 | 919 | 1,460 | 1,440 | 1,450 | 1,520 | 172 | 711 | 310 | 582 | 1,780 |
| 20 | 875 | 845 | 989 | 1,490 | 1,470 | 1,470 | 1,490 | 92 | 619 | 278 | 657 | 1,740 |
| 21 | 854 | 844 | 1,080 | 1,460 | 1,450 | 1,480 | 1,410 | 31 | 460 | 246 | 678 | 1,750 |
| 22 | 861 | 829 | 1,270 | 1,390 | 1,420 | 1,460 | 1,340 | 102 | 317 | 267 | 813 | 1,770 |
| 23 | 836 | 904 | 1,520 | 1,380 | 1,470 | 1,500 | 1,420 | 148 | 185 | 265 | 1,280 | 1,780 |
| 24 | 852 | 934 | 1,620 | 1,340 | 1,490 | 1,520 | 1,440 | 181 | 143 | 267 | 1,340 | 1,730 |
| 25 | 830 | 784 | 1,450 | 1,330 | 1,480 | 1,500 | 1,670 | 225 | 145 | 324 | 1,400 | 1,720 |
| 26 | 785 | 716 | 1,260 | 1,470 | 1,460 | 1,480 | 1,600 | 90 | 157 | 315 | 1,420 | 1,740 |
| 27 | 839 | 700 | 982 | 1,450 | 1,460 | 1,480 | 1,500 | 50 | 182 | 288 | 1,440 | 1,740 |
| 28 | 793 | 633 | 1,000 | 1,420 | 1,480 | 1,440 | 1,470 | 85 | 228 | 230 | 1,480 | 1,740 |
| 29 | 820 | ------ | 1,070 | 1,460 | 1,460 | 1,440 | 1,500 | 55 | 226 | 250 | 1,510 | 1,730 |
| 30 | 837 | ------ | 1,350 | 1,430 | 1,470 | 1,470 | 1,690 | 240 | 192 | 300 | 1,490 | 1,770 |
| 31 | 857 | ------ | 1,550 | ------ | 1,480 | ------ | 1,640 | 484 | ------ | 372 | ------ | 1,780 |
| TOTAL | 25,254 | 23,458 | 32,436 | 38,179 | 44,920 | 43,680 | 46,250 | 24,656 | 14,548 | 8,978 | 28,220 | 53,730 |
| MEAN | 815 | 838 | 1,046 | 1,273 | 1,449 | 1,456 | 1,492 | 795 | 485 | 290 | 941 | 1,733 |
| MAX | 875 | 934 | 1,620 | 1,650 | 1,540 | 1,520 | 1,690 | 1,610 | 1,450 | 498 | 1,510 | 1,830 |
| MIN | 708 | 633 | 106 | 651 | 1,360 | 1,370 | 1,340 | 31 | 52 | 149 | 354 | 1,500 |
| AC-FT | 50,090 | 46,530 | 64,340 | 75,730 | 89,100 | 86,640 | 91,740 | 48,910 | 28,860 | 17,810 | 55,970 | 106,600 |

CAL YR 1973 TOTAL 384,309.0 MEAN 1,053 MAX 1,830 MIN 31 AC-FT 762,300
WTR YR 1973 TOTAL 376,958.3 MEAN 1,033 MAX 1,710 MIN 1.9 AC-FT 747,700

## 08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, N. MEX.

LOCATION.--Lat 34°15'23", long 106°53'18", Socorro County, in Sevilleta Grant, 0.2 mi (0.3 km) below San Acacia diversion dam, 0.3 mi (0.5 km) east of San Acacia, 2 mi (3 km) downstream from Rio Salado, and at mile 1,472.6 (2,369.4 km).

DRAINAGE AREA.--26,770 mi² (69,330 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--April 1936 to September 1958 (prior to construction of conveyance channel), October 1958 to September 1964 (flow in conveyance channel included), October 1964 to current year. Prior to October 1964 published as "08355000 Rio Grande at San Acacia" and records are not equivalent.

GAGE.--Water-stage recorder. Datum of gage is 4,654.50 ft (1,418.692 m) above mean sea level. Aug. 19, 1965 to Aug. 15, 1967 at same site at datum 1.89 ft (0.576 m) higher. Prior to Mar. 19, 1953, at several sites 0.1 mi (0.2 km) upstream at different datums. Mar. 19, 1953 to Aug. 19, 1965, at site 0.4 mi (0.6 km) downstream at datum 3.60 ft (1.097 m) higher. Floodway is bypassed by Socorro main canal north and since Oct. 1958, by conveyance channel.

AVERAGE DISCHARGE.--22 calendar years (1936-58), 1,192 ft³/s (33.76 m³/s), 863,000 acre-ft/yr (1,060 hm³/yr), prior to construction of conveyance channel; does not include Socorro main canal north.
15 calendar years (1958-73), 270 ft³/s (7.646 m³/s), 195,600 acre-ft/yr (241 hm³/yr), flow of floodway only.
15 calendar years (1958-73), 913 ft³/s (25.86 m³/s), 661,500 acre-ft/yr (816 hm³/yr), combined flow of floodway, conveyance channel and Socorro main canal north.

EXTREMES.--Current year: Maximum discharge, 7,860 ft³/s (223 m³/s) May 16 (gage height, 9.00 ft or 2.743 m); maximum gage height, 9.01 ft (2.746 m) May 17; minimum, 0.95 ft³/s (0.027 m³/s) Jan. 4.
Period of record: Maximum discharge, 27,400 ft³/s (776 m³/s) Aug. 5, 1936 (gage height, 10.75 ft or 3.277 m, site and datum then in use); no flow at times.

REMARKS.--Records poor. Floodway is 1 of 3 channels (see sta 08354500, 08354800) carrying flow in valley cross section. For combined monthly flow in acre-ft of floodway, conveyance channel, and Socorro main canal north see tabulation below. Normal plan is for floodway to carry flow when combined capacities of conveyance channel (about 2,000 ft³/s or 56.6 m³/s) and Socorro main canal north (about 200 ft³/s or 5.66 m³/s) is exceeded, during periods of silt sluicing, and when river silt load is excessive. Diversions above station for irrigation of about 760,000 acres (3,080 km²); this includes Socorro main canal north which bypasses station and irrigates about 8,000 acres (3,240 hm²). Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1242: 1951. WSP 1732: 1958(M). WRD 1969: 1967.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.2 | 3.2 | 612 | 17 | 1,790 | 5,480 | 2,300 | 534 | 63 | 12 | 18 | 3.9 |
| 2 | 1.1 | 3.1 | 657 | 10 | 2,580 | 5,560 | 2,100 | 1,040 | 18 | 16 | 44 | 3.0 |
| 3 | 1.1 | 3.0 | 542 | 20 | 2,780 | 5,860 | 1,860 | 885 | 24 | 11 | 16 | 3.0 |
| 4 | .97 | 2.8 | 363 | 10 | 2,290 | 6,160 | 1,480 | 461 | 22 | 11 | 11 | 3.0 |
| 5 | 3.1 | 3.1 | 244 | 10 | 2,030 | 5,950 | 1,250 | 378 | 26 | 15 | 24 | 3.9 |
| 6 | 2.9 | 2.8 | 168 | 5.7 | 2,920 | 5,570 | 1,060 | 237 | 31 | 18 | 134 | 6.2 |
| 7 | 2.8 | 2.8 | 23 | 6.2 | 3,570 | 4,400 | 878 | 96 | 34 | 15 | 22 | 6.5 |
| 8 | 3.1 | 2.6 | 11 | 21 | 3,010 | 4,130 | 864 | 33 | 29 | 15 | 19 | 7.1 |
| 9 | 3.6 | 2.6 | 7.8 | 44 | 2,660 | 4,020 | 1,000 | 23 | 44 | 20 | 17 | 7.4 |
| 10 | 4.3 | 2.4 | 7.6 | 18 | 2,890 | 3,430 | 1,200 | 24 | 48 | 21 | 13 | 7.7 |
| 11 | 4.5 | 2.3 | 18 | 12 | 2,710 | 3,390 | 1,380 | 31 | 88 | 23 | 11 | 7.3 |
| 12 | 4.4 | 2.4 | 28 | 5.5 | 2,660 | 3,520 | 972 | 32 | 1,740 | 32 | 9.4 | 9.9 |
| 13 | 4.4 | 2.2 | 34 | 4.5 | 3,610 | 3,720 | 1,160 | 35 | 362 | 21 | 8.0 | 12 |
| 14 | 4.3 | 2.2 | 38 | 31 | 4,940 | 4,580 | 1,450 | 28 | 25 | 21 | 6.6 | 12 |
| 15 | 4.7 | 2.2 | 37 | 376 | 6,520 | 4,100 | 1,590 | 26 | 30 | 26 | 8.3 | 9.8 |
| 16 | 4.6 | 2.0 | 39 | 1,500 | 7,140 | 3,660 | 868 | 31 | 25 | 22 | 6.3 | 9.2 |
| 17 | 4.4 | 2.1 | 37 | 1,440 | 6,020 | 3,050 | 882 | 26 | 22 | 26 | 5.5 | 9.1 |
| 18 | 4.1 | 2.1 | 40 | 787 | 5,800 | 2,480 | 958 | 26 | 118 | 31 | 5.1 | 10 |
| 19 | 4.0 | 2.0 | 48 | 632 | 5,580 | 2,340 | 1,610 | 19 | 44 | 34 | 5.8 | 11 |
| 20 | 4.0 | 2.1 | 25 | 1,320 | 5,720 | 2,010 | 1,300 | 21 | 42 | 35 | 6.2 | 11 |
| 21 | 3.9 | 2.0 | 32 | 1,050 | 5,820 | 1,640 | 752 | 20 | 47 | 37 | 15 | 14 |
| 22 | 3.7 | 2.1 | 11 | 320 | 6,110 | 1,260 | 684 | 21 | 26 | 30 | 7.4 | 26 |
| 23 | 3.6 | 2.1 | 15 | 164 | 6,080 | 965 | 982 | 22 | 81 | 26 | 6.9 | 17 |
| 24 | 3.5 | 2.2 | 7.2 | 34 | 5,800 | 1,350 | 1,280 | 39 | 127 | 26 | 5.8 | 12 |
| 25 | 3.4 | 2.1 | 14 | 18 | 5,400 | 1,460 | 1,120 | 49 | 22 | 26 | 4.3 | 14 |
| 26 | 3.4 | 35 | 5.6 | 216 | 5,640 | 1,500 | 1,210 | 48 | 17 | 26 | 5.7 | 16 |
| 27 | 3.2 | 112 | 4.1 | 787 | 5,780 | 1,540 | 2,360 | 45 | 15 | 26 | 5.5 | 27 |
| 28 | 3.1 | 243 | 10 | 1,120 | 6,160 | 1,880 | 1,020 | 49 | 13 | 27 | 4.6 | 23 |
| 29 | 3.1 | ------ | 20 | 686 | 5,900 | 2,160 | 800 | 52 | 13 | 28 | 3.9 | 22 |
| 30 | 3.2 | ------ | 9.0 | 1,220 | 5,840 | 2,220 | 615 | 152 | 11 | 25 | 3.9 | 25 |
| 31 | 3.4 | ------ | 2.3 | ------ | 5,440 | ------ | 589 | 74 | ------ | 25 | ------ | 25 |
| TOTAL | 105.07 | 450.5 | 3,109.6 | 11,884.9 | 141,190 | 99,385 | 37,574 | 4,557 | 3,207 | 727 | 453.2 | 374.0 |
| MEAN | 3.39 | 16.1 | 100 | 396 | 4,555 | 3,313 | 1,212 | 147 | 107 | 23.5 | 15.1 | 12.1 |
| MAX | 4.7 | 243 | 657 | 1,500 | 7,140 | 6,160 | 2,360 | 1,040 | 1,740 | 37 | 134 | 27 |
| MIN | .97 | 2.0 | 2.3 | 4.5 | 1,790 | 965 | 589 | 19 | 11 | 11 | 3.9 | 3.0 |
| AC-FT | 208 | 894 | 6,170 | 23,570 | 280,100 | 197,100 | 74,530 | 9,040 | 6,360 | 1,440 | 899 | 742 |
| (†) | 50,300 | 47,420 | 75,650 | 109,800 | 380,000 | 294,700 | 178,800 | 70,400 | 46,600 | 30,060 | 56,870 | 107,300 |

CAL YR 1973 TOTAL 303,017.27 MEAN 830 MAX 7,140 MIN .97 AC-FT 601,000 (†) MEAN 2,000 AC-FT 1,448,000
WTR YR 1973 TOTAL 312,336.51 MEAN 856 MAX 7,140 MIN 0 AC-FT 619,500 (†) MEAN 1,995 AC-FT 1,444,000

(†) COMBINED FLOW, IN ACRE-FT AND MEAN IN FT³/S, OF FLOODWAY, CONVEYANCE CHANNEL, AND SOCORRO MAIN CANAL NORTH.

## 08355300 ARROYO DE LA MATANZA AT SOCORRO, N. MEX.

LOCATION.--Lat 34°01'51", long 106°54'04", Socorro County, in Town of Socorro Grant, on left abutment of former highway bridge, and 1.9 mi (3.1 km) south of Socorro.

DRAINAGE AREA.--46.0 mi² (119 km²).

PERIOD OF RECORD.--January 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,760 ft (1,451 m) from topographic map.

EXTREMES.--Current year: Maximum discharge, 62 ft³/s (1.76 m³/s) Sept. 11 (gage height, 3.00 ft or 0.914 m); no flow most of time.
Period of record: Maximum discharge, 1,580 ft³/s (44.7 m³/s) July 28, 1970 (gage height, 6.20 ft or 1.890 m), from rating curve extended above 60 ft³/s (1.70 m³/s) on basis of slope-area measurement of peak flow; no flow most of time.

REMARKS.--Record poor.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | 0 | 0 | | | |
| 2 | | | | | | | | 1.8 | 0 | | | |
| 3 | | | | | | | | 0 | 0 | | | |
| 4 | | | | | | | | 0 | 0 | | | |
| 5 | | | | | | | | 0 | 0 | | | |
| 6 | | | | | | | | 0 | 0 | | | |
| 7 | | | | | | | | 0 | 0 | | | |
| 8 | | | | | | | | 0 | 0 | | | |
| 9 | | | | | | | | 0 | 0 | | | |
| 10 | | | | | | | | 0 | 0 | | | |
| 11 | | | | | | | | 0 | 7.1 | | | |
| 12 | | | | | | | | 0 | 0 | | | |
| 13 | | | | | | | | 0 | 0 | | | |
| 14 | | | | | | | | 0 | 0 | | | |
| 15 | | | | | | | | 0 | 0 | | | |
| 16 | | | | | | | | 0 | 0 | | | |
| 17 | | | | | | | | 0 | 0 | | | |
| 18 | | | | | | | | 0 | 0 | | | |
| 19 | | | | | | | | 0 | 0 | | | |
| 20 | | | | | | | | 0 | 0 | | | |
| 21 | | | | | | | | 0 | 0 | | | |
| 22 | | | | | | | | 1.1 | 0 | | | |
| 23 | | | | | | | | 0 | 0 | | | |
| 24 | | | | | | | | 0 | 0 | | | |
| 25 | | | | | | | | 0 | 0 | | | |
| 26 | | | | | | | | 0 | 0 | | | |
| 27 | | | | | | | | 0 | 0 | | | |
| 28 | | | | | | | | 0 | 0 | | | |
| 29 | | ------ | | | | | | 0 | 0 | | | |
| 30 | | ------ | | | | | | 3.4 | 0 | | | |
| 31 | | ------ | | ------ | | ------ | | 0 | ------ | | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6.3 | 7.1 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | .20 | .24 | 0 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.4 | 7.1 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 14 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 13.40 MEAN .03 MAX 7.1 MIN 0 AC-FT 27
WTR YR 1973 TOTAL 363.30 MEAN 1.00 MAX 100 MIN 0 AC-FT 721

PEAK DISCHARGE (BASE, 175 FT³/S).--NO PEAK ABOVE BASE.

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

LOCATION.--Lat 33°41'07", long 106°59'40", Socorro County, in Pedro Armendaris Grant No. 34, on right bank 0.4 mi (0.6 km) northwest of Atchison, Topeka and Santa Fe Railway Co. bridge over floodway channel, 1.0 mi (1.6 km) southwest of former site of San Marcial, 3.5 mi (5.6 km) downstream from railroad bridge near Tiffany siding, and 51 mi (82 km) downstream from heading at San Acacia.

PERIOD OF RECORD.--October 1958 to September 1959, October 1960 to current year. Prior to October 1964 monthly discharge only published with record for Rio Grande at San Marcial (sta 08358500).

GAGE.--Water-stage recorder. Datum of gage is 4,454.00 ft (1,357.579 m) above mean sea level (levels by Bureau of Reclamation). Prior to Apr. 29, 1958, at datum 4.19 ft (1.277 m) higher.

AVERAGE DISCHARGE.--19 calendar years, 559 $ft^3/s$ (15.83 $m^3/s$), 405,000 acre-ft/yr (499 $hm^3/yr$).

EXTREMES.--1954-73: Maximum daily discharge, 2,200 $ft^3/s$ (62.3 $m^3/s$) May 14, 1966; no flow at times.

REMARKS.--Records poor. Original design and plan was for conveyance channel to carry all flows up to about 2,000 $ft^3/s$ (56.6 $m^3/s$). Conveyance channel is 1 of 2 channels (see sta 08358400) carrying flow in valley cross section. For combined monthly flow in acre-ft of this channel and floodway see tabulation below daily table for sta 08358400. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 826 | 922 | 246 | 1,490 | 1,480 | 1,750 | 1,730 | 1,710 | 794 | 286 | 738 | 1,460 |
| 2 | 794 | 942 | 214 | 1,440 | 1,400 | 1,770 | 1,750 | 1,770 | 1,030 | 358 | 870 | 1,470 |
| 3 | 734 | 810 | 362 | 1,590 | 1,370 | 1,790 | 1,700 | 1,780 | 790 | 358 | 1,030 | 1,520 |
| 4 | 738 | 854 | 686 | 1,720 | 1,450 | 1,790 | 1,790 | 1,790 | 730 | 350 | 962 | 1,660 |
| 5 | 726 | 762 | 1,310 | 1,430 | 1,460 | 1,770 | 1,750 | 1,810 | 622 | 382 | 950 | 1,700 |
| 6 | 830 | 766 | 1,310 | 1,240 | 1,490 | 1,670 | 1,730 | 1,850 | 482 | 318 | 794 | 1,750 |
| 7 | 826 | 846 | 858 | 926 | 1,570 | 1,630 | 1,710 | 1,810 | 530 | 422 | 926 | 1,750 |
| 8 | 854 | 998 | 758 | 1,080 | 1,580 | 1,580 | 1,720 | 1,660 | 462 | 402 | 926 | 1,760 |
| 9 | 814 | 862 | 618 | 1,620 | 1,550 | 1,570 | 1,770 | 1,450 | 370 | 362 | 886 | 1,750 |
| 10 | 834 | 922 | 762 | 1,150 | 1,570 | 1,550 | 1,800 | 1,350 | 410 | 298 | 882 | 1,730 |
| 11 | 870 | 922 | 1,350 | 1,020 | 1,450 | 1,500 | 1,810 | 1,250 | 722 | 410 | 866 | 1,710 |
| 12 | 854 | 858 | 714 | 930 | 1,590 | 1,540 | 1,740 | 1,170 | 1,490 | 510 | 858 | 1,720 |
| 13 | 850 | 870 | 694 | 906 | 1,620 | 1,570 | 1,730 | 1,170 | 1,570 | 542 | 822 | 1,690 |
| 14 | 798 | 898 | 870 | 1,230 | 1,690 | 1,600 | 1,730 | 1,120 | 1,210 | 494 | 806 | 1,670 |
| 15 | 742 | 914 | 1,210 | 1,920 | 1,720 | 1,580 | 1,770 | 1,080 | 930 | 534 | 646 | 1,690 |
| 16 | 806 | 842 | 990 | 1,450 | 1,650 | 1,630 | 1,640 | 1,030 | 718 | 494 | 494 | 1,710 |
| 17 | 858 | 858 | 1,010 | 1,490 | 1,590 | 1,700 | 1,530 | 1,050 | 658 | 494 | 458 | 1,680 |
| 18 | 818 | 918 | 806 | 1,450 | 1,650 | 1,790 | 1,570 | 862 | 682 | 486 | 506 | 1,620 |
| 19 | 782 | 826 | 1,020 | 1,540 | 1,600 | 1,740 | 1,680 | 538 | 874 | 446 | 606 | 1,680 |
| 20 | 822 | 862 | 1,070 | 1,590 | 1,590 | 1,690 | 1,650 | 446 | 770 | 410 | 638 | 1,620 |
| 21 | 818 | 902 | 1,190 | 1,500 | 1,730 | 1,670 | 1,590 | 310 | 674 | 378 | 698 | 1,580 |
| 22 | 782 | 822 | 1,500 | 1,420 | 1,750 | 1,630 | 1,550 | 282 | 658 | 378 | 750 | 1,650 |
| 23 | 762 | 887 | 1,610 | 1,420 | 1,700 | 1,630 | 1,550 | 378 | 570 | 398 | 1,140 | 1,630 |
| 24 | 818 | 970 | 1,700 | 1,350 | 1,710 | 1,650 | 1,620 | 362 | 538 | 402 | 1,290 | 1,680 |
| 25 | 766 | 774 | 1,690 | 1,250 | 1,710 | 1,620 | 1,640 | 414 | 498 | 458 | 1,340 | 1,620 |
| 26 | 750 | 710 | 1,460 | 1,540 | 1,700 | 1,610 | 1,610 | 282 | 442 | 466 | 1,370 | 1,630 |
| 27 | 798 | 662 | 1,230 | 1,470 | 1,640 | 1,620 | 1,680 | 262 | 466 | 454 | 1,360 | 1,640 |
| 28 | 794 | 694 | 1,220 | 1,450 | 1,670 | 1,600 | 1,670 | 258 | 462 | 426 | 1,430 | 1,650 |
| 29 | 822 | ------ | 1,230 | 1,480 | 1,690 | 1,620 | 1,690 | 298 | 418 | 466 | 1,450 | 1,640 |
| 30 | 882 | ------ | 1,460 | 1,470 | 1,700 | 1,690 | 1,730 | 366 | 366 | 498 | 1,430 | 1,610 |
| 31 | 822 | ------ | 1,830 | ------ | 1,740 | ------ | 1,750 | 646 | ------ | 566 | ------ | 1,730 |
| TOTAL | 24,990 | 23,873 | 32,978 | 41,562 | 49,810 | 49,550 | 52,380 | 30,554 | 20,936 | 13,246 | 27,922 | 51,400 |
| MEAN | 806 | 853 | 1,064 | 1,385 | 1,607 | 1,652 | 1,690 | 986 | 698 | 427 | 931 | 1,658 |
| MAX | 882 | 998 | 1,830 | 1,920 | 1,750 | 1,790 | 1,810 | 1,850 | 1,570 | 566 | 1,450 | 1,760 |
| MIN | 726 | 662 | 214 | 906 | 1,370 | 1,500 | 1,530 | 258 | 366 | 286 | 458 | 1,460 |
| AC-FT | 49,570 | 47,350 | 65,410 | 82,440 | 98,800 | 98,280 | 103,900 | 60,600 | 41,530 | 26,270 | 55,380 | 102,000 |

CAL YR 1973 TOTAL 419,201 MEAN 1,148 MAX 1,920 MIN 214 AC-FT 831,500
WTR YR 1973 TOTAL 414,925 MEAN 1,137 MAX 1,920 MIN 18 AC-FT 823,000

## 08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, N. MEX.

LOCATION.--Lat 33°40'50", long 106°59'30", Socorro County, in Pedro Armendaris Grant No. 33 on pier of the Atchison, Topeka, and Santa Fe Railway Co. bridge, 1.1 mi (1.8 km) downstream from former site of San Marcial, 18.5 mi (29.8 km) southwest of San Antonio, and at mile 1,425.2 (2,293.1 km).

DRAINAGE AREA.--27,700 mi² (71,740 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--October 1964 to current year. Records collected at this site January 1895 to September 1964 represented total flow of the river and were published as Rio Grande at San Marcial (sta 08358500). Records of daily discharge for floodway only April 1950 to September 1964 are available in files of district office.

GAGE.--Water-stage recorder. Datum of gage is 4,455.19 ft (1,357.942 m) above mean sea level.

AVERAGE DISCHARGE.--9 calendar years (1964-73), 200 ft³/s (5.664 m³/s), 144,900 acre-ft/yr (179 hm³/yr).
Total flow of river.--78 years (1895-73), 1,259 ft³/s (35.65 m³/s), 912,100 acre-ft/yr (1,120 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 6,300 ft³/s (178 m³/s) June 4 (gage height, 15.44 ft or 4.706 m); no flow for most of time.
Period of record: Maximum discharge since January 1895 about 50,000 ft³/s (1,420 m³/s) Oct. 11, 1904.

REMARKS.--Records fair. Floodway is 1 of 2 channels (see sta 08358300) carrying flow in valley cross section. Prior to 1950 all flow was in floodway channel. Normal plan is for floodway to carry flow when capacity of conveyance channel (about 2,000 ft³/s or 56.6 m³/s) is exceeded. Combined monthly discharge in acre-ft is given at end of each year table. Diversion for irrigation of about 775,000 acres (3,140 km²) above station (includes about 13,800 acre-ft or 17.0 hm³ diverted from conveyance channel, as based on weekly measurements, data furnished by Bureau of Reclamation). Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 298 | 0 | 1,040 | 4,700 | 1,770 | 380 | 0 | | | |
| 2 | | | 495 | 0 | 1,510 | 5,110 | 1,640 | 545 | 0 | | | |
| 3 | | | 500 | 0 | 1,770 | 5,360 | 1,500 | 726 | 0 | | | |
| 4 | | | 490 | 0 | 1,820 | 5,970 | 1,490 | 455 | 0 | | | |
| 5 | | | 272 | 0 | 1,710 | 5,660 | 1,270 | 205 | 0 | | | |
| 6 | | | 110 | 0 | 2,030 | 4,940 | 1,180 | 120 | 0 | | | |
| 7 | | | 45 | 0 | 2,620 | 4,410 | 1,000 | 39 | 0 | | | |
| 8 | | | 15 | 0 | 2,640 | 3,540 | 744 | 0 | 0 | | | |
| 9 | | | 9.8 | 0 | 2,490 | 3,080 | 702 | 0 | 0 | | | |
| 10 | | | 4.2 | 0 | 2,580 | 2,420 | 910 | 0 | 0 | | | |
| 11 | | | 1.2 | 0 | 2,700 | 2,400 | 875 | 0 | 0 | | | |
| 12 | | | 0 | 0 | 2,630 | 2,550 | 792 | 0 | 265 | | | |
| 13 | | | 1.7 | 0 | 2,920 | 2,830 | 590 | 0 | 475 | | | |
| 14 | | | 11 | 0 | 3,800 | 3,370 | 636 | 0 | 102 | | | |
| 15 | | | 13 | 0 | 4,190 | 3,960 | 834 | 0 | 1.7 | | | |
| 16 | | | 11 | 765 | 4,460 | 3,430 | 644 | 0 | 0 | | | |
| 17 | | | 14 | 990 | 4,630 | 3,180 | 585 | 0 | 0 | | | |
| 18 | | | 13 | 900 | 4,180 | 2,810 | 624 | 0 | 0 | | | |
| 19 | | | 13 | 528 | 4,160 | 2,270 | 480 | 0 | 0 | | | |
| 20 | | | 14 | 950 | 4,010 | 1,870 | 980 | 0 | 0 | | | |
| 21 | | | 11 | 990 | 3,970 | 1,570 | 618 | 0 | 0 | | | |
| 22 | | | 4.2 | 424 | 4,460 | 1,100 | 154 | 0 | 0 | | | |
| 23 | | | 5.9 | 154 | 4,790 | 726 | 34 | 0 | 0 | | | |
| 24 | | | 2.6 | 74 | 5,220 | 840 | 531 | 0 | 0 | | | |
| 25 | | | 0 | 11 | 5,740 | 1,270 | 540 | 0 | 0 | | | |
| 26 | | | 0 | .60 | 5,740 | 1,090 | 545 | 0 | 0 | | | |
| 27 | | | 0 | 339 | 5,380 | 903 | 1,350 | 0 | 0 | | | |
| 28 | | | 0 | 865 | 5,110 | 889 | 1,280 | 0 | 0 | | | |
| 29 | | ------ | 0 | 516 | 5,100 | 1,320 | 618 | 0 | 0 | | | |
| 30 | | ------ | 0 | 795 | 4,860 | 1,650 | 505 | 0 | 0 | | | |
| 31 | | ------ | 0 | ------ | 4,640 | ------ | 405 | 0 | ------ | | ------ | |
| TOTAL | 0 | 0 | 2,354.6 | 8,301.60 | 112,900 | 85,218 | 25,826 | 2,470 | 843.7 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 76.0 | 277 | 3,642 | 2,841 | 833 | 79.7 | 28.1 | 0 | 0 | 0 |
| MAX | 0 | 0 | 500 | 990 | 5,740 | 5,970 | 1,770 | 726 | 475 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 1,040 | 726 | 34 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 4,670 | 16,470 | 223,900 | 169,000 | 51,230 | 4,900 | 1,670 | 0 | 0 | 0 |
| (†) | 49,570 | 47,350 | 70,080 | 98,910 | 322,700 | 267,300 | 155,100 | 65,500 | 43,200 | 26,270 | 55,380 | 102,000 |

CAL YR 1973 TOTAL 237,913.90 MEAN 652 MAX 5,970 MIN 0 AC-FT 471,900 (†) MEAN 1,800 AC-FT 1,303,000
WTR YR 1973 TOTAL 245,093.70 MEAN 671 MAX 5,970 MIN 0 AC-FT 486,100 (†) MEAN 1,808 AC-FT 1,309,000

(†) COMBINED FLOW, IN ACRE-FT AND MEAN, IN FT³/S, OF FLOODWAY AND CONVEYANCE CHANNEL.

## 08360500 ELEPHANT BUTTE RESERVOIR AT ELEPHANT BUTTE, N. MEX.

LOCATION.--Lat 33°09'15", long 107°11'28", in NW¼ sec.30, T.13 S., R.3 W., Sierra County, at dam on Rio Grande, 1 mi (1.6 km) west of Elephant Butte, 4 mi (6 km) northeast of Truth or Consequences (Hot Springs), N. Mex., and at mile 1,383.2 (2,225.6 km).

DRAINAGE AREA.--29,445 mi² (76,260 km²), approximately including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--March 1915 to December 1939 (monthend contents only published in WSP 1312), January 1940 to September 1965 (monthend contents only), October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 43.3 ft (13.20 m) above mean sea level. Oct. 16, 1939, to May 2, 1940, and prior to September 1930, nonrecording gages.

EXTREMES.--Current year: Maximum daily contents, 794,200 acre-ft (979 hm³) Dec. 31 (gage height, 4,355.52 ft or 1,327.562 m); minimum daily, 303,600 acre-ft (374 hm³) Jan. 1 (gage height, 4,319.22 ft or 1,316.498 m).
Period of record: Maximum daily contents, 2,302,800 acre-ft (2,840 hm³) June 16-18, 1942 (gage height, 4,409.19 ft or 1,343.921 m); minimum daily after initial filling, 9,900 acre-ft (12.2 hm³) Aug. 6, 1954 (gage height, 4,258.03 ft or 1,297.848 m).

REMARKS.--Reservoir is formed by concrete dam. Storage began Jan. 6, 1915. Dam completed May 13, 1916. Capacity, 2,137,000 acre-ft (2.63 km³) survey of 1969 between gage heights 4,231.5 ft (1,289.76 m) sill of outlet gate and 4,407.0 ft (1,343.25 m) crest or spillway. Capacity by original survey was 2,638,900 acre-ft (3.25 km³). No adjustment made for decrease in capacity due to sedimentation between effective dates of capacity tables. No dead storage, survey of 1957, 1961, and 1969. No storage allocated to flood control. Figures given herein represent usable contents and are computed from mean daily gage heights. Water is used for power development and irrigation on Rio Grande Project of Bureau of Reclamation. Lake is major recreational area.

COOPERATION.--Records furnished by Bureau of Reclamation.

REVISIONS (WATER YEARS).--WSP 1442: 1954(m). WSP 1632: Drainage area.

Capacity table (gage height, in feet, and usable contents, in thousands of acre-feet)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4,270 | 27.93 | 4,290 | 92.81 | 4,310 | 220.1 | 4,330 | 422.2 | 4,350 | 701.7 |
| 4,275 | 39.98 | 4,295 | 118.2 | 4,315 | 263.5 | 4,335 | 485.1 | 4,355 | 785.2 |
| 4,280 | 54.16 | 4,300 | 147.6 | 4,320 | 311.4 | 4,340 | 552.0 | 4,360 | 874.4 |
| 4,285 | 71.45 | 4,305 | 181.4 | 4,325 | 364.1 | 4,345 | 624.0 | 4,365 | 970.0 |

CONTENTS, IN ACRE-FEET, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 303,600 | 344,800 | 385,600 | 365,400 | 386,900 | 558,900 | 677,500 | 700,400 | 703,800 | 664,000 | 672,000 | 709,600 |
| 2 | 305,100 | 346,300 | 386,600 | 364,700 | 387,400 | 566,100 | 678,600 | 701,100 | 701,700 | 664,000 | 674,300 | 712,100 |
| 3 | 306,200 | 347,900 | 387,500 | 363,300 | 389,100 | 573,400 | 679,700 | 701,900 | 699,900 | 664,000 | 674,600 | 714,000 |
| 4 | 307,400 | 349,300 | 389,000 | 362,000 | 391,300 | 581,800 | 681,500 | 704,000 | 698,300 | 664,000 | 675,700 | 716,200 |
| 5 | 308,700 | 350,800 | 391,100 | 360,900 | 394,000 | 589,300 | 682,900 | 707,200 | 696,700 | 664,000 | 676,700 | 718,600 |
| 6 | 310,100 | 351,900 | 393,800 | 359,800 | 397,300 | 597,300 | 684,000 | 709,800 | 694,600 | 664,000 | 677,800 | 721,600 |
| 7 | 310,300 | 353,100 | 396,500 | 358,700 | 400,900 | 605,000 | 684,900 | 711,600 | 692,700 | 664,200 | 679,200 | 724,500 |
| 8 | 313,000 | 354,600 | 398,600 | 357,200 | 405,300 | 613,400 | 685,500 | 713,200 | 690,800 | 664,200 | 680,300 | 727,500 |
| 9 | 314,300 | 356,100 | 399,500 | 355,800 | 409,300 | 619,500 | 686,000 | 714,800 | 688,900 | 664,200 | 682,100 | 730,800 |
| 10 | 315,500 | 357,500 | 397,800 | 356,600 | 413,400 | 624,100 | 686,300 | 715,500 | 687,000 | 664,200 | 682,900 | 733,300 |
| 11 | 317,100 | 359,100 | 395,900 | 357,700 | 417,400 | 627,900 | 686,800 | 716,300 | 685,400 | 664,200 | 684,100 | 736,400 |
| 12 | 318,200 | 360,700 | 394,500 | 358,000 | 420,900 | 631,300 | 687,000 | 717,100 | 684,000 | 664,300 | 685,500 | 739,400 |
| 13 | 319,600 | 362,000 | 392,600 | 358,500 | 424,400 | 635,100 | 687,300 | 717,500 | 682,500 | 664,900 | 687,000 | 742,700 |
| 14 | 321,000 | 363,600 | 390,300 | 358,600 | 428,500 | 639,200 | 687,800 | 717,600 | 681,100 | 665,200 | 688,600 | 745,900 |
| 15 | 322,300 | 365,100 | 388,700 | 359,300 | 433,100 | 644,300 | 688,300 | 717,800 | 679,800 | 665,700 | 689,400 | 748,000 |
| 16 | 323,500 | 366,700 | 387,100 | 360,500 | 438,800 | 648,800 | 688,900 | 717,600 | 678,600 | 666,300 | 690,200 | 751,300 |
| 17 | 325,100 | 368,300 | 385,700 | 362,700 | 444,500 | 654,400 | 689,500 | 717,600 | 677,600 | 666,800 | 690,500 | 754,700 |
| 18 | 326,600 | 369,800 | 384,000 | 365,900 | 451,600 | 659,000 | 690,200 | 717,800 | 676,500 | 667,400 | 700,600 | 757,500 |
| 19 | 327,700 | 371,400 | 382,200 | 368,900 | 459,300 | 663,400 | 690,500 | 717,800 | 675,400 | 668,100 | 691,600 | 760,100 |
| 20 | 329,000 | 372,700 | 380,300 | 371,700 | 466,800 | 665,900 | 691,000 | 717,800 | 674,500 | 668,400 | 691,900 | 762,600 |
| 21 | 330,200 | 374,500 | 378,300 | 374,400 | 473,700 | 667,900 | 691,100 | 717,100 | 673,100 | 668,800 | 692,200 | 764,800 |
| 22 | 331,500 | 376,200 | 377,100 | 378,000 | 481,100 | 669,900 | 691,400 | 716,300 | 672,000 | 669,300 | 692,600 | 768,200 |
| 23 | 332,900 | 377,500 | 375,200 | 380,400 | 488,600 | 670,900 | 691,600 | 715,500 | 671,200 | 669,600 | 694,000 | 771,500 |
| 24 | 334,100 | 378,900 | 374,300 | 381,900 | 496,600 | 671,200 | 691,400 | 714,500 | 670,200 | 670,100 | 695,400 | 774,400 |
| 25 | 335,600 | 380,600 | 373,700 | 383,300 | 504,200 | 671,700 | 691,100 | 713,200 | 669,600 | 670,400 | 696,700 | 776,600 |
| 26 | 336,900 | 382,100 | 373,100 | 384,400 | 512,700 | 672,900 | 691,300 | 712,100 | 668,400 | 670,700 | 698,300 | 780,000 |
| 27 | 338,200 | 383,300 | 372,000 | 385,600 | 521,300 | 673,400 | 692,100 | 710,800 | 666,800 | 671,200 | 700,100 | 782,300 |
| 28 | 339,300 | 384,400 | 370,700 | 386,400 | 529,100 | 674,300 | 693,700 | 709,500 | 665,200 | 671,300 | 701,700 | 785,200 |
| 29 | 340,400 | ------ | 368,900 | 386,600 | 536,600 | 675,100 | 695,900 | 707,900 | 664,000 | 671,500 | 704,600 | 788,300 |
| 30 | 341,700 | ------ | 367,200 | 386,700 | 544,300 | 675,900 | 697,700 | 706,600 | 663,800 | 671,700 | 706,600 | 791,800 |
| 31 | 343,400 | ------ | 366,100 | ------ | 551,900 | ------ | 699,100 | 705,300 | ------ | 671,800 | ------ | 794,200 |
| MAX | 343,400 | 384,400 | 399,500 | 386,700 | 551,900 | 675,900 | 699,100 | 717,800 | 703,800 | 671,800 | 706,600 | 794,200 |
| MIN | 303,600 | 344,800 | 366,100 | 355,800 | 386,900 | 558,900 | 677,500 | 700,400 | 663,800 | 664,000 | 672,000 | 709,600 |
| (†) | 4,323.10 | 4,326.80 | 4,325.18 | 4,327.00 | 4,339.99 | 4,348.38 | 4,349.84 | 4,350.22 | 4,347.61 | 4,348.12 | 4,350.30 | 4,355.52 |
| (‡) | +41,800 | +41,000 | -18,300 | +20,600 | +165,200 | +124,000 | +23,200 | +6,200 | -41,500 | +8,000 | +34,800 | +87,600 |

CAL YR 1973 . . . . . (‡) +492,600
WTR YR 1973 . . . . . (‡) +535,400

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

## 08361000 RIO GRANDE BELOW ELEPHANT BUTTE DAM, N. MEX.

LOCATION.--Lat 33°08'54", long 107°12'22", Sierra County, in Pedro Armendaris Grant, on left bank 1.0 mi (1.6 km) downstream from dam, 1.5 mi (2.4 km) upstream from Cuchillo Negro River, and at mile 1,382.2 (2,224.0 km).

DRAINAGE AREA.--29,450 mi² (76,280 km²), approximately including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--January 1915 to current year. Monthly or annual discharge only for some periods, published in WSP 1732. Figures of daily discharge, published in WSP 458 for October to December 1916, are unreliable.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 4,242.09 ft (1,292.989 m) above mean sea level. See WSP 1732 for history of changes prior to Apr. 24, 1942.

AVERAGE DISCHARGE.--59 calendar years, 996 ft³/s (28.21 m³/s), 721,600 acre-ft/yr (890 hm³/yr); 20 calendar years (1954-73), 703 ft³/s (19.91 m³/s), 509,300 acre-ft/yr (628 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,330 ft³/s (66.0 m³/s) June 29 (gage height, 7.50 ft or 2.286 m); minimum, 2.6 ft³/s (0.074 m³/s) Jan. 8, 17.
Period of record: Maximum daily discharge, 8,220 ft³/s (233 m³/s) May 22, 1942; no flow at times prior to 1929.

REMARKS.--Records good except those for June to August, which are fair. Flow regulated by Elephant Butte Reservoir (see sta 08360500). Diversion for irrigation of about 800,000 acres (3,240 km²) above station.

REVISIONS (WATER YEARS).--WSP 1562: 1920. WSP 1632: Dainage area. WSP 1732: 1917, 1920. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.7 | 23 | 17 | 1,870 | 1,940 | 1,880 | 1,930 | 1,340 | 1,460 | 15 | 9.3 | 8.1 |
| 2 | 3.7 | 7.5 | 16 | 1,870 | 1,930 | 1,860 | 1,940 | 1,330 | 1,480 | 15 | 11 | 8.1 |
| 3 | 3.3 | 9.9 | 16 | 1,830 | 1,930 | 1,850 | 1,930 | 696 | 1,510 | 15 | 13 | 8.1 |
| 4 | 3.3 | 9.9 | 16 | 1,830 | 1,930 | 1,870 | 1,970 | 764 | 1,520 | 16 | 13 | 8.1 |
| 5 | 3.3 | 11 | 11 | 1,830 | 1,930 | 1,860 | 1,990 | 756 | 1,550 | 15 | 14 | 8.1 |
| 6 | 3.7 | 11 | 9.3 | 1,870 | 1,920 | 1,830 | 1,840 | 752 | 1,510 | 15 | 14 | 8.1 |
| 7 | 3.7 | 12 | 15 | 1,860 | 1,900 | 1,780 | 1,830 | 732 | 1,490 | 14 | 14 | 11 |
| 8 | 6.0 | 12 | 15 | 1,860 | 1,910 | 1,810 | 1,830 | 720 | 1,490 | 13 | 14 | 15 |
| 9 | 6.5 | 11 | 1,310 | 748 | 1,910 | 1,840 | 1,840 | 704 | 1,460 | 11 | 15 | 14 |
| 10 | 7.0 | 11 | 1,900 | 652 | 1,890 | 1,790 | 1,830 | 672 | 1,450 | 8.7 | 15 | 14 |
| 11 | 6.0 | 12 | 1,830 | 636 | 1,900 | 1,790 | 1,810 | 656 | 1,530 | 8.7 | 15 | 14 |
| 12 | 6.0 | 15 | 1,810 | 660 | 1,910 | 1,790 | 1,820 | 656 | 1,560 | 8.1 | 15 | 13 |
| 13 | 5.0 | 11 | 1,820 | 684 | 1,920 | 1,780 | 1,830 | 648 | 1,570 | 7.5 | 16 | 14 |
| 14 | 4.1 | 11 | 1,880 | 692 | 1,930 | 1,780 | 1,830 | 648 | 1,600 | 7.5 | 15 | 14 |
| 15 | 7.0 | 11 | 1,990 | 656 | 1,900 | 1,780 | 1,830 | 648 | 1,610 | 8.7 | 14 | 14 |
| 16 | 4.5 | 11 | 2,040 | 684 | 1,960 | 1,780 | 1,830 | 660 | 1,540 | 8.7 | 14 | 14 |
| 17 | 4.5 | 9.9 | 1,970 | 684 | 1,970 | 1,790 | 1,830 | 656 | 1,580 | 8.7 | 14 | 14 |
| 18 | 4.2 | 8.7 | 1,960 | 700 | 1,960 | 1,760 | 1,820 | 664 | 855 | 8.7 | 14 | 13 |
| 19 | 4.6 | 9.3 | 1,990 | 688 | 1,920 | 1,790 | 1,820 | 668 | 768 | 8.7 | 14 | 13 |
| 20 | 4.2 | 8.1 | 1,940 | 680 | 1,930 | 1,790 | 1,820 | 676 | 732 | 8.7 | 14 | 13 |
| 21 | 4.4 | 14 | 1,940 | 652 | 1,920 | 1,790 | 1,820 | 764 | 740 | 8.7 | 14 | 13 |
| 22 | 4.2 | 13 | 1,900 | 323 | 1,940 | 1,810 | 1,830 | 664 | 748 | 8.1 | 14 | 13 |
| 23 | 4.2 | 13 | 1,860 | 520 | 1,900 | 1,790 | 1,820 | 668 | 728 | 8.7 | 13 | 12 |
| 24 | 4.2 | 13 | 1,850 | 616 | 1,820 | 1,820 | 1,820 | 676 | 716 | 8.7 | 13 | 12 |
| 25 | 4.3 | 14 | 1,860 | 652 | 1,900 | 1,810 | 1,780 | 684 | 708 | 8.7 | 12 | 12 |
| 26 | 4.2 | 14 | 1,880 | 648 | 1,970 | 1,790 | 1,340 | 696 | 700 | 9.3 | 11 | 12 |
| 27 | 3.3 | 14 | 1,880 | 704 | 1,990 | 1,860 | 1,320 | 704 | 692 | 8.7 | 7.5 | 11 |
| 28 | 3.0 | 15 | 1,890 | 1,840 | 1,960 | 1,910 | 1,450 | 704 | 708 | 8.7 | 8.1 | 11 |
| 29 | 3.0 | ------ | 1,910 | 1,910 | 1,950 | 1,930 | 1,430 | 724 | 676 | 9.3 | 8.1 | 11 |
| 30 | 4.5 | ------ | 1,890 | 1,920 | 1,900 | 1,930 | 1,420 | 1,420 | 23 | 9.9 | 8.1 | 11 |
| 31 | 26 | ------ | 1,910 | ------ | 1,870 | ------ | 1,390 | 1,440 | ------ | 9.9 | ------ | 11 |
| TOTAL | 159.6 | 335.3 | 43,325.3 | 32,769 | 59,610 | 54,640 | 54,590 | 24,190 | 34,704 | 320.4 | 386.1 | 367.6 |
| MEAN | 5.15 | 12.0 | 1,398 | 1,092 | 1,923 | 1,821 | 1,761 | 780 | 1,157 | 10.3 | 12.9 | 11.9 |
| MAX | 26 | 23 | 2,040 | 1,920 | 1,990 | 1,930 | 1,990 | 1,440 | 1,610 | 16 | 16 | 15 |
| MIN | 3.0 | 7.5 | 9.3 | 323 | 1,820 | 1,760 | 1,320 | 648 | 23 | 7.5 | 7.5 | 8.1 |
| AC-FT | 317 | 665 | 85,940 | 65,000 | 118,200 | 108,400 | 108,300 | 47,980 | 68,840 | 636 | 766 | 729 |

CAL YR 1973 TOTAL 305,397.3 MEAN 837 MAX 2,040 MIN 3.0 AC-FT 605,800
WTR YR 1973 TOTAL 304,640.9 MEAN 835 MAX 2,040 MIN 1.1 AC-FT 604,300

## 08362000 CABALLO RESERVOIR NEAR ARREY, N. MEX.

LOCATION.--Lat 32°53'47", long 107°17'30", in SE¼SW¼ sec.19, T.16 S., R.4 W., Sierra County, in control tower of Caballo Dam on Rio Grande, 0.5 mi (0.8 km) downstream from mouth of Apache Canyon, 0.9 mi (1.4 km) upstream from Bojarquez Bridge, 2 mi (3 km) upstream from Percha diversion dam, 3.5 mi (5.6 km) northeast of Arrey, 5.2 mi (8.4 km) south of Caballo, and at mile 1,356.6 (2,182.8 km).

DRAINAGE AREA.--30,700 mi² (79,510 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--February 1938 to September 1965 (monthend contents only), October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 43.3 ft (13.20 m) above mean sea level.

EXTREMES.--Current year: Maximum daily contents, 130,740 acre-ft (161 hm³) June 19 (gage height, 4,158.44 ft or 1,267.493 m); minimum daily, 31,310 acre-ft (38.6 hm³) Sept. 29 (gage height, 4,136.99 ft or 1,260.955 m).
Period of record: Maximum daily contents, 347,000 acre-ft (428 hm³) Mar. 4, 1942 (gage height, 4,182.06 ft or 1,274.692 m); minimum daily 118 acre-ft (0.145 hm³), Oct. 14, 1938 (gage height, 4,108.1 ft or 1,252.15 m).

REMARKS.--Reservoir if formed by earthfill dam, completed Sept. 19, 1938. Storage began Feb. 8, 1938. Capacity by 1958 survey, 344,000 acre-ft (424 hm³) between gage heights 4,104 ft (1,250.9 m) bottom of tunnel entrance of gates and 4,182 ft (1,274.7 m) gage height above which spillway gates operate automatically. No dead storage. Storage held for flood control, 100,000 acre-ft (123 hm³). Figures given herein represent usable contents and are computed from mean daily gage heights. Water released from Elephant Butte Reservoir for power development is stored in Caballo Reservoir and released for irrigation on Rio Grande project for Bureau of Reclamation.

COOPERATION.--Records furnished by Bureau of Reclamation.

REVISION (WATER YEARS).--WSP 978: 1942. WSP 1632: Drainage area.

Capacity table (gage height, in feet, and usable contents, in thousands of acre-feet)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4,122 | 3.41 | 4,130 | 14.70 | 4,138 | 34.19 | 4,146 | 62.50 | 4,154 | 102.2 |
| 4,124 | 5.47 | 4,132 | 18.88 | 4,140 | 40.31 | 4,148 | 71.28 | 4,156 | 114.5 |
| 4,126 | 8.00 | 4,134 | 23.52 | 4,142 | 47.03 | 4,150 | 80.76 | 4,158 | 127.7 |
| 4,128 | 11.06 | 4,136 | 28.61 | 4,144 | 54.42 | 4,152 | 91.03 | 4,160 | 141.7 |

CONTENTS, IN ACRE-FEET, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 68,150 | 69,490 | 74,030 | 83,020 | 76,270 | 119,680 | 118,000 | 129,630 | 42,740 | 32,250 | 35,570 | 37,870 |
| 2 | 68,150 | 69,540 | 74,440 | 83,320 | 78,300 | 120,400 | 116,370 | 130,320 | 43,260 | 32,480 | 35,660 | 37,870 |
| 3 | 68,110 | 69,630 | 74,960 | 83,680 | 80,180 | 121,450 | 115,070 | 130,830 | 44,110 | 32,680 | 35,750 | 37,900 |
| 4 | 68,110 | 69,670 | 75,290 | 84,230 | 81,920 | 122,790 | 113,550 | 128,460 | 44,830 | 32,880 | 35,810 | 38,000 |
| 5 | 68,150 | 69,760 | 75,560 | 84,930 | 83,480 | 123,870 | 111,920 | 125,950 | 44,900 | 33,020 | 35,900 | 38,120 |
| 6 | 68,150 | 69,900 | 75,650 | 85,840 | 85,280 | 124,410 | 110,300 | 123,130 | 44,760 | 33,160 | 35,990 | 38,150 |
| 7 | 68,200 | 69,940 | 75,840 | 86,570 | 86,990 | 124,880 | 108,860 | 120,070 | 44,560 | 33,310 | 36,080 | 38,220 |
| 8 | 68,370 | 70,030 | 76,080 | 87,360 | 88,720 | 125,350 | 107,270 | 115,790 | 43,330 | 33,360 | 36,160 | 38,340 |
| 9 | 68,510 | 70,070 | 76,420 | 88,090 | 90,080 | 125,680 | 105,890 | 111,420 | 42,440 | 33,420 | 36,260 | 38,400 |
| 10 | 68,550 | 70,120 | 78,250 | 87,830 | 86,100 | 125,950 | 104,990 | 107,150 | 42,640 | 33,590 | 36,380 | 38,400 |
| 11 | 68,550 | 70,160 | 80,420 | 87,100 | 92,290 | 126,280 | 103,970 | 103,130 | 42,870 | 33,710 | 36,490 | 38,430 |
| 12 | 68,550 | 70,250 | 82,420 | 86,780 | 93,770 | 126,490 | 103,010 | 99,020 | 42,080 | 33,820 | 36,550 | 38,560 |
| 13 | 68,600 | 70,340 | 84,380 | 85,380 | 94,860 | 126,560 | 102,180 | 94,970 | 41,130 | 33,960 | 36,610 | 38,560 |
| 14 | 68,600 | 70,390 | 85,080 | 84,530 | 96,390 | 126,630 | 101,720 | 90,560 | 40,310 | 34,080 | 36,640 | 38,750 |
| 15 | 68,640 | 70,480 | 85,890 | 83,730 | 97,990 | 126,900 | 102,120 | 86,200 | 40,160 | 34,130 | 36,640 | 38,870 |
| 16 | 68,690 | 70,610 | 86,050 | 82,770 | 99,710 | 127,570 | 104,870 | 81,770 | 40,190 | 34,250 | 36,640 | 38,970 |
| 17 | 68,690 | 70,700 | 86,000 | 81,820 | 101,720 | 128,530 | 107,390 | 77,480 | 40,340 | 34,370 | 36,670 | 38,970 |
| 18 | 68,780 | 70,840 | 85,940 | 80,620 | 103,670 | 129,630 | 110,490 | 73,700 | 40,310 | 34,490 | 36,700 | 39,030 |
| 19 | 68,820 | 71,060 | 85,790 | 79,550 | 105,830 | 130,740 | 114,050 | 70,390 | 39,400 | 34,610 | 36,760 | 39,180 |
| 20 | 68,870 | 71,190 | 85,740 | 78,540 | 107,990 | 130,250 | 117,480 | 67,170 | 38,310 | 34,730 | 36,910 | 39,180 |
| 21 | 68,910 | 71,560 | 85,690 | 77,480 | 110,040 | 129,220 | 120,070 | 64,660 | 37,150 | 34,820 | 37,060 | 39,220 |
| 22 | 69,000 | 71,750 | 85,690 | 76,420 | 111,860 | 128,320 | 121,580 | 62,720 | 36,550 | 34,910 | 37,120 | 39,280 |
| 23 | 69,050 | 71,790 | 85,690 | 75,190 | 113,240 | 127,370 | 122,720 | 60,720 | 36,050 | 35,030 | 37,180 | 39,340 |
| 24 | 69,090 | 71,890 | 85,640 | 74,260 | 114,240 | 126,490 | 123,540 | 58,090 | 35,600 | 35,090 | 37,240 | 39,370 |
| 25 | 69,140 | 72,210 | 85,030 | 73,420 | 115,010 | 125,880 | 124,340 | 55,360 | 34,850 | 35,210 | 37,280 | 39,440 |
| 26 | 69,140 | 72,720 | 84,530 | 72,490 | 115,340 | 125,810 | 126,220 | 52,450 | 33,680 | 35,300 | 37,310 | 39,500 |
| 27 | 69,180 | 73,100 | 84,130 | 71,560 | 116,110 | 124,680 | 126,430 | 49,590 | 32,530 | 35,330 | 37,590 | 39,620 |
| 28 | 69,220 | 73,560 | 83,680 | 71,380 | 116,890 | 123,000 | 126,700 | 47,210 | 31,620 | 35,360 | 37,710 | 39,690 |
| 29 | 69,310 | ------ | 83,270 | 72,720 | 117,670 | 121,380 | 127,430 | 44,000 | 31,310 | 35,420 | 37,740 | 39,780 |
| 30 | 69,360 | ------ | 83,120 | 74,260 | 118,510 | 119,680 | 128,040 | 42,800 | 31,850 | 35,480 | 37,810 | 39,810 |
| 31 | 69,450 | ------ | 83,020 | ------ | 119,160 | ------ | 128,670 | 42,800 | ------ | 35,540 | ------ | 39,970 |
| MAX | 69,450 | 73,560 | 86,050 | 88,090 | 119,160 | 130,740 | 128,670 | 130,830 | 44,900 | 35,540 | 37,810 | 39,970 |
| MIN | 68,110 | 69,490 | 74,030 | 71,380 | 76,270 | 119,680 | 101,720 | 42,800 | 31,310 | 32,250 | 35,570 | 37,870 |
| (†) | 4,147.59 | 4,148.49 | 4,150.45 | 4,148.64 | 4,156.72 | 4,156.80 | 4,158.14 | 4,140.76 | 4,137.18 | 4,138.45 | 4,139.20 | 4,139.89 |
| (‡) | +1,380 | +4,110 | +9,460 | -8,760 | +44,900 | +520 | +8,990 | -85,870 | -10,950 | +3,690 | +2,270 | +2,160 |

CAL YR 1973 . . . . . -28,100
WTR YR 1973 . . . . . -20,180

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

## 08362500 RIO GRANDE BELOW CABALLO DAM, N. MEX.

LOCATION.--Lat 32°53'05", long 107°17'31", in NE¼SW¼ sec.30, T.16 S., R.4 W., Sierra County, on left bank 2,000 ft (600 m) upstream from Interstate Highway 25, 4,200 ft (130 m) downstream from Caballo Dam, 1.2 mi (1.9 km) downstream from Apache Canyon, 1.3 mi (2.1 km) upstream from Percha diversion dam, 3 mi (5 km) northeast of Arrey, 5 mi (8 km) south of Caballo, and at mile 1,355.6 (2,181.2 km).

DRAINAGE AREA.--30,700 mi² (79,510 km²), approximately including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--January 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,140.9 ft (1,262.15 m) above mean sea level. Prior to Oct. 7, 1938, at datum 7.0 ft (2.13 m) higher, Oct. 7-12, 1938, at datum 6.0 ft (1.82 m) higher, and Oct. 13, 1938, to Dec. 31, 1945, at datum 5.0 ft (1.52 m) higher than present datum.

AVERAGE DISCHARGE.--36 calendar years, 868 ft³/s (24.58 m³/s), 628,900 acre-ft/yr (775 hm³/yr); 20 calendar years (1954-73), 687 ft³/s (19.46 m³/s), 497,700 acre-ft/yr (614 hm³/yr).

EXTREMES.--Current year: Maximum daily discharge, 2,810 ft³/s (79.6 m³/s) Aug. 15, 16; minimum daily, 1.2 ft³/s (0.034 m³/s) at times.
Period of record: Maximum daily discharge, 7,650 ft³/s (217 m³/s) May 20, 1942; minimum daily, 0.1 ft³/s (0.003 m³/s) Oct. 31 to Nov. 14, 1954, Nov. 7 to Dec 31, 1955, Feb. 15-29, 1972.

REMARKS.--Records good. Flow regulated by Caballo Reservoir capacity, 344,000 acre-ft (424 hm³), 1958 survey and Elephant Butte Reservoir capacity, 2,137,000 acre-ft (2.63 km³), 1969 survey. Diversions for irrigation of about 800,000 acres (3,240 km²) above station. Figures of daily discharge do not include Bonita ditch which diverts from Caballo Dam and bypasses station for irrigation below. See monthly table below for record of ditch.

COOPERATION.--Records furnished by Bureau of Reclamation.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.0 | 2.3 | 2.3 | 1,590 | 942 | 1,430 | 2,650 | 900 | 1,350 | 10 | 1.7 | 1.2 |
| 2 | 1.9 | 2.3 | 2.3 | 1,570 | 938 | 1,280 | 2,580 | 1,200 | 1,020 | 9.2 | 1.7 | 1.2 |
| 3 | 1.8 | 2.3 | 2.3 | 1,460 | 940 | 1,160 | 2,520 | 1,410 | 1,000 | 8.4 | 1.7 | 1.3 |
| 4 | 1.7 | 2.3 | 2.3 | 1,310 | 1,030 | 1,160 | 2,590 | 1,740 | 1,250 | 7.5 | 1.6 | 1.3 |
| 5 | 1.6 | 2.3 | 2.3 | 1,290 | 1,090 | 1,220 | 2,640 | 1,900 | 1,420 | 6.7 | 1.6 | 1.3 |
| 6 | 1.6 | 2.3 | 2.3 | 1,410 | 997 | 1,350 | 2,520 | 1,950 | 1,420 | 5.9 | 1.6 | 1.3 |
| 7 | 1.5 | 2.3 | 2.3 | 1,390 | 993 | 1,460 | 2,500 | 2,380 | 1,590 | 5.0 | 1.5 | 1.3 |
| 8 | 1.4 | 2.3 | 2.3 | 1,160 | 1,080 | 1,480 | 2,500 | 2,790 | 1,770 | 4.3 | 1.5 | 1.3 |
| 9 | 1.4 | 2.3 | 350 | 1,080 | 1,220 | 1,660 | 2,450 | 2,510 | 1,750 | 3.4 | 1.5 | 1.3 |
| 10 | 1.3 | 2.3 | 777 | 1,080 | 1,220 | 1,660 | 2,320 | 2,610 | 1,530 | 2.6 | 1.4 | 1.3 |
| 11 | 1.3 | 2.3 | 785 | 1,070 | 1,250 | 1,600 | 2,250 | 2,610 | 1,590 | 1.8 | 1.4 | 1.3 |
| 12 | 1.5 | 2.3 | 802 | 1,080 | 1,280 | 1,740 | 2,200 | 2,530 | 1,740 | 1.8 | 1.3 | 1.3 |
| 13 | 1.8 | 2.3 | 1,020 | 1,110 | 1,220 | 1,850 | 2,090 | 2,600 | 1,750 | 1.8 | 1.3 | 1.3 |
| 14 | 2.0 | 2.3 | 1,550 | 1,170 | 1,090 | 1,660 | 1,960 | 2,730 | 1,530 | 1.8 | 1.3 | 1.4 |
| 15 | 2.3 | 2.3 | 1,710 | 1,170 | 1,040 | 1,520 | 527 | 2,810 | 1,330 | 1.8 | 1.2 | 1.4 |
| 16 | 2.3 | 2.3 | 1,780 | 1,180 | 974 | 1,360 | 440 | 2,810 | 1,210 | 1.8 | 1.2 | 1.4 |
| 17 | 2.3 | 2.3 | 1,770 | 1,230 | 976 | 1,210 | 277 | 2,560 | 1,260 | 1.8 | 1.2 | 1.4 |
| 18 | 2.3 | 2.3 | 1,770 | 1,290 | 890 | 1,210 | 14 | 2,470 | 1,260 | 1.8 | 1.2 | 1.4 |
| 19 | 2.3 | 2.3 | 1,790 | 1,270 | 758 | 1,650 | 3.2 | 2,360 | 1,240 | 1.7 | 1.2 | 1.4 |
| 20 | 2.3 | 2.3 | 1,830 | 1,220 | 717 | 2,180 | 209 | 2,090 | 1,250 | 1.7 | 1.2 | 1.4 |
| 21 | 2.3 | 2.3 | 1,920 | 1,220 | 779 | 2,180 | 858 | 1,700 | 1,090 | 1.7 | 1.2 | 1.4 |
| 22 | 2.3 | 2.3 | 1,930 | 1,160 | 1,070 | 2,180 | 1,190 | 1,680 | 884 | 1.7 | 1.2 | 1.4 |
| 23 | 2.3 | 2.3 | 1,990 | 1,120 | 1,280 | 2,100 | 1,250 | 1,820 | 875 | 1.7 | 1.2 | 1.4 |
| 24 | 2.3 | 2.3 | 2,050 | 1,180 | 1,320 | 2,000 | 1,170 | 1,900 | 918 | 1.7 | 1.2 | 1.4 |
| 25 | 2.3 | 2.3 | 2,030 | 1,210 | 1,520 | 1,840 | 1,070 | 1,910 | 1,210 | 1.7 | 1.2 | 1.4 |
| 26 | 2.3 | 2.3 | 2,010 | 1,200 | 1,640 | 2,120 | 1,060 | 2,000 | 1,290 | 1.7 | 1.2 | 1.4 |
| 27 | 2.3 | 2.3 | 2,010 | 1,190 | 1,470 | 2,370 | 1,130 | 1,820 | 1,140 | 1.7 | 1.2 | 1.4 |
| 28 | 2.3 | 2.3 | 1,990 | 1,210 | 1,360 | 2,380 | 917 | 2,030 | 1,050 | 1.7 | 1.2 | 1.4 |
| 29 | 2.3 | ------ | 1,990 | 1,130 | 1,430 | 2,480 | 909 | 2,270 | 634 | 1.7 | 1.2 | 1.4 |
| 30 | 2.3 | ------ | 1,810 | 1,040 | 1,480 | 2,640 | 909 | 1,630 | 169 | 1.7 | 1.2 | 1.4 |
| 31 | 2.3 | ------ | 1,590 | ------ | 1,480 | ------ | 889 | 1,460 | ------ | 1.7 | ------ | 1.4 |
| TOTAL | 61.9 | 64.4 | 37,272.4 | 36,790 | 35,474 | 52,130 | 46,592.2 | 65,180 | 37,520 | 99.5 | 40.3 | 41.9 |
| MEAN | 2.00 | 2.30 | 1,202 | 1,226 | 1,144 | 1,738 | 1,503 | 2,103 | 1,251 | 3.21 | 1.34 | 1.35 |
| MAX | 2.3 | 2.3 | 2,050 | 1,590 | 1,640 | 2,640 | 2,650 | 2,810 | 1,770 | 10 | 1.7 | 1.4 |
| MIN | 1.3 | 2.3 | 2.3 | 1,040 | 717 | 1,160 | 3.2 | 900 | 169 | 1.7 | 1.2 | 1.2 |
| AC-FT | 123 | 128 | 73,930 | 72,970 | 70,360 | 103,400 | 92,420 | 129,300 | 74,420 | 197 | 80 | 83 |
| (†) | 0 | 0 | 124 | 65 | 144 | 178 | 119 | 265 | 125 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 311,266.6 MEAN 853 MAX 2,810 MIN 1.2 AC-FT 617,400
WTR YR 1973 TOTAL 311,293.4 MEAN 853 MAX 2,810 MIN 1.3 AC-FT 617,500

(†) DIVERSION, IN ACRE-FEET, BY BONITA DITCH, BONITA DITCH DIVERTS DIRECTLY FROM CABALLO DAM AND THIS DIVERSION IS NOT INCLUDED IN THE RIVER RECORDS.

## 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, 30 ft (9 m) downstream from flood detention dam, 1.2 mi (1.9 km) northeast of New Mexico State University, and 3.3 mi (5.3 km) southeast of Las Cruces.

DRAINAGE AREA.--20.7 $mi^2$ (53.6 $km^2$).

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder and Parshall flume at downstream end of reservoir outlet pipe. Datum of gage is 4,071.62 ft (1,241.030 m) above mean sea level Soil Conservation Service bench mark.

AVERAGE DISCHARGE.--11 calendar years, 0.217 $ft^3/s$ (0.006 $m^3/s$), 157 acre-ft/yr (194,000 $m^3/yr$).

EXTREMES.--Current year: Maximum discharge, 1.9 $ft^3/s$ (0.054 $m^3/s$) July 25 (gage height, 0.28 ft or 0.085 m); no flow most of time.
Period of record: Maximum discharge, 107 $ft^3/s$ (3.03 $m^3/s$) Sept. 1, 1972 (gage height, 2.56 ft or 0.780 m); no flow most of time.

REMARKS.--Records fair. Records represent outflow from Tortugas Reservoir, completed in 1962. Water quality records for the current year are published in Part 2 of this report.
Reservoir is designed to retard floodflows and detain silt. Dam is earthfill, L-shaped, 3,400 ft (1,040 m) long at crest and 44 ft (13 m) high. Original capacity, 1,325 acre-ft (1.63 $hm^3$) at spillway crest. No dead storage, though deposition of silt is expected to reduce storage capacity. Outlet drop tower is 9' -2" x 4' -2" inside and 18' 6" high. The tower has 9 rectangular outlet ports, each 8"x17", but 6 are presently closed. Tower is connected to downstream channel by a 30-inch diameter pipe. Records will be published in tabular form, as flow events.

Outflow during calendar year 1973

| Flow event | Date | Outflow (hours) | Maximum ($ft^3/s$) | $ft^3/s$-days | Runoff (acre-ft) |
|---|---|---|---|---|---|
| 54 | July 14,15 | 11 | 1.0 | .09 | 0.2 |
| 55 | July 25 | 5 | 1.9 | .15 | 0.3 |

08364000 RIO GRANDE AT EL PASO, TEX.

LOCATION.--Lat 31°48'10", long 106°32'25", El Paso County, on downstream side of first pier from left abutment of Courchesne Bridge at El Paso, 1.7 mi (2.7 km) upstream from American Dam, 5.6 mi (9.0 km) upstream from Santa Fe Street-Juarez Avenue Bridge between El Paso and Cd. Juarez, Chihuahua, and at mile 1,249.9 (2,011.1 km).

DRAINAGE AREA.--32,207 mi² (83,415 km²), approximately, including 2,940 mi² (7,610 km²) in closed basin in San Luis Valley, Colo.

PERIOD OF RECORD.--January 1889 to current year. October 1960 to September 1965 in bulletins of International Boundary and Water Commission. Monthly discharges only for some periods published in WSP 1312 or 1732.

GAGE.--Water-stage recorder. Datum of gage is 3,722.30 ft (1,134.557 m) above mean sea level (U.S.C. & G.S. datum). See WSP 1312 or 1732 for history of changes prior to Aug. 4, 1938.

AVERAGE DISCHARGE.--36 calendar years (1938-73), 516 ft³/s (14.61 m³/s), 373,800 acre-ft/yr (461 hm³/yr); 20 calendar years (1954-73), 341 ft³/s (9.657 m³/s) 247,100 acre-ft/yr (305 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,400 ft³/s (96.3 m³/s) Aug. 30 (gage height, 6.73 ft or 2.051 m); minimum, 4.5 ft³/s (0.13 m³/s) Mar. 6.
Period of record: Maximum discharge, 24,000 ft³/s (680 m³/s) June 12, 1905; no flow at times. Maximum discharge since construction of Elephant Butte Dam in 1915, 13,500 ft³/s (382 m³/s) Sept. 3, 1925.

REMARKS.--Daily discharges were computed by adding discharges of American Canal at El Paso and Rio Grande below American Dam at El Paso. Reservoirs, diversions, and drainage returns modify the river flow at this station.

COOPERATION.--Records furnished by International Boundary and Water Commission, United States and Mexico.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.0 | 6.8 | 6.9 | 571 | 640 | 632 | 1.020 | 431 | 976 | 456 | 106 | 77.3 |
| 2 | 7.7 | 6.7 | 7.0 | 635 | 532 | 658 | 1.260 | 378 | 1.040 | 434 | 106 | 75.3 |
| 3 | 8.1 | 5.6 | 7.2 | 599 | 458 | 665 | 1.230 | 331 | 1.160 | 323 | 106 | 71.4 |
| 4 | 7.2 | 7.1 | 7.0 | 563 | 437 | 659 | 1.080 | 380 | 862 | 260 | 105 | 69.9 |
| 5 | 7.9 | 7.1 | 5.7 | 528 | 452 | 589 | 985 | 604 | 699 | 214 | 105 | 70.5 |
| 6 | 7.7 | 7.9 | 6.2 | 442 | 506 | 535 | 1.060 | 737 | 627 | 175 | 104 | 66.9 |
| 7 | 6.5 | 7.4 | 7.0 | 466 | 608 | 520 | 1.160 | 910 | 617 | 186 | 97.8 | 67.6 |
| 8 | 6.3 | 5.5 | 7.2 | 443 | 542 | 522 | 1.040 | 925 | 564 | 208 | 100 | 68.8 |
| 9 | 7.0 | 5.5 | 5.9 | 480 | 477 | 508 | 1.130 | 1.150 | 650 | 205 | 107 | 72.3 |
| 10 | 6.5 | 5.5 | 5.1 | 470 | 467 | 521 | 1.180 | 1.190 | 810 | 170 | 101 | 64.3 |
| 11 | 6.7 | 5.5 | 6.4 | 363 | 540 | 696 | 1.130 | 944 | 929 | 153 | 102 | 75.7 |
| 12 | 7.3 | 6.2 | 7.4 | 397 | 535 | 769 | 1.000 | 1.090 | 827 | 145 | 103 | 82.7 |
| 13 | 6.8 | 5.5 | 222 | 314 | 623 | 693 | 984 | 1.080 | 583 | 135 | 101 | 61.1 |
| 14 | 6.8 | 5.5 | 368 | 327 | 689 | 765 | 983 | 1.200 | 709 | 134 | 94.3 | 59.1 |
| 15 | 6.8 | 5.5 | 487 | 390 | 776 | 851 | 1.380 | 1.270 | 697 | 143 | 90.3 | 77.8 |
| 16 | 7.0 | 5.5 | 598 | 502 | 642 | 762 | 1.510 | 1.280 | 784 | 150 | 88.6 | 77.5 |
| 17 | 8.7 | 5.5 | 550 | 518 | 588 | 883 | 935 | 1.300 | 695 | 132 | 87.6 | 79.2 |
| 18 | 10.1 | 5.5 | 580 | 498 | 485 | 883 | 903 | 1.310 | 585 | 119 | 90.3 | 81.6 |
| 19 | 10.2 | 6.0 | 623 | 500 | 419 | 702 | 729 | 1.120 | 551 | 115 | 89.1 | 79.5 |
| 20 | 7.0 | 5.5 | 651 | 584 | 397 | 672 | 404 | 1.150 | 539 | 108 | 85.0 | 75.3 |
| 21 | 7.0 | 5.5 | 609 | 576 | 332 | 732 | 312 | 1.140 | 481 | 103 | 84.6 | 74.0 |
| 22 | 10.6 | 5.5 | 810 | 586 | 331 | 931 | 291 | 939 | 572 | 101 | 83.1 | 76.4 |
| 23 | 9.5 | 5.5 | 842 | 633 | 281 | 923 | 361 | 717 | 653 | 99.2 | 83.2 | 77.8 |
| 24 | 11.5 | 6.4 | 867 | 623 | 275 | 927 | 714 | 664 | 567 | 99.1 | 81.2 | 75.1 |
| 25 | 6.8 | 6.9 | 840 | 553 | 367 | 985 | 747 | 728 | 431 | 97.4 | 81.6 | 74.0 |
| 26 | 6.8 | 6.9 | 795 | 511 | 373 | 909 | 641 | 849 | 385 | 962 | 82.2 | 70.9 |
| 27 | 6.8 | 7.6 | 852 | 508 | 492 | 778 | 508 | 966 | 315 | 93.6 | 78.7 | 84.6 |
| 28 | 6.8 | 7.6 | 729 | 510 | 661 | 877 | 459 | 1.030 | 307 | 96.0 | 74.6 | 79.3 |
| 29 | 6.8 | | 645 | 560 | 672 | 880 | 667 | 827 | 290 | 94.5 | 82.8 | 75.6 |
| 30 | 6.8 | | 708 | 677 | 584 | 907 | 584 | 1.340 | 333 | 93.6 | 77.8 | 74.5 |
| 31 | 6.8 | ------ | 718 | | 575 | | 473 | 1.560 | ------ | 107 | | 75.1 |
| TOTAL | 234.5 | 173.2 | 12.573.0 | 15.327 | 15.756 | 22.334 | 26.860 | 29.540 | 19.238 | 5.045.6 | 2.778.8 | 2.291.1 |
| MEAN | 7.6 | 6.2 | 406 | 511 | 508 | 744 | 866 | 953 | 641 | 163 | 92.6 | 73.9 |
| MAX | 11.5 | 7.9 | 867 | 677 | 776 | 985 | 1,510 | 1,560 | 1,160 | 456 | 107 | 84.6 |
| MIN | 6.0 | 5.5 | 5.1 | 314 | 275 | 508 | 291 | 331 | 290 | 93.6 | 74.6 | 59.1 |
| AC-FT | 465 | 344 | 24,938 | 30,401 | 31,252 | 44,299 | 53,276 | 58,592 | 38,158 | 10,008 | 5,512 | 4,544 |

CAL YR 1973 TOTAL 152,151.2 MEAN 417 MAX 1,560 MIN 5.1 AC-FT 301,789
WTR YR 1973 TOTAL 145,493.8 MEAN 399 MAX 1,560 MIN 1.7 AC-FT 288,584

## 08377900 RIO MORA NEAR TERRERO, N. MEX.
(Hydrologic bench-mark station)

LOCATION.--Lat 35°46'38", long 105°39'27", in E½NE¼ sec.22, T.18 N., R.12 E., San Miguel County, in Santa Fe National Forest, on left bank 450 ft (140 m) upstream from bridge on State Highway 63, 600 ft (180 m) upstream from mouth, and 2.6 mi (4.2 km) north of Terrero.

DRAINAGE AREA.--53.2 mi² (137.8 km²).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,890 ft (2,405 m) from topographic map.

AVERAGE DISCHARGE.--10 calendar years, 29.2 ft³/s (0.827 m³/s), 21,160 acre-ft/yr (26.1 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 726 ft³/s (20.6 m³/s) May 21 (gage height, 3.68 ft or 1.122 m); minimum recorded, 2.6 ft³/s (0.074 m³/s) Nov. 25, but may have been less during period of ice effect.
Period of record: Maximum discharge, 726 ft³/s (20.6 m³/s) May 21, 1973 (gage height, 3.68 ft or 1.122 m); minimum determined, 0.90 ft³/s (0.025 m³/s) Jan. 12-14, 1964, but may have been less during periods of ice effect.
Greatest flood since 1886 probably occurred Sept. 29, 1904 (based on statement for Pecos River near Pecos and history of that flood period).

REMARKS.--Records good except those for winter periods, which are poor. About 90 percent of the drainage is in the Pecos Wilderness Area and not subject to development, watershed management, or the building of highways; there is limited cattle grazing by permit. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10 | 8.2 | 9.0 | 11 | 109 | 369 | 72 | 36 | 14 | 9.2 | 6.2 | 8.0 |
| 2 | 10 | 7.8 | 9.0 | 10 | 91 | 352 | 70 | 35 | 12 | 8.6 | 6.0 | 7.0 |
| 3 | 9.8 | 7.6 | 9.5 | 9.0 | 103 | 316 | 66 | 33 | 11 | 8.4 | 5.6 | 6.0 |
| 4 | 9.5 | 7.8 | 9.0 | 8.5 | 148 | 308 | 61 | 35 | 11 | 8.5 | 6.8 | 5.5 |
| 5 | 9.3 | 7.7 | 9.0 | 10 | 184 | 306 | 54 | 31 | 10 | 9.4 | 6.2 | 5.5 |
| 6 | 9.1 | 7.6 | 8.5 | 15 | 156 | 309 | 52 | 28 | 10 | 11 | 6.2 | 6.0 |
| 7 | 8.9 | 7.4 | 8.5 | 20 | 124 | 319 | 48 | 27 | 9.7 | 9.8 | 6.4 | 6.6 |
| 8 | 8.7 | 7.0 | 8.5 | 20 | 139 | 320 | 50 | 25 | 9.6 | 8.7 | 6.2 | 7.1 |
| 9 | 8.8 | 7.0 | 7.8 | 20 | 202 | 344 | 52 | 23 | 9.4 | 8.4 | 6.0 | 6.8 |
| 10 | 8.9 | 6.7 | 7.4 | 24 | 312 | 358 | 60 | 23 | 15 | 8.9 | 6.0 | 6.7 |
| 11 | 8.8 | 6.9 | 7.7 | 27 | 426 | 352 | 53 | 26 | 27 | 9.7 | 5.8 | 7.2 |
| 12 | 8.7 | 6.8 | 8.7 | 29 | 484 | 349 | 47 | 31 | 16 | 9.4 | 5.6 | 7.8 |
| 13 | 8.5 | 6.8 | 9.0 | 35 | 416 | 337 | 52 | 30 | 13 | 9.4 | 6.0 | 7.4 |
| 14 | 8.4 | 6.6 | 8.4 | 57 | 352 | 375 | 58 | 28 | 12 | 9.2 | 5.8 | 7.0 |
| 15 | 8.5 | 6.4 | 7.5 | 74 | 282 | 319 | 60 | 27 | 12 | 8.8 | 4.0 | 5.9 |
| 16 | 8.7 | 6.6 | 7.5 | 55 | 268 | 276 | 67 | 22 | 11 | 8.6 | 4.0 | 5.4 |
| 17 | 9.0 | 6.6 | 9.0 | 48 | 270 | 241 | 86 | 21 | 11 | 8.3 | 5.0 | 5.6 |
| 18 | 9.0 | 6.5 | 11 | 58 | 344 | 218 | 90 | 20 | 11 | 8.1 | 5.4 | 6.2 |
| 19 | 8.7 | 6.7 | 13 | 48 | 492 | 193 | 104 | 19 | 10 | 7.9 | 5.2 | 5.0 |
| 20 | 8.7 | 7.2 | 14 | 40 | 592 | 169 | 89 | 18 | 9.6 | 7.9 | 5.0 | 4.8 |
| 21 | 8.6 | 7.1 | 17 | 37 | 593 | 149 | 79 | 17 | 9.3 | 7.6 | 5.1 | 5.0 |
| 22 | 8.6 | 7.1 | 15 | 36 | 577 | 134 | 73 | 17 | 8.9 | 7.5 | 6.0 | 6.0 |
| 23 | 8.4 | 6.8 | 13 | 43 | 429 | 123 | 64 | 16 | 9.2 | 7.2 | 6.0 | 5.5 |
| 24 | 8.4 | 6.8 | 11 | 47 | 379 | 113 | 57 | 15 | 9.5 | 6.8 | 4.9 | 5.5 |
| 25 | 8.4 | 7.0 | 15 | 57 | 403 | 104 | 53 | 14 | 9.1 | 6.2 | 5.0 | 5.0 |
| 26 | 8.2 | 7.0 | 16 | 59 | 406 | 98 | 54 | 13 | 9.9 | 6.4 | 5.0 | 5.0 |
| 27 | 8.1 | 7.5 | 17 | 75 | 329 | 95 | 47 | 13 | 10 | 6.4 | 5.0 | 4.5 |
| 28 | 7.5 | 8.6 | 15 | 107 | 287 | 91 | 45 | 14 | 9.9 | 6.2 | 6.0 | 5.0 |
| 29 | 7.8 | ------ | 13 | 131 | 289 | 86 | 44 | 17 | 9.6 | 6.4 | 8.0 | 5.5 |
| 30 | 8.2 | ------ | 11 | 136 | 329 | 79 | 44 | 19 | 9.5 | 6.2 | 9.0 | 5.5 |
| 31 | 8.2 | ------ | 12 | ------ | 370 | ------ | 39 | 15 | ------ | 6.2 | ------ | 5.0 |
| TOTAL | 270.4 | 199.8 | 339.0 | 1,346.5 | 9,885 | 7,202 | 1,890 | 708 | 339.2 | 250.9 | 173.4 | 185.0 |
| MEAN | 8.72 | 7.14 | 10.9 | 44.9 | 319 | 240 | 61.0 | 22.8 | 11.3 | 8.09 | 5.78 | 5.97 |
| MAX | 10 | 8.6 | 17 | 136 | 593 | 375 | 104 | 36 | 27 | 11 | 9.0 | 8.0 |
| MIN | 7.5 | 6.4 | 7.4 | 8.5 | 91 | 79 | 39 | 13 | 8.9 | 6.2 | 4.0 | 4.5 |
| AC-FT | 536 | 396 | 672 | 2,670 | 19,610 | 14,290 | 3,750 | 1,400 | 673 | 498 | 344 | 367 |

CAL YR 1973 TOTAL 22,789.2 MEAN 62.4 MAX 593 MIN 4.0 AC-FT 45,200
WTR YR 1973 TOTAL 23,831.9 MEAN 65.3 MAX 593 MIN 6.4 AC-FT 47,270

PEAK DISCHARGE (BASE, 100 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-30 | 0015 | 2.40 | 151 | 5-21 | 2315 | 3.68 | 726 |
| 5- 4 | 2400 | 2.66 | 202 | 7-18 | 2230 | 2.18 | 128 |
| 5-12 | 0745 | 3.48 | 563 | | | | |

## 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, on left bank at downstream side of bridge on private road, 300 ft (91 m) upstream from Indian Creek, 2.4 mi (3.9 km) downstream from Holy Ghost Creek, 9.0 mi (14.5 km) north of Pecos, and at mile 896.6 (1,422.6 km).

DRAINAGE AREA.--189 mi² (490 km²).

PERIOD OF RECORD.--August 1919 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "near Cowles" 1919-25, "at Irvins Ranch" 1926-29, and as "at Irvins Ranch near Pecos" 1930-39.

GAGE.--Water-stage recorder. Datum of gage is 7,502.94 ft (2,286.896 m) above mean sea level.

AVERAGE DISCHARGE.--54 calendar years, 98.0 ft³/s (2.775 m³/s), 71,000 acre-ft/yr (87.5 hm³/yr); 20 calendar years (1954-73), 88.3 ft³/s (2.501 m³/s), 63,970 acre-ft/yr (78.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,560 ft³/s (44.2 m³/s) May 21 (gage height, 4.62 ft or 1.408 m); minimum, 17 ft³/s (0.48 m³/s) Mar. 7, result of freezeup.
Period of record: Maximum discharge, about 4,500 ft³/s (127 m³/s) Sept. 21 or 22, 1929 (gage height, 6.2 ft or 1.89 m, from floodmark), from rating curve extended above 1,600 ft³/s (45.3 m³/s); minimum, 2.0 ft³/s (0.057 m³/s) Mar. 19, 1971, result of freezeup.
Flood of Sept. 29, 1904, was greatest since 1886, from information by local residents.

REMARKS.--Records good except those for winter periods, which are poor. Diversions for irrigation of about 75 acres (304,000 m²), 1959 determination, above station. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 898: Drainage area. WSP 1312: 1932(M).

### DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 40 | 37 | 35 | 51 | 338 | 878 | 423 | 123 | 56 | 37 | 30 | 27 |
| 2 | 40 | 35 | 40 | 50 | 298 | 862 | 405 | 126 | 50 | 36 | 29 | 26 |
| 3 | 38 | 35 | 41 | 53 | 321 | 775 | 383 | 120 | 48 | 35 | 29 | 25 |
| 4 | 40 | 34 | 37 | 60 | 421 | 775 | 354 | 150 | 45 | 35 | 32 | 24 |
| 5 | 44 | 35 | 38 | 57 | 507 | 754 | 330 | 118 | 45 | 38 | 31 | 23 |
| 6 | 42 | 34 | 37 | 62 | 462 | 768 | 307 | 108 | 44 | 44 | 32 | 23 |
| 7 | 41 | 33 | 35 | 81 | 388 | 761 | 284 | 103 | 43 | 39 | 32 | 23 |
| 8 | 38 | 33 | 35 | 78 | 397 | 803 | 281 | 96 | 42 | 37 | 32 | 24 |
| 9 | 40 | 33 | 35 | 72 | 526 | 862 | 281 | 92 | 41 | 35 | 32 | 24 |
| 10 | 42 | 32 | 34 | 81 | 810 | 910 | 288 | 92 | 74 | 37 | 30 | 25 |
| 11 | 40 | 33 | 37 | 100 | 1,080 | 944 | 256 | 96 | 149 | 39 | 31 | 26 |
| 12 | 37 | 34 | 40 | 114 | 1,120 | 989 | 238 | 108 | 74 | 38 | 31 | 27 |
| 13 | 39 | 35 | 44 | 134 | 1,010 | 919 | 245 | 106 | 59 | 38 | 31 | 29 |
| 14 | 40 | 33 | 42 | 198 | 868 | 970 | 245 | 99 | 53 | 38 | 30 | 31 |
| 15 | 42 | 33 | 42 | 239 | 720 | 840 | 238 | 96 | 50 | 36 | 25 | 30 |
| 16 | 40 | 34 | 42 | 180 | 683 | 761 | 235 | 81 | 48 | 36 | 27 | 30 |
| 17 | 38 | 34 | 42 | 161 | 673 | 694 | 281 | 76 | 45 | 34 | 29 | 29 |
| 18 | 36 | 34 | 47 | 189 | 811 | 657 | 270 | 74 | 44 | 33 | 29 | 29 |
| 19 | 34 | 34 | 53 | 161 | 1,100 | 620 | 284 | 70 | 43 | 33 | 29 | 28 |
| 20 | 35 | 35 | 56 | 137 | 1,280 | 580 | 245 | 68 | 42 | 32 | 30 | 28 |
| 21 | 35 | 35 | 68 | 123 | 1,360 | 541 | 225 | 67 | 41 | 32 | 30 | 28 |
| 22 | 34 | 34 | 63 | 123 | 1,300 | 515 | 212 | 67 | 39 | 32 | 31 | 28 |
| 23 | 33 | 33 | 65 | 144 | 1,040 | 489 | 196 | 62 | 39 | 32 | 31 | 29 |
| 24 | 32 | 33 | 52 | 159 | 953 | 484 | 180 | 59 | 41 | 30 | 26 | 29 |
| 25 | 34 | 33 | 58 | 198 | 962 | 470 | 171 | 57 | 39 | 28 | 27 | 30 |
| 26 | 36 | 34 | 58 | 201 | 970 | 475 | 171 | 55 | 42 | 30 | 28 | 30 |
| 27 | 38 | 34 | 62 | 236 | 810 | 484 | 150 | 53 | 42 | 29 | 29 | 29 |
| 28 | 37 | 35 | 58 | 325 | 720 | 480 | 150 | 53 | 41 | 29 | 30 | 29 |
| 29 | 34 | ------ | 58 | 388 | 701 | 470 | 150 | 62 | 39 | 29 | 29 | 28 |
| 30 | 35 | ------ | 55 | 402 | 768 | 450 | 153 | 74 | 39 | 29 | 28 | 28 |
| 31 | 38 | ------ | 53 | ------ | 865 | ------ | 134 | 62 | ------ | 30 | ------ | 27 |
| TOTAL | 1,172 | 951 | 1,462 | 4,557 | 24,252 | 20,980 | 7,765 | 2,673 | 1,497 | 1,060 | 890 | 846 |
| MEAN | 37.8 | 34.0 | 47.2 | 152 | 782 | 699 | 250 | 86.2 | 49.9 | 34.2 | 29.7 | 27.3 |
| MAX | 44 | 37 | 68 | 402 | 1,360 | 989 | 423 | 150 | 149 | 44 | 32 | 31 |
| MIN | 32 | 32 | 34 | 50 | 298 | 450 | 134 | 53 | 39 | 28 | 25 | 23 |
| AC-FT | 2,320 | 1,890 | 2,900 | 9,040 | 48,100 | 41,610 | 15,400 | 5,300 | 2,970 | 2,100 | 1,770 | 1,680 |

CAL YR 1973 TOTAL 68,105 MEAN 187 MAX 1,360 MIN 23 AC-FT 135,100
WTR YR 1973 TOTAL 71,390 MEAN 196 MAX 1,360 MIN 32 AC-FT 141,600

### PEAK DISCHARGE (BASE, 310 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-30 | 0100 | 3.37 | 431 | 5-21 | 2100 | 4.62 | 1,560 |
| 5- 5 | 0100 | 3.55 | 536 | 6-14 | 0330 | 4.27 | 1,140 |
| 5-12 | 0300 | 4.36 | 1,240 | 7-18 | 2300 | 3.05 | 346 |

## 08379500 PECOS RIVER NEAR ANTON CHICO, N. MEX.

LOCATION.--Lat 35°10'44", long 105°06'30", Guadalupe County, in Anton Chico Grant, on right bank 2.1 mi (3.4 km) upstream from Canon Blanco, 2.3 mi (3.7 km) southeast of Anton Chico, 9.7 mi (15.6 km) downstream from Tecolote Creek, and at mile 816.8 (1,314.2 km).

DRAINAGE AREA.--1,050 mi² (2,720 km²), approximately (contributing area).

PERIOD OF RECORD.--April 1910 to May 1916, October 1916 to September 1924, August to December 1925, January 1927 to current year. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder. Altitude of gage is 5,130 ft (1,564 m) from river-profile map. See WSP 1312 for history of changes prior to June 21, 1951.

AVERAGE DISCHARGE.--60 calendar years (1911-15, 1917-24, 1927-73), 134 ft³/s (3.795 m³/s), 97,080 acre-ft/yr (120 hm³/yr); 20 calendar years (1954-73), 111 ft³/s (3.144 m³/s), 80,420 acre-ft/yr (99.2 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,350 ft³/s (94.9 m³/s) May 31 (gage height, 7.90 ft or 2.408 m); no flow Nov. 21.
Period of record: Maximum discharge, 40,300 ft³/s (1,140 m³/s) June 1, 1937 (gage height, 20.34 ft or 6.200 m, from floodmarks), at site and datum then in use, by slope-area measurement; no flow at times.
The greatest flood since 1879 occurred Sept. 29, 1904, discharge about 73,000 ft³/s (207 m³/s), from information by a local resident.

REMARKS.--Records poor. Diversions above station for irrigation of about 4,900 acres (1,980 hm²), 1959 determination, above and below station. Acequia del Bodo Juan Paiz (see table below) diverts water about 8 mi (12.9 km) above gage and bypasses this station on left bank; ditch flow not included in record. Discharge measurements made at point opposite regular gage. A portion of this flow may be returned to the river about 5.0 mi (8.0 km) downstream. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1342: 1951(M), 1952-53. WSP 1512: 1912-14, 1931, 1933(M), 1935-36(M), 1938(P), 1939-40, 1941-42(P), 1945(M), 1946(P), 1949(P). WSP 1712: 1942(P).

Discharge measurements, in cubic feet per second, of Acequia del Bodo Juan Paiz, Calendar year 1973

Aug. 6, 41 ft³/s  Sept. 28, 28 ft³/s  Oct. 23, 16ft³/s

### DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 25 | 48 | 54 | 197 | 988 | 1,040 | 364 | 191 | 14 | 8.9 | 12 | 26 |
| 2 | 25 | 38 | 63 | 286 | 864 | 1,030 | 331 | 132 | 10 | 3.6 | 11 | 20 |
| 3 | 30 | 32 | 69 | 240 | 796 | 970 | 320 | 117 | 6.1 | 4.9 | 8.1 | 27 |
| 4 | 34 | 33 | 76 | 233 | 854 | 912 | 318 | 144 | 3.0 | 7.2 | 13 | 25 |
| 5 | 33 | 45 | 74 | 209 | 1,010 | 876 | 296 | 182 | 1.9 | 10 | 13 | 23 |
| 6 | 45 | 53 | 68 | 235 | 1,110 | 848 | 257 | 118 | 2.2 | 14 | 14 | 15 |
| 7 | 50 | 49 | 63 | 407 | 975 | 851 | 225 | 96 | 2.4 | 13 | 16 | 18 |
| 8 | 45 | 42 | 62 | 363 | 834 | 844 | 202 | 84 | 3.3 | 10 | 16 | 24 |
| 9 | 25 | 35 | 66 | 358 | 870 | 846 | 195 | 80 | 5.6 | 3.2 | 13 | 31 |
| 10 | 23 | 30 | 74 | 297 | 1,120 | 902 | 202 | 82 | 4.3 | 4.6 | 13 | 30 |
| 11 | 35 | 35 | 64 | 421 | 1,520 | 971 | 224 | 66 | 7.6 | 10 | 14 | 30 |
| 12 | 45 | 43 | 65 | 507 | 1,730 | 992 | 197 | 62 | 110 | 15 | 14 | 25 |
| 13 | 40 | 47 | 73 | 627 | 1,690 | 1,010 | 174 | 56 | 75 | 16 | 12 | 30 |
| 14 | 45 | 44 | 78 | 720 | 1,560 | 1,040 | 198 | 55 | 41 | 16 | 10 | 33 |
| 15 | 55 | 42 | 75 | 880 | 1,390 | 982 | 191 | 110 | 26 | 13 | 11 | 30 |
| 16 | 61 | 38 | 77 | 857 | 1,240 | 869 | 217 | 70 | 17 | 7.6 | 13 | 28 |
| 17 | 64 | 37 | 69 | 689 | 1,120 | 794 | 248 | 44 | 8.7 | 8.5 | 2.6 | 23 |
| 18 | 59 | 33 | 71 | 609 | 1,100 | 725 | 550 | 25 | 6.8 | 12 | .80 | 22 |
| 19 | 53 | 40 | 77 | 638 | 1,250 | 676 | 433 | 22 | 3.7 | 14 | .56 | 25 |
| 20 | 53 | 38 | 88 | 565 | 1,490 | 625 | 292 | 18 | 4.2 | 13 | .72 | 15 |
| 21 | 48 | 37 | 88 | 472 | 1,600 | 570 | 250 | 15 | 6.1 | 11 | 2.4 | 18 |
| 22 | 39 | 35 | 95 | 397 | 1,660 | 518 | 288 | 12 | 6.1 | 9.0 | .96 | 13 |
| 23 | 37 | 39 | 124 | 383 | 1,490 | 481 | 388 | 9.8 | 6.6 | 5.3 | .64 | 13 |
| 24 | 37 | 41 | 138 | 434 | 1,260 | 451 | 183 | 8.6 | 1.5 | 8.1 | .64 | 12 |
| 25 | 43 | 38 | 124 | 481 | 1,160 | 434 | 154 | 5.2 | 1.6 | 12 | 2.2 | 9.0 |
| 26 | 46 | 43 | 113 | 585 | 1,130 | 407 | 532 | 5.0 | 1.9 | 12 | 25 | 20 |
| 27 | 45 | 42 | 135 | 563 | 1,090 | 412 | 206 | 3.7 | 7.2 | 12 | 22 | 40 |
| 28 | 40 | 46 | 197 | 618 | 927 | 423 | 154 | 2.3 | 8.5 | 12 | 20 | 45 |
| 29 | 37 | ------ | 190 | 806 | 833 | 405 | 126 | 2.4 | 12 | 7.2 | 10 | 32 |
| 30 | 37 | ------ | 201 | 971 | 812 | 389 | 122 | 5.4 | 13 | 8.1 | 16 | 37 |
| 31 | 49 | ------ | 186 | ------ | 1,060 | ------ | 286 | 6.0 | ------ | 10 | ------ | 25 |
| TOTAL | 1,303 | 1,123 | 2,997 | 15,048 | 36,533 | 22,293 | 8,123 | 1,829.4 | 417.3 | 311.2 | 307.62 | 764.0 |
| MEAN | 42.0 | 40.1 | 96.7 | 502 | 1,178 | 743 | 262 | 59.0 | 13.9 | 10.0 | 10.3 | 24.6 |
| MAX | 64 | 53 | 201 | 971 | 1,730 | 1,040 | 550 | 191 | 110 | 16 | 25 | 45 |
| MIN | 23 | 30 | 54 | 197 | 796 | 389 | 122 | 2.3 | 1.5 | 3.2 | .56 | 9.0 |
| AC-FT | 2,580 | 2,230 | 5,940 | 29,850 | 72,460 | 44,220 | 16,110 | 3,630 | 828 | 617 | 610 | 1,520 |

CAL YR 1973 TOTAL 91,049.5 MEAN 249 MAX 1,730 MIN .56 AC-FT 180,600
WTR YR 1973 TOTAL 97,846.8 MEAN 268 MAX 1,730 MIN 1.5 AC-FT 194,100

PEAK DISCHARGE (BASE, 3,000 FT ³/S).--May 31 (2030) 3,350 ft³/s (7.90 ft).

## 08380500 GALLINAS CREEK NEAR MONTEZUMA, N. MEX.

LOCATION.--Lat 35°39'07", long 105°19'06", San Miguel County, in Las Vegas Grant, on left bank 2.4 mi (3.9 km) west of Montezuma, 6.9 mi (11.1 km) northwest of Las Vegas, and at mile 62.4 (100.4 km).

DRAINAGE AREA.--84 mi² (220 km²), approximately.

PERIOD OF RECORD.--March to September 1915, June 1916 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1964, published as Gallinas River near Montezuma.

GAGE.--Water-stage recorder. Altitude of gage is 6,875 ft (2,096 m) from topographic map. Prior to Sept. 21, 1934, at different datum.

AVERAGE DISCHARGE.--57 calendar years, 19.9 ft³/s (0.564 m³/s), 14,420 acre-ft/yr (17.8 hm³/yr); 20 calendar years (1954-73), 18.7 ft³/s (0.530 m³/s), 13,550 acre-ft/yr (16.7 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 835 ft³/s (23.6 m³/s) Apr. 14 (gage height, 3.95 ft or 1.204 m); minimum, 1.2 ft³/s (0.034 m³/s) Dec. 20, result of freezeup.
Period of record: Maximum discharge, 7,120 ft³/s (202 m³/s) Aug. 2, 1966 (gage height, 9.7 ft or 2.96 m, from floodmarks), from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of slope-area measurements at gage heights 5.25 ft (1.600 m), 8.25 ft (2.515 m), and 9.7 ft (2.96 m); minimum, 0.20 ft³/s (0.006 m³/s), Oct. 6-9, 1922, Sept. 21, Oct. 9-14, 1956, Dec. 13, 1964.
The greatest flood since about 1900 occurred the night of Sept. 29, 1904 (discharge not determined), from information by local residents and G. B. Monk's report on floods.

REMARKS.--Records good except those for winter periods, which are poor. Diversions for irrigation of about 80 acres (324,000 m²), 1959 determination, above station.

REVISIONS (WATER YEARS).--WSP 898: Drainage area. WSP 1562: 1951(P), 1952(M), 1955(P), 1957. WSP 1632: 1931-32, 1933(M), 1934, 1935(M), 1938, 1939-40(M), 1941-42, 1945, 1949-50(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10 | 8.9 | 17 | 49 | 209 | 146 | 23 | 69 | 9.6 | 7.5 | 5.8 | 6.3 |
| 2 | 10 | 8.5 | 17 | 45 | 184 | 146 | 23 | 58 | 8.5 | 7.0 | 5.8 | 6.3 |
| 3 | 9.5 | 9.0 | 16 | 49 | 181 | 129 | 25 | 46 | 7.8 | 6.6 | 5.8 | 6.0 |
| 4 | 10 | 9.5 | 14 | 43 | 210 | 115 | 25 | 42 | 7.4 | 6.6 | 6.0 | 6.0 |
| 5 | 10 | 9.2 | 14 | 45 | 254 | 108 | 22 | 39 | 7.1 | 7.0 | 6.6 | 5.5 |
| 6 | 10 | 8.6 | 13 | 74 | 231 | 103 | 20 | 31 | 7.0 | 8.0 | 6.3 | 5.0 |
| 7 | 10 | 8.9 | 13 | 94 | 183 | 102 | 21 | 27 | 6.7 | 7.3 | 6.0 | 5.5 |
| 8 | 9.5 | 8.4 | 14 | 82 | 182 | 98 | 20 | 24 | 6.5 | 6.8 | 6.0 | 6.0 |
| 9 | 9.5 | 8.0 | 14 | 71 | 226 | 99 | 25 | 23 | 6.3 | 6.4 | 6.0 | 6.0 |
| 10 | 10 | 8.3 | 13 | 81 | 313 | 103 | 24 | 22 | 26 | 7.0 | 6.0 | 6.0 |
| 11 | 10 | 8.4 | 17 | 114 | 386 | 102 | 24 | 23 | 61 | 8.4 | 6.0 | 6.0 |
| 12 | 10 | 8.4 | 22 | 146 | 426 | 97 | 20 | 20 | 33 | 7.7 | 6.0 | 6.0 |
| 13 | 10 | 8.2 | 23 | 236 | 349 | 99 | 23 | 26 | 22 | 7.4 | 5.8 | 5.8 |
| 14 | 9.5 | 8.6 | 18 | 414 | 325 | 114 | 27 | 21 | 18 | 7.2 | 5.5 | 5.8 |
| 15 | 9.5 | 8.0 | 19 | 349 | 276 | 97 | 30 | 19 | 16 | 7.0 | 5.5 | 5.3 |
| 16 | 11 | 8.3 | 17 | 232 | 238 | 84 | 38 | 17 | 13 | 7.0 | 5.5 | 5.5 |
| 17 | 10 | 8.7 | 18 | 217 | 220 | 74 | 56 | 15 | 12 | 6.7 | 5.8 | 5.8 |
| 18 | 9.5 | 8.4 | 20 | 220 | 238 | 66 | 49 | 14 | 11 | 6.4 | 5.8 | 5.5 |
| 19 | 10 | 8.5 | 21 | 184 | 277 | 60 | 54 | 14 | 9.9 | 6.3 | 6.0 | 5.5 |
| 20 | 9.5 | 8.4 | 21 | 156 | 303 | 54 | 43 | 13 | 9.1 | 6.1 | 5.8 | 5.0 |
| 21 | 9.5 | 8.4 | 25 | 135 | 303 | 48 | 38 | 13 | 8.4 | 6.1 | 5.5 | 5.5 |
| 22 | 9.0 | 8.4 | 24 | 132 | 294 | 45 | 35 | 12 | 8.0 | 6.3 | 5.3 | 6.0 |
| 23 | 9.0 | 8.1 | 24 | 147 | 231 | 43 | 34 | 12 | 7.8 | 6.2 | 6.0 | 5.5 |
| 24 | 9.5 | 8.6 | 17 | 153 | 196 | 41 | 27 | 11 | 8.2 | 6.0 | 5.5 | 5.5 |
| 25 | 9.5 | 9.8 | 25 | 164 | 188 | 36 | 40 | 11 | 7.6 | 6.1 | 5.4 | 5.0 |
| 26 | 9.5 | 11 | 28 | 168 | 184 | 33 | 58 | 11 | 8.1 | 6.1 | 5.5 | 5.0 |
| 27 | 9.5 | 14 | 40 | 150 | 164 | 31 | 40 | 11 | 8.6 | 6.1 | 5.5 | 5.0 |
| 28 | 9.0 | 17 | 43 | 179 | 144 | 31 | 33 | 10 | 8.5 | 6.2 | 6.0 | 5.5 |
| 29 | 9.5 | ------ | 43 | 227 | 132 | 29 | 29 | 13 | 8.1 | 6.2 | 6.3 | 5.5 |
| 30 | 9.5 | ------ | 40 | 249 | 133 | 26 | 31 | 13 | 7.8 | 6.1 | 6.5 | 5.5 |
| 31 | 9.9 | ------ | 43 | ------ | 145 | ------ | 66 | 11 | ------ | 6.2 | ------ | 5.0 |
| TOTAL | 300.9 | 256.5 | 693 | 4,605 | 7,325 | 2,359 | 1,023 | 691 | 379.0 | 208.0 | 175.5 | 173.8 |
| MEAN | 9.71 | 9.16 | 22.4 | 154 | 236 | 78.6 | 33.0 | 22.3 | 12.6 | 6.71 | 5.85 | 5.61 |
| MAX | 11 | 17 | 43 | 414 | 426 | 146 | 66 | 69 | 61 | 8.4 | 6.6 | 6.3 |
| MIN | 9.0 | 8.0 | 13 | 43 | 132 | 26 | 20 | 10 | 6.3 | 6.0 | 5.3 | 5.0 |
| AC-FT | 597 | 509 | 1,370 | 9,130 | 14,530 | 4,680 | 2,030 | 1,370 | 752 | 413 | 348 | 345 |

CAL YR 1973 TOTAL 18,189.7 MEAN 49.8 MAX 426 MIN 5.0 AC-FT 36,080
WTR YR 1973 TOTAL 19,933.4 MEAN 54.6 MAX 426 MIN 6.3 AC-FT 39,540

PEAK DISCHARGE (BASE, 200 FT³/S)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-14 | 1715 | 3.95 | 835 | 5-12 | 0500 | 3.30 | 452 |
| 4-30 | 0400 | 2.78 | 269 | 5-22 | 0100 | 2.98 | 329 |
| 5- 5 | 0345 | 2.78 | 269 | 7-25 | 2115 | 2.55 | 213 |

## 08382500 GALLINAS RIVER NEAR COLONIAS, N. MEX.

LOCATION.--Lat 35°10'55", long 104°53'59", Guadalupe County, in Anton Chico and Preston Beck Grants, on right bank 2.3 mi (3.7 km) south of San Miguel-Guadalupe County line, 2.4 mi (3.9 km) upstream from mouth, 5.8 mi (9.3 km) northwest of Colonias, and 9.0 mi (14.5 km) east of Dilia.

DRAINAGE AREA.--610 mi² (1,580 km²), approximately.

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,944 ft (1,507 m) from topographic map.

AVERAGE DISCHARGE.--23 calendar years, 18.1 ft³/s (0.513 m³/s), 13,110 acre-ft/yr (16.2 hm³/yr); 20 calendar years (1954-73), 19.5 ft³/s (0.552 m³/s), 14,130 acre-ft/yr (17.4 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 900 ft³/s (25.5 m³/s) Apr. 14 (gage height, 6.26 ft or 1.908 m); no flow at times.
Period of record: Maximum discharge, 9,360 ft³/s (265 m³/s) June 16, 1963 (gage height, 16.65 ft or 5.075 m), from rating curve extended above 1,900 ft³/s (53.8 m³/s) on basis of slope-area measurements at gage heights 8.64 ft (2.633 m), 12.74 ft (3.883 m), 16.65 ft (5.075 m), and 27.2 ft (8.29 m); no flow most of time.
Flood of about June 1, 1937, reached a stage of about 27.2 ft (8.29 m); discharge determined as 26,700 ft³/s (756 m³/s) by slope-area measurement made in 1951. A flood of about the same magnitude occurred Sept. 29-30, 1904.

REMARKS.--Records fair. Diversions for irrigation of about 7,000 acres (2,830 hm²), 1959 determination, above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.1 | 4.5 | 5.5 | 118 | 292 | 242 | 2.2 | 138 | 9.8 | 1.9 | 2.0 | 3.8 |
| 2 | 5.5 | 4.3 | 5.3 | 240 | 251 | 169 | 1.6 | 47 | 3.5 | 1.8 | 1.9 | 3.8 |
| 3 | 4.5 | 3.5 | 5.5 | 149 | 220 | 156 | 5.0 | 57 | 1.8 | 1.5 | 1.9 | 3.6 |
| 4 | 5.5 | 2.1 | 4.9 | 165 | 211 | 132 | .82 | 59 | .96 | 1.4 | 1.5 | 3.4 |
| 5 | 6.0 | 1.4 | 4.7 | 160 | 234 | 115 | .20 | 30 | .48 | 1.7 | 1.6 | 3.3 |
| 6 | 7.5 | 2.2 | 4.3 | 178 | 268 | 105 | .03 | 19 | .16 | 4.0 | 1.5 | 3.5 |
| 7 | 5.0 | 2.5 | 3.3 | 279 | 251 | 95 | 0 | 16 | 0 | 5.3 | 1.3 | 3.7 |
| 8 | 4.0 | 3.2 | 3.2 | 231 | 211 | 46 | 0 | 15 | 0 | 3.4 | 2.1 | 3.8 |
| 9 | .50 | 3.3 | 3.3 | 275 | 199 | 33 | 0 | 11 | .12 | 2.2 | 3.7 | 5.0 |
| 10 | 1.5 | 3.3 | 4.5 | 199 | 229 | 28 | 8.1 | 24 | 3.9 | 1.9 | 3.7 | 4.4 |
| 11 | 3.0 | 3.2 | 5.1 | 257 | 305 | 27 | 13 | 14 | 5.3 | 2.9 | 4.2 | 3.7 |
| 12 | 3.8 | 2.9 | 7.2 | 319 | 380 | 28 | 6.6 | 8.8 | 65 | 2.9 | 4.4 | 3.1 |
| 13 | 4.5 | 3.5 | 6.6 | 440 | 449 | 31 | 6.6 | 8.8 | 31 | 2.7 | 4.0 | 2.9 |
| 14 | 5.8 | 3.7 | 6.6 | 579 | 414 | 33 | 8.0 | 7.2 | 17 | 4.0 | 3.5 | 2.9 |
| 15 | 5.4 | 4.1 | 5.5 | 554 | 408 | 32 | 20 | 6.6 | 11 | 2.9 | 3.4 | 2.8 |
| 16 | 4.7 | 3.7 | 4.8 | 325 | 325 | 26 | 9.1 | 5.5 | 8.5 | 2.1 | 3.2 | 2.8 |
| 17 | 3.7 | 4.3 | 3.8 | 246 | 276 | 17 | 51 | 5.5 | 7.2 | 1.7 | 3.2 | 2.4 |
| 18 | 3.3 | 4.5 | 2.8 | 283 | 251 | 15 | 154 | 5.0 | 5.0 | 1.6 | 3.2 | 2.8 |
| 19 | 3.2 | 3.9 | 2.0 | 276 | 258 | 11 | 116 | 4.6 | 3.2 | 1.5 | 3.2 | 1.8 |
| 20 | 3.3 | 3.3 | 1.7 | 234 | 294 | 8.5 | 56 | 6.8 | 1.9 | 1.3 | 3.7 | 1.5 |
| 21 | 3.5 | 3.2 | 1.4 | 211 | 305 | 7.4 | 26 | 5.2 | 1.2 | 1.3 | 3.7 | 1.4 |
| 22 | 2.7 | 3.9 | 1.3 | 194 | 308 | 6.6 | 54 | 3.4 | .89 | 1.2 | 3.8 | 1.9 |
| 23 | 1.3 | 4.9 | 2.3 | 188 | 302 | 8.0 | 139 | 3.7 | .56 | 1.1 | 4.0 | 1.5 |
| 24 | 1.3 | 4.7 | 3.8 | 203 | 248 | 8.0 | 30 | 1.8 | .52 | 1.1 | 3.8 | 2.2 |
| 25 | 1.3 | 4.7 | 5.5 | 209 | 220 | 7.2 | 23 | .64 | .28 | 1.1 | 3.7 | 2.0 |
| 26 | 2.1 | 4.1 | 8.3 | 216 | 203 | 6.1 | 81 | .28 | .20 | 1.0 | 3.7 | 1.5 |
| 27 | 2.4 | 4.5 | 11 | 218 | 201 | 4.6 | 35 | .02 | .26 | 1.2 | 3.8 | 1.4 |
| 28 | 1.0 | 6.0 | 16 | 201 | 173 | 4.4 | 27 | 0 | .44 | 1.3 | 3.7 | 2.2 |
| 29 | .42 | ------ | 27 | 222 | 146 | 3.7 | 32 | 0 | .75 | 1.9 | 3.5 | 3.0 |
| 30 | .63 | ------ | 54 | 278 | 130 | 3.4 | 18 | 0 | 1.4 | 2.0 | 3.8 | 4.0 |
| 31 | 3.5 | ------ | 57 | ------ | 127 | ------ | 87 | 79 | ------ | 2.2 | ------ | 3.0 |
| TOTAL | 104.95 | 103.4 | 278.2 | 7,647 | 8,089 | 1,408.9 | 970.25 | 582.04 | 182.32 | 64.1 | 94.5 | 89.1 |
| MEAN | 3.39 | 3.69 | 8.97 | 255 | 261 | 47.0 | 31.3 | 18.8 | 6.08 | 2.07 | 3.15 | 2.87 |
| MAX | 7.5 | 6.0 | 57 | 579 | 449 | 242 | 139 | 138 | 65 | 5.3 | 4.4 | 5.0 |
| MIN | .42 | 1.4 | 1.3 | 118 | 127 | 3.4 | 0 | 0 | 0 | 1.0 | 1.3 | 1.4 |
| AC-FT | 208 | 205 | 552 | 15,170 | 16,040 | 2,790 | 1,920 | 1,150 | 362 | 127 | 187 | 177 |

CAL YR 1973 TOTAL 19,613.76 MEAN 53.7 MAX 579 MIN 0 AC-FT 38,900
WTR YR 1973 TOTAL 20,880.76 MEAN 57.2 MAX 579 MIN 0 AC-FT 41,420

PEAK DISCHARGE (BASE, 1,700 CFS).--No peak above base.

## 08382700 PECOS RIVER NEAR COLONIAS, N. MEX.

LOCATION.--Lat 35°03'26", long 104°45'20", in SW¼SE¼SW¼ sec.30, T.10 N., R.21 E., Guadalupe County, at edge of left bank, on south boundary of Preston Beck Grant, 1.2 mi (1.9 km) upstream from River Ranch, 6.5 mi (10.5 km) southeast of Colonias, and 8.8 mi (14.2 km) northwest of Santa Rosa.

DRAINAGE AREA.--2,340 mi² (6,060 km²), approximately.

PERIOD OF RECORD.--July 1970 to current year (operated as a low-flow station only).

GAGE.--Water-stage recorder. Altitude of gage is 4,758 ft (1,450 m) from topographic map.

EXTREMES.--Current year: Maximum discharge not determined; minimum, 10 ft³/s (0.28 m³/s) Feb. 19.
Period of record: Maximum discharge not determined; minimum, 5.6 ft³/s (0.16 m³/s) July 3, 16, 17, 1971.

REMARKS.--Records poor. Diversions and ground-water withdrawals above station for irrigation of about 12,000 acres (4,860 hm²), 1959 determination. Base flow is from springs in a 4 mi (6 km) reach upstream from gage.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1975

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14 | 14 | 15 | | | | - | 443 | 29 | 29 | 20 | 20 |
| 2 | 14 | 14 | 14 | | | | - | 241 | 28 | 29 | 20 | 20 |
| 3 | 14 | 14 | 14 | | | | - | 137 | 28 | 28 | 20 | 22 |
| 4 | 14 | 13 | 14 | | | | - | 253 | 28 | 30 | 18 | 21 |
| 5 | 14 | 12 | 13 | | | | - | 153 | 29 | 32 | 19 | 21 |
| 6 | 14 | 15 | 13 | | | | - | 215 | 30 | 31 | 18 | 21 |
| 7 | 14 | 12 | 14 | | | | - | 80 | 31 | 29 | 18 | 21 |
| 8 | 14 | 12 | 14 | | | | - | 58 | 30 | 29 | 20 | 20 |
| 9 | 14 | 12 | 15 | | | | - | 40 | 31 | 30 | 20 | 19 |
| 10 | 14 | 12 | 14 | | | | - | 54 | 30 | 30 | 20 | 20 |
| 11 | 14 | 11 | 14 | | | | 84 | 46 | 33 | 29 | 21 | 20 |
| 12 | 14 | 12 | 14 | | | | 93 | 53 | 30 | 28 | 21 | 20 |
| 13 | 14 | 12 | 14 | | | | 58 | 32 | 67 | 28 | 21 | 20 |
| 14 | 15 | 12 | 14 | | | | 38 | 51 | 50 | 28 | 20 | 21 |
| 15 | 12 | 12 | 14 | | | | 84 | 29 | 29 | 27 | 21 | 21 |
| 16 | 12 | 12 | 18 | | | | 73 | 42 | 27 | 27 | 22 | 20 |
| 17 | 12 | 12 | 19 | | | | - | 28 | 29 | 28 | 21 | 20 |
| 18 | 12 | 11 | 15 | | | | - | 26 | 29 | 26 | 20 | 20 |
| 19 | 12 | 11 | 14 | | | | - | 28 | 28 | 26 | 20 | 20 |
| 20 | 12 | 12 | 16 | | | | 385 | 29 | 29 | 24 | 21 | 20 |
| 21 | 12 | 12 | 20 | | | | 241 | 28 | 28 | 24 | 20 | 20 |
| 22 | 12 | 14 | 29 | | | | 180 | 27 | 28 | 23 | 20 | 20 |
| 23 | 12 | 13 | 50 | | | | - | 26 | 29 | 23 | 20 | 20 |
| 24 | 12 | 12 | 71 | | | | 269 | 26 | 28 | 22 | 20 | 20 |
| 25 | 13 | 13 | 77 | | | | 134 | 27 | 30 | 22 | 20 | 20 |
| 26 | 13 | 13 | 47 | | | | | 28 | 31 | 23 | 19 | 20 |
| 27 | 13 | 13 | 58 | | | | 450 | 29 | 32 | 23 | 18 | 20 |
| 28 | 14 | 13 | 67 | | | | 202 | 29 | 31 | 22 | 20 | 19 |
| 29 | 14 | ------ | 137 | | | | 226 | 28 | 30 | 22 | 20 | 20 |
| 30 | 14 | ------ | 206 | | | | 86 | 31 | 30 | 24 | 20 | 19 |
| 31 | 15 | ------ | 174 | ------ | | ------ | 256 | 30 | ------ | 20 | ------ | 20 |
| TOTAL | 411 | 348 | 1,206 | - | - | - | - | 2,287 | 942 | 816 | 598 | 625 |
| MEAN | 13.3 | 12.4 | 38.9 | - | - | - | - | 73.8 | 31.4 | 26.3 | 19.9 | 20.2 |
| MAX | 15 | 14 | 206 | - | - | - | - | 443 | 67 | 32 | 22 | 22 |
| MIN | 12 | 11 | 13 | - | - | - | - | 26 | 27 | 20 | 18 | 19 |
| AC-FT | 815 | 690 | 2,390 | - | - | - | - | 4,540 | 1,870 | 1,620 | 1,190 | 1,240 |

## 08382800 PECOS RIVER ABOVE LOS ESTEROS DAMSITE, NEAR SANTA ROSA, N. MEX.

LOCATION.--Lat 35°02'26", long 104°40'52", Guadalupe County, in Jose Perea Grant, on left bank, 1.3 mi (2.1 km) downstream from Catfish Falls, 1.6 mi (2.6 km) southwest from mouth of Esteros Creek, and 7.2 mi (11.6 km) north of Santa Rosa.

DRAINAGE AREA.--2,430 mi² (6,290 km²), approximately.

PERIOD OF RECORD.--October 1965 to current year (operated as a low-flow station only).

GAGE.--Water-stage recorder. Altitude of gage is 4,630 ft (1,410 m) from topographic map.

EXTREMES.--Current year: Maximum not determined; minimum, 7.5 ft³/s (0.21 m³/s) Dec. 20.
Period of record: Maximum not determined; minimum daily discharge, 1.0 ft ³/s (0.028 m³/s) Jan. 5, 6, 1971.

REMARKS.--Records poor. Diversions for irrigation of about 12,000 acres (4,860 hm²), 1959 determination, above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14 | 12 | 12 | 174 | | - | 243 | 289 | 29 | 25 | 21 | 18 |
| 2 | 15 | 12 | 12 | 458 | | - | 225 | 204 | 25 | 24 | 22 | 18 |
| 3 | 16 | 12 | 12 | 432 | | - | 215 | 124 | 25 | 23 | 22 | 20 |
| 4 | 15 | 12 | 13 | 366 | | - | 177 | 161 | 25 | 24 | 22 | 20 |
| 5 | 15 | 12 | 12 | 335 | | - | 177 | 122 | 24 | 25 | 22 | 18 |
| 6 | 14 | 12 | 12 | 333 | | 768 | 163 | 162 | 24 | 25 | 25 | 16 |
| 7 | 13 | 12 | 12 | 606 | | 737 | 133 | 91 | 26 | 25 | 22 | 20 |
| 8 | 11 | 10 | 12 | 621 | | 724 | 84 | 64 | 25 | 23 | 22 | 21 |
| 9 | 9.0 | 9.0 | 12 | 572 | | 678 | 74 | 51 | 24 | 23 | 22 | 21 |
| 10 | 11 | 10 | 14 | 417 | | 710 | 69 | 41 | 25 | 25 | 22 | 20 |
| 11 | 14 | 12 | 12 | 503 | | 764 | 71 | 45 | 26 | 26 | 21 | 20 |
| 12 | 16 | 12 | 12 | 685 | | 786 | 86 | 39 | 27 | 22 | 20 | 20 |
| 13 | 17 | 12 | 13 | 878 | | 877 | 69 | 37 | 36 | 22 | 20 | 20 |
| 14 | 13 | 12 | 12 | 1,130 | | 836 | 50 | 36 | 53 | 22 | 20 | 20 |
| 15 | 12 | 12 | 12 | 1,280 | | 863 | 66 | 34 | 32 | 22 | 20 | 18 |
| 16 | 12 | 11 | 14 | 1,200 | | 732 | 77 | 33 | 24 | 22 | 22 | 18 |
| 17 | 12 | 10 | 15 | 891 | | 665 | 185 | 45 | 24 | 22 | 21 | 20 |
| 18 | 12 | 11 | 14 | 782 | | 560 | - | 34 | 24 | 22 | 20 | 20 |
| 19 | 12 | 12 | 14 | 877 | | 501 | - | 30 | 24 | 22 | 21 | 18 |
| 20 | 12 | 12 | 14 | 769 | | 454 | 298 | 30 | 24 | 22 | 20 | 13 |
| 21 | 12 | 12 | 16 | 643 | | 417 | 218 | 29 | 24 | 22 | 19 | 18 |
| 22 | 12 | 10 | 20 | 530 | | 369 | 174 | 28 | 24 | 22 | 19 | 20 |
| 23 | 11 | 12 | 37 | 477 | | 337 | - | 27 | 25 | 22 | 19 | 22 |
| 24 | 11 | 12 | 60 | 509 | | 309 | 253 | 27 | 24 | 21 | 20 | 21 |
| 25 | 11 | 12 | 77 | 564 | | 295 | 143 | 25 | 25 | 22 | 20 | 16 |
| 26 | 13 | 12 | 63 | - | | 278 | 266 | 25 | 24 | 22 | 20 | 14 |
| 27 | 12 | 12 | 47 | - | | 258 | 360 | 25 | 25 | 22 | 19 | 13 |
| 28 | 10 | 12 | 59 | - | | 269 | 191 | 25 | 25 | 22 | 20 | 22 |
| 29 | 11 | ------ | 110 | - | | 264 | 200 | 26 | 25 | 21 | 20 | 22 |
| 30 | 12 | ------ | 174 | - | | 256 | 162 | 27 | 25 | 24 | 18 | 20 |
| 31 | 12 | ------ | 170 | ------ | | ------ | 176 | 30 | ------ | 22 | ------ | 21 |
| TOTAL | 392.0 | 323.0 | 1,088 | - | - | - | - | 1,966 | 792 | 706 | 619 | 588 |
| MEAN | 12.6 | 11.5 | 35.1 | - | - | - | - | 63.4 | 26.4 | 22.8 | 20.6 | 19.0 |
| MAX | 17 | 12 | 174 | - | - | - | - | 289 | 53 | 26 | 23 | 22 |
| MIN | 9.0 | 9.0 | 12 | - | - | - | - | 25 | 24 | 21 | 18 | 13 |
| AC-FT | 778 | 641 | 2,160 | - | - | - | - | 3,900 | 1,570 | 1,400 | 1,230 | 1,170 |

08383000 PECOS RIVER AT SANTA ROSA, N. MEX.

LOCATION.--Lat 34°56'36", long 104°41'55", in NW¼SE¼ sec.3, T.8 N., R.21 E., Guadalupe County, on left bank 0.6 mi (1.0 km) upstream from bridge on U.S. Highway 66 in Santa Rosa, 1.9 mi (3.1 km) upstream from El Rito Creek, and at mile 756.56 (1,217.2 km).

DRAINAGE AREA.--2,650 mi² (6,860 km²), approximately (contributing area).

PERIOD OF RECORD.--May 1903 to December 1905 (gage heights only), January to December 1906, February 1910 to July 1911, September 1912 to December 1924, March to May 1927, July 1927, January 1928 to current year. Monthly discharge only for some periods, published in WSP 1312. Figures of daily discharge for Apr. 5-20, May 4-7, 11, Aug. 13, 16-18, 24, Sept. 7-9, 11, 13, 19, 21, 23, 25, 27, Oct. 1-31, Nov. 3, 4, 9, 11, 20, 22, 1910, and Feb. 1 to Mar. 31, June 1 to July 31, 1911, published in WSP 358 are unreliable and should not be used.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 4,537.56 ft (1,383.048 m) above mean sea level. For history of changes prior to July 1, 1958, see WSP 1732, July 1, 1958, to Sept. 30, 1963, water-stage recorder at site 800 ft (244 m) downstream at datum 4.16 ft (1.268 m) lower. Supplemental water-stage recorder at site 800 ft (244 m) downstream Oct. 1, 1963, to Sept. 13, 1967, at datum 4.16 ft (1.268 m) lower than primary gage.

AVERAGE DISCHARGE.--59 calendar years (1906, 1913-24, 1928-73), 141 ft³/s (3.993 m³/s), 102,200 acre-ft/yr (126 hm³/yr); 20 calendar years (1954-73), 111 ft³/s (3.144 m³/s), 80,420 acre-ft/yr (99.2 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,240 ft³/s (63.4 m³/s) May 13 (gage height, 3.47 ft or 1.058 m); minimum, 4.2 ft³/s (0.12 m³/s) Jan. 15.

1930-73: Maximum discharge, 55,200 ft³/s (1,560 m³/s) June 2, 1937 (gage height, 25.7 ft or 7.83 m), site and datum then in use, from rating curve extended above 32,000 ft³/s (906 m³/s); minimum, 0.28 ft³/s (0.008 m³/s) Jan. 7, 1971.

The flood of June 2, 1937, is the greatest since about 1886. Flood of Sept. 30, 1904, reached a stage of 24.7 ft (7.53 m), site and datum then in use, discharge, 45,000 ft³/s (1,290 m³/s), by Kutter's formula. Flood of June 9, 1903, reached a stage of 21.1 ft (6.43 m), same site and datum as in 1904, discharge, 34,000 ft³/s (963 m³/s), by comparison with 1904 flood.

REMARKS.--Records fair. Diversions for irrigation of about 12,000 acres (4,860 hm³), 1959 determination, above station. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1512: 1913-15. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17 | 19 | 17 | 173 | 1,180 | 1,280 | 248 | 319 | 35 | 29 | 25 | 24 |
| 2 | 19 | 16 | 16 | 320 | 1,050 | 1,060 | 232 | 252 | 31 | 27 | 25 | 25 |
| 3 | 20 | 16 | 16 | 450 | 891 | 1,010 | 226 | 158 | 29 | 27 | 25 | 24 |
| 4 | 25 | 17 | 16 | 380 | 837 | 882 | 187 | 147 | 29 | 29 | 25 | 22 |
| 5 | 31 | 17 | 16 | 340 | 1,000 | 819 | 177 | 156 | 27 | 29 | 25 | 21 |
| 6 | 25 | 17 | 16 | 330 | 1,250 | 774 | 168 | 166 | 27 | 33 | 27 | 18 |
| 7 | 27 | 19 | 17 | 560 | 1,230 | 729 | 138 | 116 | 31 | 29 | 27 | 22 |
| 8 | 20 | 15 | 19 | 600 | 990 | 729 | 108 | 78 | 29 | 25 | 27 | 25 |
| 9 | 10 | 15 | 19 | 580 | 910 | 686 | 91 | 64 | 27 | 25 | 27 | 27 |
| 10 | 12 | 17 | 22 | 440 | 1,100 | 738 | 82 | 46 | 29 | 31 | 29 | 25 |
| 11 | 17 | 17 | 20 | 480 | 1,590 | 792 | 85 | 41 | 31 | 33 | 29 | 25 |
| 12 | 14 | 17 | 17 | 669 | 2,030 | 819 | 97 | 41 | 40 | 27 | 29 | 24 |
| 13 | 17 | 16 | 16 | 747 | 2,200 | 900 | 88 | 33 | 31 | 25 | 27 | 24 |
| 14 | 14 | 17 | 16 | 1,070 | 2,050 | 882 | 72 | 33 | 76 | 25 | 27 | 25 |
| 15 | 14 | 16 | 16 | 1,330 | 1,910 | 920 | 69 | 33 | 56 | 24 | 27 | 24 |
| 16 | 14 | 17 | 17 | 1,210 | 1,650 | 783 | 101 | 33 | 33 | 24 | 27 | 27 |
| 17 | 13 | 20 | 19 | 882 | 1,450 | 694 | 196 | 46 | 29 | 25 | 27 | 27 |
| 18 | 12 | 17 | 20 | 765 | 1,300 | 627 | 440 | 35 | 29 | 25 | 27 | 25 |
| 19 | 11 | 17 | 17 | 873 | 1,400 | 579 | 885 | 31 | 27 | 24 | 27 | 19 |
| 20 | 12 | 17 | 16 | 747 | 1,670 | 517 | 342 | 31 | 27 | 22 | 27 | 17 |
| 21 | 12 | 17 | 17 | 611 | 1,890 | 465 | 248 | 31 | 27 | 22 | 25 | 28 |
| 22 | 13 | 18 | 22 | 494 | 1,940 | 408 | 187 | 31 | 27 | 22 | 24 | 29 |
| 23 | 15 | 21 | 35 | 458 | 1,910 | 368 | 660 | 31 | 29 | 22 | 24 | 25 |
| 24 | 17 | 20 | 66 | 494 | 1,610 | 330 | 293 | 31 | 29 | 24 | 24 | 25 |
| 25 | 20 | 17 | 75 | 547 | 1,380 | 305 | 156 | 27 | 29 | 24 | 25 | 18 |
| 26 | 19 | 17 | 69 | 627 | 1,300 | 281 | 247 | 27 | 31 | 27 | 27 | 17 |
| 27 | 17 | 17 | 94 | 686 | 1,290 | 259 | 431 | 29 | 31 | 27 | 25 | 15 |
| 28 | 13 | 17 | 51 | 627 | 1,110 | 270 | 215 | 29 | 31 | 27 | 24 | 23 |
| 29 | 19 | ------ | 94 | 792 | 920 | 270 | 164 | 29 | 33 | 29 | 27 | 24 |
| 30 | 17 | ------ | 156 | 1,030 | 837 | 259 | 226 | 33 | 29 | 31 | 25 | 22 |
| 31 | 19 | ------ | 156 | ------ | 855 | ------ | 156 | 39 | ------ | 29 | ------ | 20 |
| TOTAL | 525 | 483 | 1,143 | 19,312 | 42,730 | 19,435 | 7,015 | 2,176 | 967 | 822 | 786 | 716 |
| MEAN | 16.9 | 17.3 | 36.9 | 644 | 1,378 | 648 | 226 | 70.2 | 32.2 | 26.5 | 26.2 | 23.1 |
| MAX | 31 | 21 | 156 | 1,330 | 2,200 | 1,280 | 885 | 319 | 76 | 33 | 29 | 29 |
| MIN | 10 | 15 | 16 | 173 | 837 | 259 | 69 | 27 | 27 | 22 | 24 | 15 |
| AC-FT | 1,040 | 958 | 2,270 | 38,310 | 84,750 | 38,550 | 13,910 | 4,320 | 1,920 | 1,630 | 1,560 | 1,420 |

CAL YR 1973 TOTAL 96,110 MEAN 263 MAX 2,200 MIN 10 AC-FT 190,600
WTR YR 1973 TOTAL 100,433 MEAN 275 MAX 2,200 MIN 10 AC-FT 199,200

PEAK DISCHARGE (BASE, 4,000 CFS).--No peak above base.

## 08383500 PECOS RIVER NEAR PUERTO DE LUNA, N. MEX.

LOCATION.--Lat 34°43'48", long 104°31'28", in NE¼SE¼NW¼ sec.20, T.6 N., R.23 E., Guadalupe County, on left bank 9 mi (14.5 km) southeast of Puerto de Luna, 15.8 mi (25.4 km) upstream from Alamogordo Dam, and at mile 726.2 (1,168.5 km).

DRAINAGE AREA.--3,970 mi² (10,280 km²), approximately (contributing area).

PERIOD OF RECORD.--April 1938 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,311.34 ft (1,314.096 m) above mean sea level. Prior to Apr. 15, 1954, at datum 1 ft (0.30 m) higher.

AVERAGE DISCHARGE.--35 calendar years, 217 ft³/s (6.145 m³/s), 157,200 acre-ft/yr (194 hm³/yr); 20 calendar years (1954-73), 196 ft³/s (5.551 m³/s), 142,000 acre-ft/yr (175 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,440 ft³/s (69.1 m³/s) May 13 (gage height 3.74 ft or 1.140 m); minimum, 78 ft³/s (2.21 m³/s) Aug. 25.

Period of record: Maximum discharge, 48,600 ft³/s (1,380 m³/s) Sept. 1, 1942 (gage height, 17.00 ft or 5.182 m), from rating curve extended above 7,400 ft³/s (210 m³/s) on basis of flow at Santa Rosa; minimum, 11 ft³/s (0.31 m³/s) Jan. 31, 1951. Maximum flood since at least 1886 occurred June 2, 1937, when peak at Santa Rosa was 55,200 ft³/s (1,560 m³/s). Flood of July 24, 1895, was reported as "highest in 10 years." Other major floods occurred on June 9, 1903, Sept. 30, 1904, and May 1, 1914.

REMARKS.--Records good. Diversions for irrigation of about 12,500 acres (5,060 hm²), 1959 determination, above station. Discharge represents inflow to Alamogordo Reservoir, capacity, 110,700 acre-ft (136 hm³). Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1512: 1939.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 106 | 91 | 90 | 262 | 1,180 | 1,280 | 342 | 346 | 96 | 100 | 94 | 96 |
| 2 | 108 | 91 | 90 | 374 | 1,160 | 1,170 | 321 | 414 | 87 | 93 | 94 | 96 |
| 3 | 108 | 90 | 90 | 617 | 1,000 | 1,120 | 290 | 271 | 83 | 93 | 94 | 100 |
| 4 | 106 | 91 | 89 | 429 | 914 | 1,000 | 289 | 215 | 95 | 93 | 94 | 106 |
| 5 | 106 | 91 | 89 | 480 | 998 | 926 | 233 | 249 | 86 | 96 | 94 | 111 |
| 6 | 110 | 91 | 89 | 434 | 1,230 | 869 | 222 | 208 | 84 | 100 | 96 | 103 |
| 7 | 107 | 91 | 90 | 444 | 1,310 | 828 | 201 | 243 | 92 | 98 | 94 | 99 |
| 8 | 105 | 92 | 90 | 738 | 1,100 | 819 | 174 | 168 | 95 | 92 | 96 | 101 |
| 9 | 101 | 89 | 92 | 611 | 948 | 756 | 153 | 144 | 92 | 88 | 96 | 106 |
| 10 | 85 | 90 | 98 | 635 | 1,010 | 763 | 142 | 166 | 88 | 91 | 96 | 102 |
| 11 | 88 | 89 | 94 | 522 | 1,400 | 830 | 120 | 113 | 88 | 104 | 96 | 101 |
| 12 | 92 | 91 | 90 | 705 | 2,010 | 843 | 118 | 111 | 93 | 99 | 96 | 97 |
| 13 | 96 | 91 | 91 | 878 | 2,310 | 924 | 136 | 106 | 88 | 92 | 96 | 98 |
| 14 | 104 | 95 | 88 | 1,080 | 2,240 | 926 | 123 | 102 | 86 | 92 | 94 | 100 |
| 15 | 103 | 96 | 91 | 1,270 | 2,050 | 917 | 109 | 99 | 173 | 96 | 94 | 99 |
| 16 | 97 | 94 | 90 | 1,350 | 1,730 | 814 | 114 | 94 | 106 | 99 | 96 | 98 |
| 17 | 98 | 96 | 91 | 1,060 | 1,500 | 749 | 126 | 90 | 96 | 99 | 96 | 101 |
| 18 | 97 | 93 | 93 | 841 | 1,360 | 681 | 283 | 101 | 99 | 94 | 96 | 99 |
| 19 | 96 | 90 | 93 | 890 | 1,390 | 620 | 940 | 88 | 99 | 90 | 96 | 94 |
| 20 | 94 | 89 | 96 | 851 | 1,590 | 552 | 446 | 86 | 91 | 88 | 94 | 94 |
| 21 | 93 | 89 | 95 | 742 | 1,920 | 520 | 341 | 87 | 90 | 90 | 95 | 96 |
| 22 | 93 | 95 | 96 | 657 | 1,990 | 477 | 275 | 88 | 89 | 90 | 95 | 101 |
| 23 | 95 | 98 | 106 | 594 | 2,080 | 443 | 481 | 86 | 94 | 90 | 97 | 99 |
| 24 | 93 | 100 | 126 | 571 | 1,760 | 421 | 547 | 83 | 94 | 90 | 97 | 99 |
| 25 | 93 | 93 | 154 | 610 | 1,480 | 397 | 402 | 80 | 92 | 90 | 96 | 94 |
| 26 | 93 | 90 | 167 | 657 | 1,400 | 374 | 257 | 81 | 99 | 92 | 95 | 92 |
| 27 | 93 | 90 | 152 | 740 | 1,360 | 355 | 451 | 86 | 101 | 92 | 95 | 98 |
| 28 | 92 | 91 | 136 | 722 | 1,250 | 333 | 371 | 85 | 101 | 92 | 92 | 101 |
| 29 | 91 | ------ | 156 | 787 | 1,060 | 354 | 271 | 84 | 99 | 92 | 95 | 99 |
| 30 | 91 | ------ | 244 | 1,020 | 949 | 358 | 314 | 374 | 99 | 104 | 95 | 96 |
| 31 | 91 | ------ | 302 | ------ | 937 | ------ | 244 | 271 | ------ | 101 | ------ | 92 |
| TOTAL | 3,025 | 2,577 | 3,558 | 21,571 | 44,616 | 21,419 | 8,836 | 4,819 | 2,875 | 2,920 | 2,854 | 3,068 |
| MEAN | 97.6 | 92.0 | 115 | 719 | 1,439 | 714 | 285 | 155 | 95.8 | 94.2 | 95.1 | 99.0 |
| MAX | 110 | 100 | 302 | 1,350 | 2,310 | 1,280 | 940 | 414 | 173 | 104 | 97 | 111 |
| MIN | 85 | 89 | 88 | 262 | 914 | 333 | 109 | 80 | 83 | 88 | 92 | 92 |
| AC-FT | 6,000 | 5,110 | 7,060 | 42,790 | 88,500 | 42,480 | 17,530 | 9,560 | 5,700 | 5,790 | 5,660 | 6,090 |

CAL YR 1973 TOTAL 122,138 MEAN 335 MAX 2,310 MIN 80 AC-FT 242,300
WTR YR 1973 TOTAL 127,921 MEAN 350 MAX 2,310 MIN 80 AC-FT 253,700

PEAK DISCHARGE (BASE, 5,500 CFS).--No peak above base.

## 08384000 ALAMOGORDO RESERVOIR NEAR FORT SUMNER, N. MEX.

LOCATION.--Lat 34°36'30", long 104°23'04", in SE¼SW¼ sec.34, T.5 N., R.24 E., DeBaca County, near center of dam on Pecos River, 5.0 mi (8.0 km) northeast of Guadalupe, 12.2 mi (19.6 km) northwest of Fort Sumner, and at mile 711.0 (1,144.0 km).

DRAINAGE AREA.--4,390 mi² (11,370 km²), approximately (contributing area).

PERIOD OF RECORD.--December 1938 to September 1965 (monthend contents only), October 1965 to current year. Monthend elevations September 1937 to November 1938 published in reports of Pecos River Commission.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (Bureau of Reclamation datum). April 1, 1946, to Sept. 30, 1957, water-stage recorder above elevation 4,234.25 ft (1,290.599 m), nonrecording gage below.

EXTREMES.--Current year: Maximum contents, 112,400 acre-ft (138 hm³) Apr. 17, July 20-22, 24-26, elevation, 4,275.4 ft (1,308.42 m); minimum, 80,520 acre-ft (99.3 hm³) Jan. 1-3, elevation, 4,267.6 ft (1,300.76 m).
Period of record: Maximum contents, 138,300 acre-ft (171 hm³) May 23-30, June 1-10, July 21, Sept. 22, 23, 30, Oct. 12, Nov. 4, 5, 30, Dec. 23, 24, 1941, elevation, 4,275.00 ft (1,303.020 m); maximum elevation 4,276.10 ft (1,303.355 m) June 3, Sept. 8, 1958; no storage July 28 to Aug. 2, 1951, elevation, 4,200.70 ft (1,280.373 m).

REMARKS.--Reservoir is formed by earthfill dam, completed and storage began in August 1937. Capacity, 110,700 acre-ft (136 hm³) at elevation 4,275.0 ft (1,303.020 m), top of spillway gates. No dead storage. No storage allocated for flood control. Reservoir is used to store water for irrigation. Figures given herein represent contents computed from elevations at 0800 hours.

COOPERATION.--Elevation record and capacity table furnished by Bureau of Reclamation.

REVISIONS (WATER YEARS).--WSP 1732: 1939-54. WSP 1923: 1939-53(M) (m).

ELEVATION, IN FEET, AT 0800, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4,267.60 | 4,268.90 | 4,270.00 | 4,271.20 | 4,272.40 | 4,273.50 | 4,275.00 | 4,275.20 | 4,274.80 | 4,274.20 | 4,269.20 | 4,270.00 |
| 2 | 4,267.60 | 4,268.90 | 4,270.00 | 4,271.30 | 4,272.40 | 4,273.90 | 4,275.10 | 4,275.20 | 4,274.80 | 4,273.80 | 4,269.20 | 4,270.10 |
| 3 | 4,267.60 | 4,268.90 | 4,270.10 | 4,271.50 | 4,272.40 | 4,274.20 | 4,275.10 | 4,275.20 | 4,274.80 | 4,273.30 | 4,269.20 | 4,270.10 |
| 4 | 4,267.70 | 4,269.00 | 4,270.10 | 4,271.80 | 4,272.30 | 4,274.40 | 4,275.10 | 4,275.20 | 4,274.70 | 4,272.70 | 4,269.20 | 4,270.20 |
| 5 | - | 4,269.00 | 4,270.10 | 4,272.00 | 4,272.20 | 4,274.50 | 4,275.10 | 4,275.10 | 4,274.60 | 4,272.20 | 4,269.20 | 4,270.20 |
| 6 | - | 4,269.00 | 4,270.20 | 4,272.20 | 4,272.20 | 4,274.70 | 4,275.10 | 4,275.00 | 4,274.60 | 4,271.80 | 4,269.20 | 4,270.30 |
| 7 | - | 4,269.10 | 4,270.20 | 4,272.30 | 4,272.10 | 4,274.80 | 4,275.10 | 4,275.00 | 4,274.60 | 4,271.10 | 4,269.30 | 4,270.30 |
| 8 | 4,267.80 | 4,269.10 | 4,270.20 | 4,272.50 | 4,272.10 | 4,274.90 | 4,275.10 | 4,275.00 | 4,274.60 | 4,270.80 | 4,269.30 | 4,270.40 |
| 9 | 4,267.90 | 4,269.20 | 4,270.30 | 4,272.80 | 4,272.10 | 4,274.90 | 4,275.00 | 4,275.00 | 4,274.60 | 4,270.20 | 4,269.30 | 4,270.40 |
| 10 | 4,267.90 | 4,269.20 | 4,270.30 | 4,273.10 | 4,272.00 | 4,274.90 | 4,275.10 | 4,275.00 | 4,274.60 | 4,269.80 | 4,269.30 | 4,270.40 |
| 11 | 4,268.00 | 4,269.20 | 4,270.40 | 4,273.50 | 4,272.00 | 4,274.90 | 4,275.10 | 4,274.90 | 4,274.60 | 4,269.40 | 4,269.40 | 4,270.50 |
| 12 | 4,268.00 | 4,269.50 | 4,270.40 | 4,273.60 | 4,272.20 | 4,274.90 | 4,275.10 | 4,274.90 | 4,274.60 | 4,269.40 | 4,269.40 | 4,270.50 |
| 13 | 4,268.10 | 4,269.30 | 4,270.40 | 4,273.90 | 4,272.60 | 4,275.00 | 4,275.10 | 4,274.90 | 4,274.60 | 4,269.30 | 4,269.50 | 4,270.50 |
| 14 | 4,268.10 | 4,269.30 | 4,270.50 | 4,274.30 | 4,273.20 | 4,275.20 | 4,275.00 | 4,274.90 | 4,274.50 | 4,269.30 | 4,269.50 | 4,270.60 |
| 15 | 4,268.20 | 4,269.40 | 4,270.50 | 4,274.70 | 4,273.20 | 4,275.30 | 4,275.00 | 4,274.80 | 4,274.50 | 4,269.30 | 4,269.50 | 4,270.60 |
| 16 | 4,268.20 | 4,269.40 | 4,270.50 | 4,275.30 | 4,273.20 | 4,275.20 | 4,275.00 | 4,274.80 | 4,274.50 | 4,269.30 | 4,269.60 | 4,270.70 |
| 17 | 4,268.30 | 4,269.50 | 4,270.60 | 4,275.40 | 4,273.00 | 4,275.00 | 4,275.00 | 4,274.80 | 4,274.40 | 4,269.30 | 4,269.60 | 4,270.70 |
| 18 | 4,268.30 | 4,269.50 | 4,270.60 | 4,275.50 | 4,272.80 | - | 4,275.00 | 4,274.70 | 4,274.40 | 4,269.30 | 4,269.60 | 4,270.80 |
| 19 | 4,268.30 | 4,269.50 | 4,270.60 | 4,275.10 | 4,272.70 | 4,274.90 | 4,275.10 | 4,274.70 | 4,274.40 | 4,269.30 | 4,269.60 | 4,270.80 |
| 20 | 4,268.40 | 4,269.60 | 4,270.70 | 4,274.90 | 4,272.70 | 4,274.90 | 4,275.40 | 4,274.70 | 4,274.40 | 4,269.30 | 4,269.70 | 4,270.80 |
| 21 | 4,268.40 | 4,269.60 | 4,270.70 | 4,274.70 | 4,272.80 | 4,274.80 | 4,275.40 | 4,274.60 | 4,274.40 | 4,269.20 | 4,269.70 | 4,270.90 |
| 22 | 4,268.40 | 4,269.70 | 4,270.70 | 4,274.40 | 4,273.00 | 4,274.80 | 4,275.40 | 4,274.60 | 4,274.40 | 4,269.20 | 4,269.80 | 4,270.90 |
| 23 | 4,268.50 | 4,269.70 | 4,270.70 | 4,274.20 | 4,273.20 | 4,274.80 | 4,275.30 | 4,274.60 | 4,274.40 | 4,269.20 | 4,269.80 | 4,270.90 |
| 24 | 4,268.50 | 4,269.80 | 4,270.70 | 4,273.90 | 4,273.40 | 4,274.90 | 4,275.40 | 4,274.50 | 4,274.40 | 4,269.20 | 4,269.80 | 4,271.00 |
| 25 | 4,268.60 | 4,269.80 | 4,270.80 | 4,273.60 | 4,273.50 | 4,274.70 | 4,275.40 | 4,274.50 | 4,274.40 | 4,269.20 | 4,269.80 | 4,271.00 |
| 26 | - | 4,269.90 | 4,270.90 | 4,273.50 | 4,273.50 | 4,274.80 | 4,275.40 | 4,274.40 | 4,274.30 | 4,269.20 | 4,269.90 | 4,271.00 |
| 27 | - | 4,269.90 | 4,270.90 | 4,273.10 | 4,273.40 | 4,274.90 | 4,275.30 | 4,274.40 | 4,274.30 | 4,269.20 | 4,269.90 | 4,271.00 |
| 28 | - | 4,270.00 | 4,270.90 | 4,272.90 | 4,273.40 | 4,274.90 | 4,275.20 | 4,274.40 | 4,274.30 | 4,269.20 | 4,269.90 | 4,271.10 |
| 29 | - | ------ | 4,270.90 | 4,272.70 | 4,273.20 | 4,275.00 | 4,275.10 | 4,274.30 | 4,274.20 | 4,269.20 | 4,269.90 | 4,271.10 |
| 30 | - | ------ | 4,271.00 | 4,272.50 | 4,273.20 | 4,275.10 | 4,275.10 | 4,274.30 | 4,274.20 | 4,269.20 | 4,270.00 | 4,271.10 |
| 31 | - | ------ | 4,271.10 | ------ | 4,273.30 | ------ | 4,275.10 | 4,274.30 | ------ | 4,269.20 | ------ | 4,271.20 |
| MEAN | - | 4,269.38 | 4,270.52 | 4,273.39 | 4,272.76 | - | 4,275.15 | 4,274.77 | 4,274.50 | 4,270.14 | 4,269.54 | 4,270.65 |
| MAX | - | 4,270.00 | 4,271.10 | 4,275.40 | 4,273.50 | - | 4,275.40 | 4,275.20 | 4,274.80 | 4,274.20 | 4,270.00 | 4,271.20 |
| MIN | - | 4,268.90 | 4,270.00 | 4,271.20 | 4,272.00 | - | 4,275.00 | 4,274.30 | 4,274.20 | 4,269.20 | 4,269.20 | 4,270.00 |

08384000 Alamogordo Reservoir near Fort Sumner, N. Mex.--Continued

CONTENTS, IN ACRE-FEET, AT 0800, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 80,520 | 85,290 | 89,480 | 94,280 | 99,260 | 104,000 | 110,700 | 111,500 | 109,800 | 107,100 | 86,420 | 89,460 |
| 2 | 80,520 | 85,290 | 89,480 | 94,690 | 99,260 | 105,700 | 111,100 | 111,500 | 109,800 | 105,300 | 86,420 | 89,880 |
| 3 | 80,520 | 85,290 | 89,880 | 95,510 | 99,260 | 107,100 | 111,100 | 111,500 | 109,800 | 103,100 | 86,420 | 89,880 |
| 4 | 80,880 | 85,660 | 89,880 | 96,740 | 98,830 | 108,000 | 111,100 | 111,500 | 109,300 | 100,500 | 86,420 | 90,280 |
| 5 | - | 85,660 | 89,880 | 97,560 | 98,410 | 108,400 | 111,100 | 111,100 | 108,900 | 98,410 | 86,420 | 90,280 |
| 6 | - | 85,660 | 90,280 | 98,410 | 98,410 | 109,300 | 111,100 | 110,700 | 108,900 | 96,740 | 86,420 | 90,680 |
| 7 | - | 86,040 | 90,280 | 98,830 | 97,990 | 109,800 | 111,100 | 110,700 | 108,900 | 93,870 | 86,810 | 90,680 |
| 8 | 81,240 | 86,040 | 90,280 | 99,680 | 97,990 | 110,200 | 111,100 | 110,700 | 108,900 | 92,660 | 86,810 | 91,080 |
| 9 | 81,600 | 86,420 | 90,680 | 101,000 | 97,990 | 110,200 | 110,700 | 110,700 | 108,900 | 90,280 | 86,810 | 91,080 |
| 10 | 81,600 | 86,420 | 90,680 | 102,200 | 97,560 | 110,200 | 111,100 | 110,700 | 108,900 | 88,720 | 86,810 | 91,080 |
| 11 | 81,960 | 86,420 | 91,070 | 103,100 | 97,560 | 110,200 | 111,100 | 110,200 | 108,900 | 87,190 | 87,190 | 91,470 |
| 12 | 81,960 | 86,810 | 91,070 | 104,400 | 98,410 | 110,200 | 111,100 | 110,200 | 108,900 | 87,190 | 87,190 | 91,470 |
| 13 | 82,330 | 86,810 | 91,070 | 105,700 | 100,100 | 110,700 | 111,100 | 110,200 | 108,900 | 86,810 | 87,570 | 91,470 |
| 14 | 82,330 | 86,810 | 91,470 | 107,500 | 102,700 | 111,600 | 110,700 | 110,200 | 108,400 | 86,810 | 87,570 | 91,870 |
| 15 | 82,700 | 87,190 | 91,470 | 109,300 | 102,700 | 112,000 | 110,700 | 109,800 | 108,400 | 86,810 | 87,570 | 91,870 |
| 16 | 82,700 | 87,190 | 91,470 | 112,000 | 102,700 | 111,600 | 110,700 | 109,800 | 108,400 | 86,810 | 87,950 | 92,270 |
| 17 | 83,070 | 87,570 | 91,870 | 112,400 | 101,800 | 110,700 | 110,700 | 109,800 | 108,000 | 86,810 | 87,950 | 92,270 |
| 18 | 83,070 | 87,570 | 91,870 | 112,000 | 101,000 | - | 110,700 | 109,300 | 108,000 | 86,810 | 87,950 | 92,660 |
| 19 | 83,070 | 87,570 | 91,870 | 111,100 | 100,500 | 110,200 | 111,100 | 109,300 | 108,000 | 86,810 | 87,950 | 92,660 |
| 20 | 83,440 | 87,950 | 92,270 | 110,200 | 100,500 | 110,200 | 112,400 | 109,300 | 108,000 | 86,810 | 88,340 | 92,660 |
| 21 | 83,440 | 87,950 | 92,270 | 109,300 | 101,000 | 109,800 | 112,400 | 108,900 | 108,000 | 86,420 | 88,340 | 93,060 |
| 22 | 83,440 | 88,340 | 92,270 | 108,000 | 101,800 | 109,800 | 112,400 | 108,900 | 108,000 | 86,420 | 88,720 | 93,060 |
| 23 | 83,810 | 88,340 | 92,270 | 107,100 | 102,700 | 109,800 | 112,000 | 108,900 | 108,000 | 86,420 | 88,720 | 93,060 |
| 24 | 83,810 | 88,720 | 92,270 | 105,700 | 103,500 | 110,200 | 112,400 | 108,400 | 108,000 | 86,420 | 88,720 | 93,460 |
| 25 | 84,180 | 88,720 | 92,660 | 104,400 | 104,000 | 109,300 | 112,400 | 108,400 | 108,000 | 86,420 | 88,720 | 93,460 |
| 26 | - | 89,100 | 93,060 | 103,100 | 104,000 | 109,800 | 112,400 | 108,000 | 107,500 | 86,420 | 89,100 | 93,460 |
| 27 | - | 89,100 | 93,060 | 102,200 | 103,500 | 110,200 | 112,000 | 108,000 | 107,500 | 86,420 | 89,100 | 93,460 |
| 28 | - | 89,480 | 93,060 | 101,400 | 103,500 | 110,200 | 111,600 | 108,000 | 107,500 | 86,420 | 89,100 | 93,870 |
| 29 | - | ------ | 93,060 | 100,500 | 102,700 | 110,700 | 111,100 | 107,500 | 107,100 | 86,420 | 89,100 | 93,870 |
| 30 | - | ------ | 93,460 | 99,680 | 102,700 | 111,100 | 111,100 | 107,500 | 107,100 | 86,420 | 89,480 | 93,870 |
| 31 | 84,920 | ------ | 93,870 | ------ | 103,100 | ------ | 111,100 | 107,500 | ------ | 86,420 | ------ | 94,280 |
| (†) | +4,750 | +4,560 | +4,390 | +5,810 | +3,420 | +8,000 | 0 | -3,600 | -400 | -20,680 | +3,060 | +4,800 |
| MAX | - | 89,480 | 93,870 | 112,400 | 104,000 | - | 112,400 | 111,500 | 109,800 | 107,100 | 89,480 | 94,280 |
| MIN | - | 85,290 | 89,480 | 94,280 | 97,560 | - | 110,700 | 107,500 | 107,100 | 86,420 | 86,420 | 89,480 |

CAL YR 1973 MAX 112,400 MIN 80,520 CHANGE IN CONTENTS +14,110
WTR YR 1973 MAX 112,400 MIN 58,320 CHANGE IN CONTENTS +47,620

† Change in contents, in acre-feet.

08384500 PECOS RIVER BELOW ALAMOGORDO DAM, N. MEX.

LOCATION.--Lat 34°36'15", long 104°23'14", in lot 1, sec.2, T.4 N., R.24 E., DeBaca County, on left bank 1,200 ft (366 m) downstream from Alamogordo Dam, 2.9 mi (4.7 km) upstream from Salada Creek, 4.6 mi (7.4 km) northeast of Guadalupe, 12.2 mi (19.6 km) northwest of Fort Sumner, and at mile 710.7 (1,143.5 km).

DRAINAGE AREA.--4,390 mi² (11,370 km²), approximately (contributing area).

PERIOD OF RECORD.--October 1912 to April 1926, August 1926 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1944, published as "near Guadalupe."

GAGE.--Water-stage recorder and Parshall flume, with concrete control above top of flume. Datum of gage is 4,142.67 ft (1,262.686 m) above mean sea level (Bureau of Reclamation datum). Prior to Sept. 10, 1936, at site 1.5 mi (2.4 km) upstream at different datum. Sept. 14, 1936, to Mar. 8, 1941, and June 11, to Sept. 21, 1941, at site 0.2 mi (0.3 km) downstream at different datums.

AVERAGE DISCHARGE.--23 calendar years (1913-25, 1927-36), 236 ft³/s (6.684 m³/s), 171,000 acre-ft/yr (211 hm³/yr), prior to completion of Alamogordo Dam; 37 calendar years (1937-73), 212 ft³/s (6.004 m³/s) 153,600 acre-ft/yr (189 hm³/yr); 20 calendar years (1954-73), 179 ft³/s (5.069 m³/s), 129,700 acre-ft/yr (160 hm³/yr).

EXTREMES.--Current year: Maximum daily discharge, 1,980 ft³/s (56.1 m³/s) May 15 (gage height, 3.53 ft or 1.076 m); minimum 2.2 ft³/s (0.062 m³/s) Feb. 12, 13.

Period of record: Maximum discharge, 42,800 ft³/s (1,210 m³/s) Sept. 1, 1942, by computation of flow over spillway and through outlet gages of Alamogordo Dam by Bureau of Reclamation; maximum gage height, 13.58 ft (4.139 m) Sept. 22, 1941, no flow at times.

Flood of June 2, 1937, probably exceeded 55,000 ft³/s (1,560 m³/s) at site 1.5 mi (2.4 km) upstream.

REMARKS.--Records good. Diversion for irrigation of about 12,500 acres (5,060 hm²), 1959 determination, above station. Flow regulated by Alamogordo Reservoir (see sta 08384000). Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1512: 1932. WSP 1632: 1942. WSP 1712: 1944.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.8 | 2.8 | 4.4 | 88 | 1,220 | 494 | 233 | 147 | 86 | 510 | 33 | 11 |
| 2 | 3.8 | 3.4 | 4.9 | 87 | 1,230 | 496 | 179 | 276 | 87 | 1,210 | 21 | 11 |
| 3 | 3.8 | 4.1 | 4.9 | 41 | 1,230 | 502 | 208 | 334 | 95 | 1,180 | 21 | 11 |
| 4 | 3.9 | 3.6 | 5.0 | 5.7 | 1,230 | 510 | 205 | 332 | 94 | 1,180 | 20 | 10 |
| 5 | 4.1 | 3.6 | 5.0 | 32 | 1,240 | 511 | 199 | 331 | 91 | 1,170 | 19 | 11 |
| 6 | 4.1 | 3.6 | 4.8 | 36 | 1,240 | 519 | 198 | 206 | 90 | 1,160 | 18 | 11 |
| 7 | 4.1 | 3.5 | 5.0 | 25 | 1,260 | 513 | 202 | 131 | 95 | 1,160 | 17 | 11 |
| 8 | 4.1 | 3.4 | 5.0 | 9.1 | 1,260 | 628 | 205 | 118 | 80 | 1,140 | 16 | 11 |
| 9 | 4.1 | 3.5 | 4.9 | 9.0 | 1,300 | 691 | 159 | 106 | 82 | 1,130 | 16 | 10 |
| 10 | 4.0 | 3.7 | 4.9 | 9.5 | 1,290 | 702 | 116 | 106 | 95 | 1,130 | 16 | 10 |
| 11 | 4.2 | 3.2 | 5.0 | 11 | 1,300 | 702 | 116 | 105 | 93 | 439 | 17 | 9.4 |
| 12 | 4.7 | 2.8 | 5.6 | 12 | 1,290 | 691 | 117 | 105 | 94 | 88 | 18 | 7.8 |
| 13 | 4.7 | 2.3 | 5.3 | 13 | 1,300 | 680 | 118 | 103 | 87 | 91 | 18 | 6.7 |
| 14 | 5.2 | 2.6 | 4.7 | 14 | 1,690 | 804 | 118 | 103 | 90 | 92 | 17 | 6.5 |
| 15 | 5.7 | 2.8 | 5.1 | 32 | 1,980 | 1,010 | 118 | 102 | 89 | 94 | 16 | 6.5 |
| 16 | 5.8 | 3.0 | 5.5 | 663 | 1,960 | 1,090 | 118 | 104 | 90 | 95 | 16 | 6.5 |
| 17 | 5.5 | 3.0 | 6.0 | 1,250 | 1,960 | 1,050 | 118 | 104 | 91 | 94 | 16 | 6.5 |
| 18 | 4.7 | 3.1 | 6.1 | 1,300 | 1,760 | 768 | 118 | 108 | 90 | 93 | 15 | 6.1 |
| 19 | 4.7 | 3.3 | 5.7 | 1,300 | 1,540 | 680 | 196 | 106 | 91 | 90 | 14 | 5.5 |
| 20 | 4.7 | 3.6 | 6.0 | 1,300 | 1,540 | 691 | 315 | 106 | 93 | 91 | 11 | 5.8 |
| 21 | 4.9 | 3.1 | 6.1 | 1,300 | 1,550 | 566 | 330 | 105 | 91 | 96 | 11 | 5.8 |
| 22 | 4.9 | 2.9 | 6.1 | 1,280 | 1,520 | 435 | 331 | 102 | 90 | 95 | 11 | 5.8 |
| 23 | 5.0 | 3.3 | 6.2 | 1,260 | 1,520 | 372 | 329 | 103 | 90 | 92 | 11 | 5.8 |
| 24 | 5.5 | 4.2 | 5.6 | 1,260 | 1,540 | 362 | 331 | 104 | 90 | 93 | 11 | 5.8 |
| 25 | 5.9 | 4.6 | 33 | 1,250 | 1,550 | 207 | 381 | 103 | 88 | 91 | 11 | 5.5 |
| 26 | 6.0 | 4.5 | 77 | 1,230 | 1,580 | 98 | 472 | 104 | 88 | 92 | 11 | 5.8 |
| 27 | 4.2 | 5.0 | 78 | 1,230 | 1,610 | 96 | 514 | 104 | 88 | 93 | 9.9 | 5.8 |
| 28 | 2.9 | 7.0 | 79 | 1,210 | 1,590 | 104 | 514 | 103 | 89 | 93 | 9.8 | 5.2 |
| 29 | 3.3 | ------ | 85 | 1,210 | 1,140 | 117 | 250 | 99 | 90 | 96 | 10 | 5.2 |
| 30 | 3.4 | ------ | 87 | 1,230 | 614 | 238 | 146 | 106 | 90 | 98 | 11 | 5.2 |
| 31 | 3.2 | ------ | 87 | ------ | 491 | ------ | 146 | 104 | ------ | 96 | ------ | 5.2 |
| TOTAL | 138.9 | 99.5 | 653.8 | 18,697.3 | 43,525 | 16,327 | 7,100 | 4,270 | 2,697 | 13,272 | 461.7 | 235.4 |
| MEAN | 4.48 | 3.55 | 21.1 | 623 | 1,404 | 544 | 229 | 138 | 89.9 | 428 | 15.4 | 7.59 |
| MAX | 6.0 | 7.0 | 87 | 1,300 | 1,980 | 1,090 | 514 | 334 | 95 | 1,210 | 33 | 11 |
| MIN | 2.9 | 2.3 | 4.4 | 5.7 | 491 | 96 | 116 | 99 | 80 | 88 | 9.8 | 5.2 |
| AC-FT | 276 | 197 | 1,300 | 37,090 | 86,330 | 32,380 | 14,080 | 8,470 | 5,350 | 26,330 | 916 | 467 |

CAL YR 1973 TOTAL 107,477.6 MEAN 294 MAX 1,980 MIN 2.3 AC-FT 213,200
WTR YR 1973 TOTAL 95,534.4 MEAN 262 MAX 1,980 MIN 2.0 AC-FT 189,500

## 08385000 FORT SUMNER MAIN CANAL NEAR FORT SUMNER, N. MEX.

LOCATION.--Lat 34°30'30", long 104°16'40", in SW¼SW¼ sec.1, T.3 N., R.25 E., DeBaca County, on right bank of concrete canal, 200 ft (60 m) downstream from diversion dam on Pecos River, 3.0 mi (4.8 km) northwest of Fort Sumner, and at Pecos River mile 694.1 (1,116.8 km).

PERIOD OF RECORD.--March 1939 to February 1943 (published in WSP 1732), April 1954 to current year (monthly discharge only prior to October 1965).

GAGE.--Water-stage recorder. Datum of gage is 4,034.7 ft (1,229.78 m) above mean sea level (Bureau of Reclamation bench mark). Prior to March 1954 at site 2.4 mi (3.9 km) downstream at different datum. April 1954 to March 1965 at site 1.1 mi (1.8 km) downstream at datum 1.7 ft (0.52 m) lower.

AVERAGE DISCHARGE.--22 calendar years (1940-42, 1955-73), 48.3 ft³/s (1.368 m³/s), 34,990 acre-ft/yr (43.1 hm³/yr), 19 calendar years (1955-73), 50.3 ft³/s (1.424 m³/s), 36,440 acre-ft/yr (44.9 hm³/yr).

EXTREMES.--Current year: Maximum daily discharge, 115 ft³/s (3.26 m³/s) June 16; no flow at times.
Period of record: Maximum daily discharge, 174 ft³/s (4.93 m³/s) July 22, 1941; no flow many days each year.

REMARKS.--Records good. Canal diverts water from Pecos River for irrigation of about 6,600 acres (2,670 hm²), 1961 determination, by the Fort Sumner Irrigation District.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 0 | 85 | 101 | 108 | 111 | 0 | 101 | 90 | 71 | |
| 2 | | | 0 | 96 | 103 | 108 | 107 | 0 | 74 | 100 | 16 | |
| 3 | | | 0 | 90 | 105 | 108 | 109 | 0 | 94 | 109 | 0 | |
| 4 | | | 0 | 16 | 104 | 107 | 109 | 0 | 90 | 107 | 0 | |
| 5 | | | 0 | 0 | 104 | 107 | 109 | 0 | 80 | 105 | 0 | |
| 6 | | | 0 | 28 | 103 | 108 | 108 | 70 | 86 | 104 | 0 | |
| 7 | | | 0 | 48 | 102 | 108 | 108 | 104 | 92 | 101 | 0 | |
| 8 | | | 0 | 27 | 102 | 108 | 108 | 103 | 88 | 100 | 0 | |
| 9 | | | 0 | 16 | 101 | 110 | 109 | 100 | 77 | 99 | 0 | |
| 10 | | | 0 | 14 | 101 | 110 | 106 | 100 | 89 | 98 | 0 | |
| 11 | | | 0 | 14 | 102 | 110 | 104 | 99 | 90 | 104 | 0 | |
| 12 | | | 0 | 14 | 89 | 110 | 103 | 100 | 93 | 109 | 0 | |
| 13 | | | 0 | 14 | 80 | 110 | 103 | 101 | 83 | 106 | 0 | |
| 14 | | | 0 | 19 | 34 | 111 | 104 | 101 | 83 | 104 | 0 | |
| 15 | | | 0 | 42 | 0 | 114 | 104 | 101 | 88 | 104 | 0 | |
| 16 | | | 0 | 56 | 0 | 115 | 104 | 101 | 98 | 104 | 0 | |
| 17 | | | 0 | 93 | 0 | 114 | 104 | 102 | 96 | 102 | 0 | |
| 18 | | | 0 | 106 | 0 | 112 | 105 | 102 | 90 | 102 | 0 | |
| 19 | | | 0 | 102 | 0 | 110 | 106 | 104 | 88 | 98 | 0 | |
| 20 | | | 0 | 96 | 33 | 111 | 112 | 103 | 88 | 91 | 0 | |
| 21 | | | 0 | 90 | 106 | 110 | 114 | 102 | 90 | 94 | 0 | |
| 22 | | | 0 | 97 | 106 | 108 | 113 | 100 | 87 | 98 | 0 | |
| 23 | | | 0 | 102 | 106 | 106 | 112 | 100 | 86 | 95 | 0 | |
| 24 | | | 0 | 99 | 106 | 106 | 113 | 100 | 89 | 91 | 0 | |
| 25 | | | 0 | 98 | 106 | 103 | 114 | 100 | 86 | 90 | 0 | |
| 26 | | | 33 | 102 | 106 | 100 | 51 | 100 | 86 | 86 | 0 | |
| 27 | | | 69 | 103 | 106 | 101 | 0 | 99 | 86 | 87 | 0 | |
| 28 | | | 71 | 102 | 106 | 100 | 0 | 100 | 86 | 85 | 0 | |
| 29 | | ------ | 80 | 102 | 104 | 101 | 0 | 98 | 87 | 91 | 0 | |
| 30 | | ------ | 92 | 101 | 101 | 106 | 0 | 98 | 89 | 92 | 0 | |
| 31 | | ------ | 85 | ------ | 108 | ------ | 0 | 105 | ------ | 92 | ------ | |
| TOTAL | 0 | 0 | 430 | 1,972 | 2,525 | 3,240 | 2,750 | 2,593 | 2,640 | 3,038 | 87 | 0 |
| MEAN | 0 | 0 | 13.9 | 65.7 | 81.5 | 108 | 88.7 | 83.6 | 88.0 | 98.0 | 2.90 | 0 |
| MAX | 0 | 0 | 92 | 106 | 108 | 115 | 114 | 105 | 101 | 109 | 71 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 74 | 85 | 0 | 0 |
| AC-FT | 0 | 0 | 853 | 3,910 | 5,010 | 6,430 | 5,450 | 5,140 | 5,240 | 6,030 | 173 | 0 |

CAL YR 1973 TOTAL 19,275.00 MEAN 52.8 MAX 115 MIN 0 AC-FT 38,230
WTR YR 1973 TOTAL 18,017.00 MEAN 49.4 MAX 115 MIN 0 AC-FT 35,740

## 08386000 PECOS RIVER NEAR ACME, N. MEX.

LOCATION.--Lat 33°32'10", long 104°22'34", in SW¼NW¼ sec.14, T.9 S., R.25 E., Chaves County, on right bank 3.0 mi (4.8 km) downstream from U.S. Highway 70, 3.7 mi (6.0 km) downstream from Salt Creek, 4.7 mi (7.6 km) southwest of Acme, 14 mi (22.5 km) northeast of Roswell, and at mile 591.2 (951.2 km).

DRAINAGE AREA.--11,380 mi² (29,470 km²), approximately (contributing area).

PERIOD OF RECORD.--September 1921 to June 1923, July 1937 to current year. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder. Altitude of gage is 3,507 ft (1,069 m), from topographic map. Prior to Nov. 1, 1938, at site on highway bridge 3 mi (4.8 km) upstream at various datums. Since Oct. 25, 1963, supplemental water-stage recorder at site opposite base gage at same datum.

AVERAGE DISCHARGE.--36 calendar years (1938-73), 198 ft³/s (5.607 m³/s), 143,500 acre-ft/yr (177 hm³/yr); 20 calendar years (1954-73), 166 ft³/s (4.701 m³/s) 120,300 acre-ft/yr (148 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,560 ft³/s (101 m³/s) July 26 (gage height, 6.96 ft or 2.121 m); minimum 0.51 ft³/s (0.014 m³/s) Aug. 28.
Period of record: Maximum discharge, 45,000 ft³/s (1,270 m³/s) Sept. 23, 1941 (gage height, 13.71 ft or 4.179 m), from rating curve extended above 26,000 ft³/s (736 m³/s); no flow at times.
The flood of May 28, 1937, reached a discharge of 53,000 ft³/s (1,500 m³/s) (gage height, 14.82 ft or 4.517 m, from floodmarks), site and datum then in use, by slope-area method, but may have been exceeded by the flood of Oct. 1, 1904.

REMARKS.--Records fair except those below 10 ft³/s (0.28 m³/s), which are poor. Flow regulated by Alamogordo Reservoir (see sta 08384000). Diversions for irrigation of about 20,000 acres (8,090 hm²), 1959 determination, above station. Water quality records for the current year are published in Part 2 of this report.

### DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18 | 17 | 21 | 21 | 954 | 555 | 40 | 639 | 36 | 9.7 | 34 | 22 |
| 2 | 17 | 19 | 19 | 22 | 987 | 528 | 31 | 261 | 21 | 11 | 36 | 22 |
| 3 | 16 | 17 | 17 | 24 | 954 | 528 | 25 | 227 | 12 | 15 | 47 | 21 |
| 4 | 18 | 17 | 16 | 31 | 943 | 442 | 114 | 196 | 9.7 | 690 | 60 | 21 |
| 5 | 19 | 16 | 15 | 53 | 1,020 | 425 | 61 | 303 | 5.5 | 822 | 50 | 21 |
| 6 | 26 | 15 | 15 | 50 | 998 | 365 | 65 | 316 | 3.0 | 833 | 37 | 21 |
| 7 | 37 | 16 | 14 | 52 | 987 | 434 | 73 | 323 | 3.1 | 822 | 37 | 22 |
| 8 | 34 | 14 | 14 | 44 | 943 | 468 | 61 | 323 | 5.8 | 921 | 34 | 23 |
| 9 | 29 | 12 | 15 | 39 | 965 | 493 | 61 | 227 | 8.9 | 910 | 33 | 22 |
| 10 | 19 | 14 | 34 | 41 | 976 | 573 | 115 | 143 | 12 | 965 | 34 | 22 |
| 11 | 15 | 17 | 51 | 42 | 1,010 | 640 | 160 | 87 | 16 | 921 | 34 | 23 |
| 12 | 17 | 19 | 55 | 39 | 1,160 | 546 | 112 | 65 | 437 | 899 | 34 | 25 |
| 13 | 22 | 21 | 54 | 51 | 1,310 | 630 | 77 | 51 | 191 | 424 | 33 | 24 |
| 14 | 27 | 19 | 39 | 27 | 1,220 | 600 | 45 | 40 | 108 | 186 | 31 | 21 |
| 15 | 30 | 17 | 33 | 24 | 1,510 | 555 | 68 | 34 | 58 | 134 | 28 | 19 |
| 16 | 38 | 15 | 28 | 21 | 2,010 | 582 | 47 | 33 | 34 | 105 | 26 | 19 |
| 17 | 32 | 15 | 26 | 17 | 2,020 | 780 | 29 | 27 | 25 | 93 | 26 | 20 |
| 18 | 26 | 16 | 24 | 280 | 1,960 | 822 | 40 | 23 | 37 | 75 | 26 | 20 |
| 19 | 25 | 16 | 21 | 844 | 1,880 | 710 | 50 | 18 | 50 | 58 | 25 | 13 |
| 20 | 22 | 15 | 20 | 976 | 1,400 | 573 | 28 | 16 | 48 | 61 | 26 | 8.0 |
| 21 | 21 | 17 | 18 | 954 | 1,360 | 510 | 26 | 14 | 37 | 65 | 27 | 8.0 |
| 22 | 21 | 26 | 17 | 1,020 | 1,340 | 502 | 452 | 10 | 34 | 58 | 28 | 10 |
| 23 | 18 | 29 | 16 | 1,040 | 1,290 | 442 | 372 | 8.9 | 33 | 45 | 27 | 14 |
| 24 | 16 | 29 | 17 | 1,040 | 1,290 | 343 | 290 | 6.7 | 29 | 42 | 27 | 20 |
| 25 | 17 | 29 | 18 | 1,030 | 1,310 | 283 | 425 | 5.2 | 24 | 33 | 26 | 28 |
| 26 | 17 | 28 | 18 | 1,060 | 1,350 | 283 | 1,610 | 3.5 | 22 | 30 | 25 | 30 |
| 27 | 17 | 26 | 17 | 1,030 | 1,290 | 255 | 928 | 2.2 | 19 | 32 | 22 | 14 |
| 28 | 15 | 24 | 17 | 987 | 1,300 | 157 | 555 | 1.2 | 25 | 30 | 21 | 17 |
| 29 | 15 | ------ | 16 | 1,040 | 1,320 | 83 | 650 | 1.7 | 17 | 31 | 21 | 19 |
| 30 | 16 | ------ | 17 | 965 | 1,310 | 58 | 493 | 1.5 | 11 | 32 | 21 | 21 |
| 31 | 16 | ------ | 21 | ------ | 740 | ------ | 1,170 | 29 | ------ | 33 | ------ | 21 |
| TOTAL | 676 | 535 | 721 | 12,824 | 39,107 | 14,165 | 8,273 | 3,435.9 | 1,372.0 | 9,385.7 | 936 | 611.0 |
| MEAN | 21.8 | 19.1 | 23.3 | 427 | 1,262 | 472 | 267 | 111 | 45.7 | 303 | 31.2 | 19.7 |
| MAX | 38 | 29 | 55 | 1,060 | 2,020 | 822 | 1,610 | 639 | 437 | 965 | 60 | 30 |
| MIN | 15 | 12 | 13 | 17 | 740 | 58 | 25 | 1.2 | 3.0 | 9.7 | 21 | 8.0 |
| AC-FT | 1,340 | 1,060 | 1,430 | 25,440 | 77,570 | 28,100 | 16,410 | 6,820 | 2,720 | 18,620 | 1,860 | 1,210 |

CAL YR 1973 TOTAL 92,041.6 MEAN 252 MAX 2,020 MIN 1.2 AC-FT 182,600
WTR YR 1973 TOTAL 84,149.9 MEAN 231 MAX 2,020 MIN 1.2 AC-FT 166,900

### PEAK DISCHARGE (BASE, 2,500 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 7-26 | 1530 | 6.96 | 3,560 | 7-31 | 0500 | 6.72 | 3,140 |

## 08386900 F. HERRERA DITCH-S. AT HOLLYWOOD, N. MEX.

LOCATION.--Lat 33°19'35", long 105°36'50", in NE¼NE¼SW¼ sec.30, T.11 S., R.14 E., Lincoln County, on left bank, at upstream end of flume over Grapevine Canyon, 1.0 mi (1.6 km) below point of diversion, 0.7 mi (1.1 km) east of Hollywood, and junction of U.S. Highway 70 and State Highway 37.

PERIOD OF RECORD.--May 1960 to current year. (Monthly acre-ft only prior to January 1973, published as a supplement to sta 08387000).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,432 ft (1,960.5 m) from Topographic Division. Prior to Mar. 20, 1962, at site 315 ft (96 m) downstream at datum 12.79 ft (3.898 m) lower.

AVERAGE DISCHARGE.--13 calendar years, 0.62 ft³/s (0.0176 m³/s), 449 acre-ft/yr (554,000 m³/yr).

EXTREMES.--Current year: Maximum daily discharge, 0.94 ft³/s (0.027 m³/s) June 1; no flow many days.
Period of record: Maximum daily discharge, 6.6 ft³/s (0.19 m³/s) June 15, 1961; no flow many days each year.

REMARKS.--Records poor. Water is diverted from Rio Ruidoso 1.0 mi (1.6 km) upstream for irrigation below sta 08387000.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | .94 | .14 | .40 | .22 | .50 | .14 | .02 |
| 2 | 0 | 0 | 0 | 0 | 0 | .90 | .09 | .28 | .19 | .50 | .12 | .02 |
| 3 | 0 | 0 | 0 | .01 | 0 | .59 | .01 | .28 | .17 | .50 | .12 | .01 |
| 4 | .05 | 0 | 0 | 0 | 0 | .45 | 0 | .52 | .16 | .45 | .10 | .02 |
| 5 | 0 | 0 | 0 | .06 | .06 | .45 | .17 | .32 | .14 | .59 | .08 | .01 |
| 6 | 0 | 0 | 0 | .07 | .03 | .42 | .32 | .26 | .13 | .69 | .08 | 0 |
| 7 | .15 | 0 | 0 | .04 | .11 | .32 | .19 | .19 | .12 | .37 | .08 | .01 |
| 8 | 0 | 0 | .01 | .01 | .10 | .30 | .04 | .14 | .10 | .35 | .07 | .02 |
| 9 | 0 | .29 | .01 | 0 | 0 | .22 | .32 | .02 | .22 | .30 | .07 | .02 |
| 10 | .12 | 0 | .01 | 0 | 0 | .22 | .66 | .38 | .66 | .35 | .07 | .03 |
| 11 | 0 | 0 | 0 | 0 | 0 | .20 | .26 | .13 | .66 | .26 | .06 | .03 |
| 12 | 0 | .03 | .01 | 0 | 0 | .45 | .13 | .08 | .62 | .16 | .05 | .03 |
| 13 | 0 | 0 | .03 | 0 | .01 | .90 | .10 | .06 | .53 | .16 | .05 | .01 |
| 14 | 0 | 0 | .10 | 0 | .46 | .56 | .04 | .03 | .53 | .13 | .04 | 0 |
| 15 | 0 | 0 | .03 | .06 | .07 | .42 | .22 | .08 | .50 | .08 | .04 | .01 |
| 16 | 0 | 0 | .07 | .11 | .13 | .35 | .20 | .13 | .47 | .06 | .04 | .03 |
| 17 | 0 | 0 | .16 | .09 | .20 | .14 | .56 | .06 | .40 | .06 | .04 | .03 |
| 18 | 0 | .04 | .08 | .16 | 0 | .20 | .62 | .03 | .48 | .05 | .04 | .01 |
| 19 | 0 | 0 | .19 | .17 | 0 | .10 | .56 | .06 | .50 | .04 | .04 | 0 |
| 20 | 0 | 0 | .17 | .03 | 0 | 0 | .50 | .16 | .35 | .07 | .07 | 0 |
| 21 | 0 | .20 | .12 | .06 | .02 | 0 | .42 | .30 | .37 | .01 | .05 | 0 |
| 22 | 0 | .32 | .07 | .13 | .08 | .01 | .42 | .26 | .40 | .02 | .05 | 0 |
| 23 | 0 | 0 | .06 | .56 | 0 | .15 | .50 | .24 | .37 | .16 | .05 | 0 |
| 24 | 0 | 0 | .03 | .69 | 0 | .22 | .37 | .20 | .24 | .24 | .04 | 0 |
| 25 | 0 | 0 | .01 | .46 | .13 | .86 | .40 | .20 | .22 | .17 | .04 | 0 |
| 26 | 0 | 0 | 0 | 0 | .11 | .80 | .47 | .17 | .24 | .19 | .06 | 0 |
| 27 | 0 | 0 | .01 | .03 | .07 | .83 | .42 | .17 | .26 | .20 | .05 | 0 |
| 28 | 0 | 0 | 0 | 0 | .03 | .56 | .42 | .28 | .48 | .20 | .03 | 0 |
| 29 | 0 | ------ | .04 | 0 | 0 | .12 | .40 | .32 | .59 | .20 | .04 | 0 |
| 30 | 0 | ------ | .03 | .04 | .29 | .08 | .47 | .32 | .50 | .17 | .03 | 0 |
| 31 | 0 | ------ | .06 | ------ | .86 | ------ | .50 | .30 | ------ | .17 | ------ | 0 |
| TOTAL | .32 | .88 | 1.30 | 2.78 | 2.76 | 11.76 | 9.92 | 6.37 | 10.82 | 7.40 | 1.84 | .31 |
| MEAN | .010 | .031 | .042 | .093 | .089 | .39 | .32 | .21 | .36 | .24 | .061 | .010 |
| MAX | .15 | .32 | .19 | .69 | .86 | .94 | .66 | .52 | .66 | .69 | .14 | .03 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | .02 | .10 | .01 | .03 | 0 |
| AC-FT | .6 | 1.7 | 2.6 | 5.5 | 5.5 | 23 | 20 | 13 | 21 | 15 | 3.6 | .6 |

CAL YR 1973 TOTAL 56.46 MEAN .15 MAX .94 MIN 0 AC-FT 112
WTR YR 1973 TOTAL 53.38 MEAN .15 MAX 1.3 MIN 0 AC-FT 106

## 08387000 RIO RUIDOSO AT HOLLYWOOD, N. MEX.

LOCATION.--Lat 33°19'43", long 105°36'34", in SW¼SE¼NE¼ sec.30, T.11 S., R.14 E., Lincoln County, on right upstream bridge abutement on road leading to Ruidoso Downs race track, 0.2 mi (0.3 km) north of U.S. Highway 70, 1.1 mi (1.8 km) east of the Hollywood Post Office, 1.2 mi (1.9 km) downstream from the Ruidoso sewage disposal plant, 1.8 mi (2.9 km) downstream from Gavilan Canyon, 2.8 mi (4.5 km) downstream from Carrizozo Creek, and at mile 23.4 (37.7 km).

DRAINAGE AREA.--120 mi² (311 km²), approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 6,365.42 ft (1,940.180 m) above mean sea level. Prior to Oct. 14, 1961, at datum 0.30 ft (0.091 m) higher. Oct. 14, 1961, to Mar. 8, 1962, at datum 0.60 ft (0.183 m) higher. Mar. 9, 1962, to June 18, 1965, at datum 1.0 ft (0.305 m) higher.

AVERAGE DISCHARGE.--20 calendar years, 12.9 ft³/s (0.365 m³/s), 9,350 acre-ft/yr (11.5 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 161 ft³/s (4.56 m³/s) Apr. 29 (gage height, 2.25 ft or 0.686 m); minimum, 3.6 ft³/s (0.10 m³/s) Nov. 13-17.
Period of record: Maximum discharge, 1,340 ft³/s (37.9 m³/s) June 17, 1965, (gage height, 9.05 ft or 2.758 m), from rating curve extended above 110 ft³/s (3.12 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.30 ft³/s (0.008 m³/s) Jan. 1, 1962, May 8-9, 1964.
The flood of Sept. 29, 1941, is probably the highest since at least 1904 (discharge not determined).

REMARKS.--Records good. Figures of discharge do not include F. Herrera ditch-S., which diverts from right bank 1.5 mi (2.4 km) upstream and bypasses station for irrigation of 75 acres (30.4 hm²), 1959 determination, below. See monthly table below for record of ditch. Village of Ruidoso diverts from right bank 7 mi (11.3 km) upstream for municipal use and returns a portion of this to river as effluent from sewage disposal plant 1.2 mi (1.9 km) upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 25 | 17 | 35 | 43 | 110 | 60 | 17 | 19 | 11 | 4.5 | 4.2 | 4.8 |
| 2 | 25 | 16 | 38 | 42 | 95 | 59 | 17 | 17 | 9.2 | 4.7 | 4.2 | 4.9 |
| 3 | 24 | 15 | 41 | 41 | 101 | 54 | 15 | 18 | 8.4 | 4.3 | 4.2 | 4.9 |
| 4 | 23 | 16 | 41 | 39 | 113 | 49 | 15 | 22 | 8.0 | 4.3 | 4.2 | 4.7 |
| 5 | 23 | 17 | 41 | 38 | 135 | 46 | 16 | 20 | 7.7 | 4.1 | 4.3 | 4.6 |
| 6 | 23 | 18 | 41 | 38 | 135 | 42 | 16 | 19 | 7.3 | 4.4 | 4.2 | 4.0 |
| 7 | 23 | 22 | 39 | 38 | 101 | 41 | 14 | 18 | 7.5 | 4.5 | 4.2 | 4.3 |
| 8 | 21 | 21 | 38 | 40 | 87 | 41 | 14 | 16 | 7.3 | 4.3 | 4.2 | 5.0 |
| 9 | 21 | 20 | 36 | 39 | 98 | 39 | 16 | 16 | 6.9 | 4.2 | 4.2 | 4.6 |
| 10 | 21 | 21 | 36 | 40 | 124 | 37 | 22 | 21 | 7.6 | 4.5 | 4.2 | 4.8 |
| 11 | 20 | 22 | 34 | 45 | 141 | 36 | 17 | 16 | 6.8 | 4.8 | 4.2 | 4.8 |
| 12 | 19 | 21 | 34 | 56 | 128 | 41 | 14 | 14 | 6.5 | 4.7 | 4.1 | 4.7 |
| 13 | 19 | 20 | 34 | 70 | 126 | 49 | 14 | 13 | 6.0 | 4.4 | 3.9 | 4.6 |
| 14 | 19 | 20 | 37 | 98 | 138 | 46 | 14 | 13 | 6.1 | 4.3 | 3.8 | 4.6 |
| 15 | 19 | 19 | 35 | 114 | 110 | 42 | 16 | 13 | 5.9 | 4.4 | 3.8 | 4.6 |
| 16 | 20 | 20 | 35 | 103 | 97 | 39 | 16 | 16 | 5.8 | 4.4 | 3.8 | 4.6 |
| 17 | 21 | 19 | 36 | 88 | 99 | 34 | 27 | 13 | 5.7 | 4.5 | 3.8 | 4.8 |
| 18 | 22 | 19 | 38 | 88 | 102 | 31 | 28 | 12 | 5.9 | 4.6 | 4.0 | 4.7 |
| 19 | 22 | 19 | 41 | 89 | 113 | 29 | 29 | 12 | 6.4 | 4.3 | 4.3 | 4.6 |
| 20 | 22 | 20 | 43 | 83 | 122 | 27 | 27 | 11 | 5.7 | 4.5 | 4.6 | 4.0 |
| 21 | 20 | 21 | 45 | 74 | 121 | 25 | 24 | 11 | 5.6 | 4.4 | 4.5 | 4.0 |
| 22 | 22 | 21 | 47 | 74 | 108 | 23 | 21 | 10 | 5.6 | 4.4 | 4.4 | 4.8 |
| 23 | 20 | 20 | 50 | 86 | 98 | 22 | 19 | 9.5 | 5.7 | 4.4 | 4.6 | 5.0 |
| 24 | 19 | 22 | 48 | 101 | 90 | 21 | 17 | 9.0 | 5.3 | 4.0 | 4.5 | 4.9 |
| 25 | 19 | 24 | 49 | 113 | 80 | 19 | 16 | 8.3 | 5.2 | 4.0 | 4.4 | 4.5 |
| 26 | 18 | 25 | 48 | 113 | 76 | 18 | 17 | 7.8 | 5.5 | 4.2 | 4.4 | 4.8 |
| 27 | 18 | 27 | 49 | 116 | 73 | 19 | 16 | 7.6 | 5.6 | 4.2 | 4.6 | 4.2 |
| 28 | 17 | 31 | 47 | 132 | 66 | 18 | 16 | 9.5 | 5.1 | 4.2 | 4.7 | 4.9 |
| 29 | 17 | ------ | 47 | 149 | 59 | 17 | 15 | 12 | 4.7 | 4.1 | 4.7 | 5.0 |
| 30 | 18 | ------ | 46 | 129 | 54 | 16 | 17 | 13 | 4.7 | 4.2 | 4.7 | 4.8 |
| 31 | 18 | ------ | 44 | ------ | 54 | ------ | 20 | 12 | ------ | 4.2 | ------ | 4.7 |
| TOTAL | 638 | 573 | 1,272 | 2,319 | 3,154 | 1,040 | 562 | 428.7 | 194.7 | 135.0 | 127.9 | 144.2 |
| MEAN | 20.6 | 20.5 | 41.0 | 77.3 | 102 | 34.7 | 18.1 | 13.8 | 6.49 | 4.35 | 4.26 | 4.65 |
| MAX | 25 | 31 | 50 | 149 | 141 | 60 | 29 | 22 | 11 | 4.8 | 4.7 | 5.0 |
| MIN | 17 | 15 | 34 | 38 | 54 | 16 | 14 | 7.6 | 4.7 | 4.0 | 3.8 | 4.0 |
| AC-FT | 1,270 | 1,140 | 2,520 | 4,600 | 6,260 | 2,060 | 1,110 | 850 | 386 | 268 | 254 | 286 |

CAL YR 1973 TOTAL 10,588.5 MEAN 29.0 MAX 149 MIN 3.8 AC-FT 21,000
WTR YR 1973 TOTAL 12,552.7 MEAN 34.4 MAX 153 MIN 4.7 AC-FT 24,900

PEAK DISCHARGE (BASE, 100 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-29 | 1030 | 2.25 | 161 | | | | |

## 08387600 EAGLE CREEK BELOW SOUTH FORK, NEAR ALTO, N. MEX.

LOCATION.--Lat 33°23'33", long 105°43'16", in SE¼SW¼ sec.31, T.10 S., R.13 E., Lincoln County, at right bank, 100 ft (30 m) downwstream from culvert under State Road No. 532, 0.1 mi (0.2 km) downstream from South Fork, and 2.4 mi (3.9 km) west of Alto.

DRAINAGE AREA.--8.14 mi² (21.08 km²).

PERIOD OF RECORD.--August 1969 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,600 ft (2,316 m), from topographic map.

EXTREMES.--Current year: Maximum discharge, 58 ft³/s (1.64 m³/s) Aug. 28 (gage height, 3.16 ft or 0.963 m), from rating curve extended above 21 ft³/s (0.59 m³/s); minimum, 0.25 ft³/s (0.007 m³/s) Nov. 26.
Period of record: Maximum discharge, 107 ft³/s (3.03 m³/s) Oct. 20, 1972 (gage height, 3.49 ft or 1.064 m), from rating curve extended above 21 ft³/s (0.59 m³/s); minimum, 0.06 ft³/s (0.002 m³/s) July 18, 1971.

REMARKS.--Records fair except those during the winter months which are poor. No diversions for irrigation above station. Some water is stored in small unregulated recreational ponds on the Mescalero Apache Indian Reservation upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.0 | 2.7 | 7.4 | 6.4 | 19 | 7.6 | 1.9 | 2.0 | 2.6 | .48 | .43 | .42 |
| 2 | 4.5 | 2.3 | 8.0 | 6.3 | 16 | 7.4 | 1.7 | 2.8 | 2.1 | .46 | .47 | .44 |
| 3 | 4.2 | 2.8 | 8.0 | 6.2 | 14 | 6.3 | 1.6 | 3.0 | 1.9 | .46 | .43 | .44 |
| 4 | 3.7 | 3.8 | 7.6 | 5.7 | 16 | 5.7 | 1.4 | 3.3 | 1.6 | .44 | .37 | .41 |
| 5 | 3.6 | 3.7 | 7.4 | 5.5 | 22 | 5.2 | 1.4 | 3.9 | 1.5 | .49 | .43 | .41 |
| 6 | 3.4 | 4.2 | 6.9 | 5.7 | 22 | 4.8 | 1.3 | 3.5 | 1.3 | .50 | .44 | .42 |
| 7 | 3.3 | 5.0 | 6.4 | 5.7 | 17 | 4.4 | 1.3 | 3.0 | 1.3 | .51 | .45 | .42 |
| 8 | 2.7 | 3.5 | 6.1 | 6.2 | 14 | 4.2 | 2.0 | 2.6 | 1.2 | .47 | .47 | .43 |
| 9 | 3.2 | 2.8 | 5.9 | 6.5 | 16 | 4.0 | 1.6 | 2.5 | 1.6 | .43 | .47 | .42 |
| 10 | 3.0 | 3.2 | 6.0 | 7.0 | 20 | 3.8 | 1.7 | 2.6 | 1.6 | .46 | .47 | .42 |
| 11 | 2.9 | 3.5 | 5.9 | 8.5 | 23 | 3.6 | 1.7 | 2.2 | 1.3 | .47 | .43 | .45 |
| 12 | 2.5 | 3.3 | 5.9 | 12 | 20 | 5.4 | 1.9 | 1.8 | 1.1 | .46 | .43 | .44 |
| 13 | 2.9 | 3.3 | 5.8 | 15 | 20 | 7.3 | 1.9 | 1.6 | 1.0 | .47 | .42 | .45 |
| 14 | 2.9 | 3.0 | 6.4 | 22 | 24 | 7.7 | 1.7 | 1.5 | 1.0 | .51 | .40 | .47 |
| 15 | 3.3 | 3.2 | 6.0 | 25 | 18 | 7.4 | 1.7 | 1.8 | .95 | .55 | .44 | .45 |
| 16 | 3.9 | 2.7 | 6.5 | 21 | 16 | 6.2 | 1.6 | 1.8 | .86 | .53 | .43 | .44 |
| 17 | 4.4 | 2.3 | 7.9 | 16 | 17 | 5.1 | 3.4 | 1.5 | .82 | .53 | .43 | .45 |
| 18 | 4.7 | 2.7 | 9.1 | 16 | 18 | 4.3 | 3.0 | 1.4 | .83 | .53 | .43 | .44 |
| 19 | 4.6 | 3.2 | 10 | 16 | 19 | 3.9 | 3.0 | 1.4 | .89 | .49 | .44 | .44 |
| 20 | 4.0 | 2.9 | 11 | 14 | 19 | 3.5 | 2.7 | 1.3 | .77 | .48 | .49 | .37 |
| 21 | 3.1 | 2.8 | 11 | 13 | 18 | 3.2 | 2.4 | 1.3 | .63 | .47 | .49 | .41 |
| 22 | 3.8 | 2.5 | 10 | 13 | 16 | 3.0 | 2.3 | 1.2 | .61 | .56 | .50 | .45 |
| 23 | 2.2 | 2.8 | 11 | 16 | 14 | 2.8 | 2.2 | 1.0 | .58 | .56 | .50 | .47 |
| 24 | 2.1 | 3.2 | 9.8 | 19 | 12 | 2.6 | 2.1 | .89 | .51 | .47 | .46 | .43 |
| 25 | 3.0 | 3.8 | 8.8 | 22 | 11 | 2.5 | 2.1 | .84 | .45 | .47 | .46 | .40 |
| 26 | 3.2 | 4.3 | 8.3 | 20 | 11 | 2.3 | 2.2 | .79 | .44 | .47 | .43 | .42 |
| 27 | 3.0 | 5.0 | 8.5 | 20 | 10 | 2.4 | 1.9 | .80 | .71 | .47 | .40 | .47 |
| 28 | 2.5 | 6.2 | 7.9 | 22 | 8.7 | 2.1 | 1.8 | 5.4 | 1.0 | .47 | .43 | .52 |
| 29 | 2.8 | ------ | 7.6 | 25 | 7.3 | 1.9 | 1.7 | 4.5 | .52 | .51 | .45 | .55 |
| 30 | 3.5 | ------ | 7.0 | 22 | 6.5 | 1.8 | 1.7 | 4.0 | .49 | .51 | .44 | .55 |
| 31 | 2.5 | ------ | 6.6 | ------ | 6.8 | ------ | 2.1 | 3.3 | ------ | .47 | ------ | .50 |
| TOTAL | 104.4 | 94.7 | 240.7 | 418.7 | 491.3 | 132.4 | 61.0 | 69.52 | 32.16 | 15.15 | 13.33 | 13.80 |
| MEAN | 3.37 | 3.38 | 7.76 | 14.0 | 15.8 | 4.41 | 1.97 | 2.24 | 1.07 | .49 | .44 | .45 |
| MAX | 5.0 | 6.2 | 11 | 25 | 24 | 7.7 | 3.4 | 5.4 | 2.6 | .56 | .50 | .55 |
| MIN | 2.1 | 2.3 | 5.8 | 5.5 | 6.5 | 1.8 | 1.3 | .79 | .44 | .43 | .37 | .37 |
| AC-FT | 207 | 188 | 477 | 830 | 974 | 263 | 121 | 138 | 64 | 30 | 26 | 27 |

CAL YR 1973 TOTAL 1,687.16 MEAN 4.62 MAX 25 MIN .37 AC-FT 3,350
WTR YR 1973 TOTAL 2,120.58 MEAN 5.81 MAX 68 MIN .44 AC-FT 4,210

PEAK DISCHARGE (BASE, 25 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 4-15 | 0730 | 2.99 | 26 | 8-28 | 1330 | 3.16 | 58 |
| 6-13 | 1930 | 2.91 | 25 | | | | |

## 08387800 EAGLE CREEK NEAR ALTO, N. MEX.

LOCATION.--Lat 33°23'29", long 105°36'39", in SW¼SE¼SE¼ sec.31, T.10 S., R.14 E., Lincoln County, on left bank 200 ft (60 m) north of Lincoln National Forest boundary, 500 ft (152 m) northeast of windmill, and 4.0 mi (6.4 km) east of Alto.

DRAINAGE AREA.--15.7 mi² (40.7 km²).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,838 ft (2,084 m), from topographic map.

EXTREMES.--Current year: Maximum discharge, 21 ft³/s (0.59 m³/s) May 6 (gage height, 1.38 ft or 0.421 m); no flow many days. Period of record: Maximum discharge, 46 ft³/s (1.30 m³/s) Oct. 21, 1972 (gage height, 1.80 ft or 0.549 m); no flow most of time.

REMARKS.--Records excellent. Discharge at this station is affected by Alto Reservoir and municipal water supply diversions for Ruidoso and Capitan.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.0 | .60 | 7.0 | 7.0 | 17 | 4.8 | 0 | 1.2 | .42 | | | |
| 2 | 3.5 | .40 | 7.5 | 7.0 | 15 | 5.2 | 0 | 1.2 | 0 | | | |
| 3 | 3.8 | .60 | 7.5 | 7.3 | 13 | 4.2 | 0 | 2.3 | 0 | | | |
| 4 | 4.0 | 1.1 | 7.5 | 6.6 | 14 | 3.5 | 0 | 2.4 | 0 | | | |
| 5 | 3.7 | 1.2 | 7.5 | 6.3 | 18 | 2.0 | 0 | 3.0 | 0 | | | |
| 6 | 3.5 | 1.2 | 7.3 | 6.8 | 20 | 1.5 | 0 | 3.2 | 0 | | | |
| 7 | 2.6 | 2.2 | 6.8 | 6.6 | 16 | 1.2 | 0 | 2.4 | 0 | | | |
| 8 | 1.8 | 1.6 | 6.6 | 7.5 | 15 | .91 | 0 | 1.6 | 0 | | | |
| 9 | 1.7 | 1.2 | 6.3 | 7.5 | 14 | .79 | .18 | .24 | 0 | | | |
| 10 | 1.8 | 1.4 | 6.6 | 7.8 | 16 | 1.5 | .26 | 1.5 | 0 | | | |
| 11 | 1.3 | 2.2 | 6.3 | 8.9 | 18 | 1.8 | .28 | 1.7 | 0 | | | |
| 12 | 1.2 | 2.5 | 6.3 | 11 | 17 | 2.6 | 0 | .85 | 0 | | | |
| 13 | 1.4 | 2.2 | 6.1 | 12 | 17 | 5.7 | .15 | .14 | 0 | | | |
| 14 | 1.7 | 2.0 | 7.3 | 16 | 20 | 7.3 | 0 | 0 | 0 | | | |
| 15 | 2.0 | 1.4 | 7.8 | 19 | 17 | 5.9 | 0 | 0 | 0 | | | |
| 16 | 2.6 | 1.6 | 7.5 | 19 | 14 | 3.3 | 0 | 0 | 0 | | | |
| 17 | 3.2 | 1.3 | 8.6 | 16 | 14 | 2.4 | .77 | 0 | 0 | | | |
| 18 | 3.5 | 1.2 | 10 | 16 | 15 | 1.8 | 2.8 | 0 | 0 | | | |
| 19 | 3.7 | 1.4 | 11 | 16 | 14 | 1.2 | 1.3 | 0 | 0 | | | |
| 20 | 3.0 | 1.7 | 11 | 14 | 15 | 1.2 | .19 | 0 | 0 | | | |
| 21 | 1.3 | 2.0 | 12 | 13 | 15 | 1.1 | 0 | 0 | 0 | | | |
| 22 | 1.8 | 1.6 | 12 | 13 | 13 | 1.3 | .13 | 0 | 0 | | | |
| 23 | 1.2 | 1.7 | 12 | 15 | 11 | 1.2 | .06 | 0 | 0 | | | |
| 24 | .65 | 1.8 | 11 | 16 | 10 | .91 | .80 | 0 | 0 | | | |
| 25 | 1.0 | 2.5 | 11 | 18 | 8.4 | .69 | .79 | 0 | 0 | | | |
| 26 | 1.5 | 3.5 | 9.8 | 18 | 8.1 | .56 | .91 | 0 | 0 | | | |
| 27 | 1.5 | 4.2 | 9.2 | 17 | 7.5 | .08 | 1.1 | 0 | 0 | | | |
| 28 | .50 | 5.7 | 8.6 | 18 | 6.6 | .41 | 1.1 | .73 | 0 | | | |
| 29 | .90 | ------ | 8.6 | 20 | 5.2 | .34 | .69 | 2.2 | 0 | | | |
| 30 | 1.3 | ------ | 8.3 | 19 | 4.4 | .02 | .69 | 2.0 | 0 | | | |
| 31 | 1.0 | ------ | 7.5 | ------ | 4.4 | ------ | .79 | .85 | ------ | | ------ | |
| TOTAL | 66.65 | 52.00 | 262.5 | 385.3 | 408.6 | 65.41 | 12.99 | 27.51 | .42 | 0 | 0 | 0 |
| MEAN | 2.15 | 1.86 | 8.47 | 12.8 | 13.2 | 2.18 | .42 | .89 | .014 | 0 | 0 | 0 |
| MAX | 4.0 | 5.7 | 12 | 20 | 20 | 7.3 | 2.8 | 3.2 | .42 | 0 | 0 | 0 |
| MIN | .50 | .40 | 6.1 | 6.3 | 4.4 | .02 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 132 | 103 | 521 | 764 | 810 | 130 | 26 | 55 | .8 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 1,281.38 MEAN 3.51 MAX 20 MIN 0 AC-FT 2,540
WTR YR 1973 TOTAL 1,614.28 MEAN 4.42 MAX 39 MIN 0 AC-FT 3,200

PEAK DISCHARGE (BASE, 25 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-6 | 0400 | 1.38 | 21 | | | | |

## 08390500 RIO HONDO AT DIAMOND A RANCH, NEAR ROSWELL, N. MEX.

LOCATION.--Lat 33°20'57", long 104°51'05", in NE¼NE¼ sec.20, T.11 S., R.21 E., Chaves County, on right bank 15 ft (5 m) downstream from county road bridge at Diamond A Ranch, 1.3 mi (2.1 km) south of U.S. Highway 70-380, 13 mi (21 km) upstream from Two Rivers Reservoir, 21 mi (34 km) upstream from mouth of Rocky Arroyo, 18 mi (29 km) west of Roswell, and at mile 44.7 (71.9 km).

DRAINAGE AREA.--947 mi² (2,450 km²), contributing area.

PERIOD OF RECORD.--May 1908 to August 1909, May 1939 to current year. Monthly discharge only for 1908-9, published in Technical Report No. 7, State of New Mexico, Streamflow and Reservoir Content 1888-1954.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,190 ft (1,277 m), from topographic map. Prior to Nov. 11, 1965, at site on opposite bank at same datum. Supplemental water-stage recorder on opposite bank Nov. 11, 1965 to December 1972, at same datum.

AVERAGE DISCHARGE.--34 calendar years (1940-73), 23.3 ft³/s (0.660 m³/s), 16,880 acre-ft/yr (20.8 hm³/yr); 20 calendar years (1954-73), 14.5 ft³/s (0.411 m³/s), 10,510 acre-ft/yr (13.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,160 ft³/s (32.9 m³/s) July 23 (gage height, 13.49 ft or 4.112 m); no flow most of time.
Period of record: Maximum discharge, 54,800 ft³/s (1,550 m³/s) June 18, 1965 (gage height, 26.40 ft or 8.047 m), from rating curve extended above 3,000 cfs (85.0 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 28.78 ft (8.772 m), Sept. 22, 1941; no flow most of time.
A flood on June 1, 1937, reached a discharge of 24,900 ft³/s (705 m³/s) at Riverside about 13 mi (21 km) upstream. Other major floods occurred Oct. 31, 1901, Sept. 29, 30, 1904, and July 25, 1905.

REMARKS.--Records poor. Diversions and ground-water withdrawals above station for irrigation above and below station of about 6,500 acres (2,630 hm²), 1959 determination.

REVISIONS (WATER YEARS).--WSP 1392: Drainage area. WSP 1512: 1939-40(P), 1941, 1942-43(P), 1946(P).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | 12 | 9.5 | 44 | 179 | 51 | 0 | | | | | |
| 2 | 42 | 11 | 13 | 40 | 154 | 53 | 0 | | | | | |
| 3 | 38 | 11 | 14 | 37 | 131 | 51 | 0 | | | | | |
| 4 | 34 | 11 | 14 | 39 | 128 | 28 | 0 | | | | | |
| 5 | 32 | 11 | 16 | 35 | 133 | 24 | 0 | | | | | |
| 6 | 33 | 9.9 | 17 | 53 | 176 | 17 | 0 | | | | | |
| 7 | 34 | 9.5 | 17 | 31 | 185 | 14 | 0 | | | | | |
| 8 | 32 | 9.9 | 18 | 29 | 144 | 4.0 | 0 | | | | | |
| 9 | 31 | 11 | 17 | 30 | 119 | 1.1 | 0 | | | | | |
| 10 | 31 | 12 | 19 | 27 | 120 | 0 | 0 | | | | | |
| 11 | 31 | 12 | 18 | 27 | 136 | 0 | 0 | | | | | |
| 12 | 29 | 13 | 17 | 29 | 161 | 0 | 0 | | | | | |
| 13 | 28 | 13 | 17 | 36 | 156 | 0 | 0 | | | | | |
| 14 | 28 | 12 | 18 | 44 | 192 | 9.5 | 0 | | | | | |
| 15 | 28 | 12 | 19 | 72 | 215 | 26 | 0 | | | | | |
| 16 | 28 | 12 | 19 | 121 | 154 | 15 | 0 | | | | | |
| 17 | 22 | 11 | 19 | 114 | 119 | 12 | 0 | | | | | |
| 18 | 17 | 11 | 19 | 94 | 111 | 1.3 | 0 | | | | | |
| 19 | 19 | 11 | 19 | 89 | 112 | 0 | 0 | | | | | |
| 20 | 19 | 12 | 23 | 94 | 125 | 0 | 0 | | | | | |
| 21 | 21 | 12 | 32 | 78 | 139 | 0 | 0 | | | | | |
| 22 | 21 | 15 | 38 | 75 | 147 | 0 | 0 | | | | | |
| 23 | 20 | 15 | 45 | 75 | 122 | 0 | 155 | | | | | |
| 24 | 19 | 15 | 52 | 84 | 106 | 0 | 76 | | | | | |
| 25 | 15 | 14 | 59 | 111 | 91 | 0 | 26 | | | | | |
| 26 | 14 | 13 | 56 | 157 | 81 | 0 | 8.3 | | | | | |
| 27 | 13 | 12 | 53 | 137 | 72 | 0 | 3.0 | | | | | |
| 28 | 14 | 11 | 53 | 149 | 72 | 0 | 4.0 | | | | | |
| 29 | 14 | ------ | 52 | 170 | 65 | 0 | .41 | | | | | |
| 30 | 12 | ------ | 54 | 218 | 51 | 0 | 0 | | | | | |
| 31 | 12 | ------ | 49 | ------ | 39 | ------ | 0 | | ------ | | ------ | |
| TOTAL | 767 | 334.3 | 885.5 | 2,299 | 3,929 | 246.9 | 252.71 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 24.7 | 11.9 | 28.6 | 76.6 | 127 | 8.23 | 8.15 | 0 | 0 | 0 | 0 | 0 |
| MAX | 42 | 15 | 59 | 218 | 215 | 33 | 135 | 0 | 0 | 0 | 0 | 0 |
| MIN | 12 | 9.5 | 9.5 | 27 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 1,520 | 663 | 1,760 | 4,560 | 7,790 | 490 | 501 | 0 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 8,714.41 MEAN 23.9 MAX 218 MIN 0 AC-FT 17,290
WTR YR 1973 TOTAL 12,228.21 MEAN 33.5 MAX 268 MIN 0 AC-FT 24,250

PEAK DISCHARGE (BASE, 1,000 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 7-23 | 2100 | 13.49 | 1,160 | | | | |

## 08390600 TWO RIVERS RESERVOIR NEAR ROSWELL, N. MEX.

LOCATION.--08390610 Rio Hondo Reservoir: Lat 33°17'55", long 104°43'20", in SW¼SE¼NE¼ sec.4, T.12 S., R.22 E., Chaves County, near center of Diamond A Dam on Rio Hondo, 13 mi (20.9 km) southwest of Roswell at mile 33.4 (53.7 km); 08390620 Rocky Arroyo Reservoir: Lat 33°16'20", long 104°43'20", in NW¼SE¼NE¼ sec.16, T.12 S., R.22 E., Chaves County, at left end of Rocky Dam on Rocky Arroyo, and 14 mi (22.5 km) southwest of Roswell.

DRAINAGE AREA.--1,027 mi² (2,660 km²); Rio Hondo, 963 mi² (2,494 km²); Rocky Arroyo, 64 mi² (166 km²).

PERIOD OF RECORD.--July 1963 to current year. Prior to October 1965 (monthend contents only).

GAGE.--Water-stage recorders. Datum of gages is mean sea level.

EXTREMES.--Current year: Maximum contents at 2400 hours of Rio Hondo Reservoir, 62 acre-ft (76,450 m³) Apr. 13, elevation, 3,976.72 ft (1,212.104 m); no contents most of time. No contents at 2400 hours during year for Rocky Arroyo Reservoir.
Period of record: Maximum contents at 0800 hours of Rio Hondo Reservoir, 1,260 acre-ft (155,400 m³) July 29, 1965, elevation, 3,985.7 ft (1,214.84 m); Rocky Arroyo Reservoir at 0800 hours, 6,090 acre-ft (7.51 hm³) June 18, 1965, elevation, 3,970.7 ft (1,210.27 m); no contents both reservoirs most of time.

REMARKS.--Two Rivers Reservoir, completed July 16, 1963, is formed by earthfill dams on Rio Hondo, which forms Rio Hondo Reservoir; and Rocky Arroyo which forms Rocky Arroyo Reservoir. Above elevation 3,980.0 ft (1,213.10 m) the pools of the two reservoirs combine to form Two Rivers Reservoir with a total capacity of 166,200 acre-ft (205 hm³) at elevation 4,032.0 ft (1,228.95 m) crest of ungated spillway. Capacity of Rio Hondo Reservoir, 181 acre-ft (22,320 m³) between elevations 3,957.0 ft (1,206.09 m), sill of outlet gate, and 3,980.0 ft (1,213.10 m). Capacity of Rocky Arroyo Reservoir, 13,410 acre-ft (16.5 hm³) between elevations 3,945.0 ft (1,202.44 m), sill of outlet gate, and 3,980.0 ft (1,213.10 m). No dead storage in Rio Hondo Reservoir, or Rocky Arroyo Reservoir. Primary objective of project is flood control. Outlet conduits in Rocky Dam have fixed openings. Figures given herein represent total contents at 2400 hours from new capacity table put into use Jan. 1, 1972, (in table, reservoirs separated as indicated).

COOPERATION.--Records furnished by Corps of Engineers.

ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FEET, AT 2400 HOURS, CALENDAR YEAR 1973

| | Rio Hondo Res. | | Rocky Arroyo Res. | |
|---|---|---|---|---|
| | Elevation (ft) | Contents (ac-ft) | Elevation (ft) | Contents (ac-ft) |
| April 9 | 3,973.00 | 14 | - | 0 |
| 10 | 3,975.80 | 45 | - | 0 |
| 11 | 3,976.20 | 52 | - | 0 |
| 12 | 3,976.60 | 60 | - | 0 |
| 13 | 3,978.00 | 1.2 | - | 0 |

NOTE.--Storage only on days listed above.

## 08390800 RIO HONDO BELOW DIAMOND A DAM, NEAR ROSWELL, N. MEX.

LOCATION.--Lat 33°18'05", long 104°43'12", in NE¼SE¼NE¼ sec.4, T.12 S., R.22 E., Chaves County, on left bank, 500 ft (152 m) downstream from outlet conduit of Diamond A dam (Two Rivers Reservoir), 13 mi (20.9 km) southwest of Roswell, and at mile 33.3 (53.6 km).

DRAINAGE AREA.--963 mi² (2,490 km²), contributing area.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,949.68 ft (1,203.862 m) above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--10 calendar years, 9.46 ft³/s (0.268 m³/s), 6,850 acre-ft/yr (8.45 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 371 ft³/s (10.5 m³/s) July 24 (gage height, 3.64 ft or 1.109 m); no flow most of time.
Period of record: Maximum discharge, 659 ft³/s (18.7 m³/s) July 29, 1965 (gage height, 4.91 ft or 1.497 m); no flow most of time.

REMARKS.--Records fair. Diversions and ground-water withdrawals for irrigation of about 6,500 acres (2,630 hm²), 1959 determination, above station. This record represents the outflow from Two Rivers Reservoir through Diamond A Dam.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1974

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 31 | 11 | 3.8 | 36 | 169 | 22 | 0 | 0 | | | | |
| 2 | 42 | 10 | 6.1 | 31 | 141 | 25 | 0 | 0 | | | | |
| 3 | 36 | 9.0 | 8.0 | 27 | 118 | 23 | 0 | 0 | | | | |
| 4 | 36 | 11 | 8.7 | 30 | 106 | 21 | 0 | 0 | | | | |
| 5 | 31 | 9.1 | 11 | 22 | 105 | 19 | 0 | 0 | | | | |
| 6 | 31 | 6.9 | 14 | 20 | 131 | 9.9 | 0 | 0 | | | | |
| 7 | 30 | 2.0 | 14 | 16 | 158 | 8.0 | 0 | 0 | | | | |
| 8 | 28 | 5.0 | 15 | 19 | 127 | 2.3 | 0 | 0 | | | | |
| 9 | 26 | 7.0 | 12 | 12 | 101 | 0 | 0 | 0 | | | | |
| 10 | 24 | 8.0 | 15 | 1.0 | 97 | 0 | 0 | 0 | | | | |
| 11 | 22 | 9.1 | 16 | 0 | 115 | 0 | 0 | 0 | | | | |
| 12 | 21 | 8.3 | 15 | 0 | 139 | 0 | 0 | 0 | | | | |
| 13 | 22 | 8.7 | 11 | 35 | 143 | .04 | 0 | 0 | | | | |
| 14 | 23 | 8.3 | 13 | 23 | 162 | .02 | 0 | 0 | | | | |
| 15 | 22 | 6.4 | 15 | 58 | 196 | 6.2 | 0 | 0 | | | | |
| 16 | 22 | 5.5 | 15 | 105 | 147 | 4.4 | 0 | 0 | | | | |
| 17 | 19 | 6.4 | 13 | 105 | 101 | 1.2 | 0 | 0 | | | | |
| 18 | 11 | 9.5 | 15 | 86 | 94 | 0 | 0 | 0 | | | | |
| 19 | 12 | 9.1 | 13 | 74 | 92 | 0 | 0 | 0 | | | | |
| 20 | 15 | 6.6 | 15 | 79 | 106 | 0 | 0 | 0 | | | | |
| 21 | 16 | 7.6 | 20 | 65 | 122 | 0 | 1.8 | 0 | | | | |
| 22 | 17 | 11 | 29 | 58 | 133 | 0 | .08 | 0 | | | | |
| 23 | 15 | 11 | 34 | 53 | 113 | 0 | .41 | 0 | | | | |
| 24 | 14 | 9.5 | 44 | 55 | 89 | 0 | 139 | 0 | | | | |
| 25 | 14 | 8.0 | 54 | 78 | 68 | 0 | 20 | 0 | | | | |
| 26 | 13 | 6.9 | 44 | 101 | 62 | 0 | 2.2 | 0 | | | | |
| 27 | 12 | 5.0 | 35 | 131 | 52 | 0 | 0 | 0 | | | | |
| 28 | 12 | 6.1 | 34 | 133 | 55 | 0 | 0 | 0 | | | | |
| 29 | 11 | ------ | 38 | 131 | 51 | 0 | 0 | 0 | | | | |
| 30 | 9.9 | ------ | 41 | 185 | 38 | 0 | 0 | 13 | | | | |
| 31 | 9.5 | ------ | 36 | ------ | 30 | ------ | 0 | 3.1 | ------ | | ------ | |
| TOTAL | 647.4 | 222.0 | 657.6 | 1,769.0 | 3,359 | 142.06 | 163.49 | 16.1 | 0 | 0 | 0 | 0 |
| MEAN | 20.9 | 7.93 | 21.2 | 59.0 | 108 | 4.74 | 5.27 | .52 | 0 | 0 | 0 | 0 |
| MAX | 42 | 11 | 54 | 185 | 196 | 25 | 139 | 13 | 0 | 0 | 0 | 0 |
| MIN | 9.5 | 2.0 | 3.8 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 1,280 | 440 | 1,300 | 3,510 | 6,660 | 282 | 324 | 32 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 6,976.65 MEAN 19.1 MAX 196 MIN 0 AC-FT 13,840
WTR YR 1973 TOTAL 9,552.35 MEAN 26.2 MAX 287 MIN 0 AC-FT 18,950

08393200 ROCKY ARROYO ABOVE TWO RIVERS RESERVOIR, NEAR ROSWELL, N. MEX.

LOCATION.--Lat 33°17'07", long 104°47'47", in NE¼SW¼ sec.11, T.12 S., R.21½ E., Chaves County, on left bank, 2.1 mi (3.4 km) upstream from mouth of Buchnan Draw, 5.2 mi (8.4 km) upstream from Rocky Dam (Two Rivers Reservoir), and 17 mi (27.4 km) southwest of Roswell.

DRAINAGE AREA.--31 mi² (80 km²), approximately.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,059.17 ft (1,237.235 m) above mean sea level (Corps of Engineers datum). Prior to Dec. 7, 1968, at site on opposite bank at datum 3.72 ft (1.134 m) lower.

AVERAGE DISCHARGE.--10 calendar years, 0.91 ft³/s (0.0258 m³/s), 659 acre-ft/yr (0.813 m³/yr).

EXTREMES.--Current year: No flow during year.
Period of record: Maximum discharge, 12,000 ft³/s (340 m³/s) July 5, 1968 (gage height, 11.53 ft or 3.514 m, from floodmarks, present datum), from rating curve extended above 350 ft³/s (9.91 m³/s) on basis of slope-area measurements at gage heights 5.92 ft (1.804 m), 7.14 ft (2.176 m), and 11.53 ft (3.514 m), present datum; no flow most of time.

REMARKS.--Records good. No diversions above station. Flow past station represents inflow to Two Rivers Reservoir.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| 29 | | ------ | | | | | | | | | | |
| 30 | | ------ | | | | | | | | | | |
| 31 | | ------ | | ------ | | ------ | | | ------ | | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 0.00 MEAN 0 MAX 0 MIN 0 AC-FT 0
WTR YR 1973 TOTAL 0.00 MEAN 0 MAX 0 MIN 0 AC-FT 0

PEAK DISCHARGE (BASE, 90 CFS).--No peak above base.

## 08393300 ROCKY ARROYO BELOW ROCKY DAM, NEAR ROSWELL, N. MEX.

LOCATION.--Lat 33°16'11", long 104°43'13", in SE¼SE¼NE¼ sec.16, T.12 S., R.22 E., Chaves County, on left bank, 300 ft (90 m) downstream from outlet structure in Rocky Dam (Two Rivers Reservoir) and 13.5 mi (21.7 km) southwest of Roswell.

DRAINAGE AREA.--64 mi² (166 km²), approximately.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,935.66 ft (1,199.589 m) above mean sea level (Corps of Engineers bench mark). Prior to Jan. 12, 1972, at site 1.4 mi (2.3 km) downstream at datum 28.76 ft (8.766 m) lower.

AVERAGE DISCHARGE.--10 calendar years, 2.01 ft³/s (0.0569 m³/s), 1,460 acre-ft/yr (180,000 m³/yr).

EXTREMES.--Current year: Maximum discharge, 0.07 ft³/s (0.002 m³/s) June 13; no flow most of time.
Period of record: Maximum discharge, 548 ft³/s (15.5 m³/s) Aug. 21, 1966 (gage height, 4.57 ft or 1.393 m), site and datum then in use, from rating curve extended above 260 ft³/s (7.36 m³/s); no flow most of time.

REMARKS.--Records good. No diversions above station. This record represents the outflow from Two Rivers Reservoir through Rocky Dam. Outlet conduits in Rocky Dam have fixed openings.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| 29 | | ------ | | | | | | | | | | |
| 30 | | ------ | | | | | | | | | | |
| 31 | | ------ | | ------ | | ------ | | | ------ | | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 0.00 MEAN 0 MAX 0 MIN 0 AC-FT 0
WTR YR 1973 TOTAL 0.00 MEAN 0 MAX 0 MIN 0 AC-FT 0

## 08393600 NORTH SPRING RIVER AT ROSWELL, N. MEX.

LOCATION.--Lat 33°23'47", long 104°32'53", in NW¼SW¼SE¼ sec.31, T.10 S., R.24 E., Chaves County, in Roswell Municipal Golf Course, on left bank 2,400 ft (730 m) upstream from Montana Avenue, and 2 blocks north of West Second Street.

DRAINAGE AREA.--19.5 mi² (31.4 km²).

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,575 ft (1,090 m), from topographic map.

AVERAGE DISCHARGE.--15 calendar years, 0.051 ft³/s (0.0014 m³/s), 37 acre-ft/yr (45,620 m³/yr).

EXTREMES.--Current year: Maximum discharge, 2.2 ft³/s (0.062 m³/s) July 21 (gage height, 2.99 ft or 0.911 m); no flow most of time.
Period of record: Maximum discharge, 387 ft³/s (11.0 m³/s) June 13, 1964 (gage height, 4.65 ft or 1.417 m), from rating curve extended above 80 ft³/s (2.27 m³/s) on basis of slope-area measurement; no flow most of time.

REMARKS.--Records good. No diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | 0 | | | | | |
| 2 | | | | | | | 0 | | | | | |
| 3 | | | | | | | 0 | | | | | |
| 4 | | | | | | | 0 | | | | | |
| 5 | | | | | | | 0 | | | | | |
| 6 | | | | | | | 0 | | | | | |
| 7 | | | | | | | 0 | | | | | |
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| 9 | | | | | | | 0 | | | | | |
| 10 | | | | | | | 0 | | | | | |
| 11 | | | | | | | 0 | | | | | |
| 12 | | | | | | | 0 | | | | | |
| 13 | | | | | | | 0 | | | | | |
| 14 | | | | | | | 0 | | | | | |
| 15 | | | | | | | 0 | | | | | |
| 16 | | | | | | | 0 | | | | | |
| 17 | | | | | | | 0 | | | | | |
| 18 | | | | | | | 0 | | | | | |
| 19 | | | | | | | 0 | | | | | |
| 20 | | | | | | | 0 | | | | | |
| 21 | | | | | | | .04 | | | | | |
| 22 | | | | | | | 0 | | | | | |
| 23 | | | | | | | 0 | | | | | |
| 24 | | | | | | | 0 | | | | | |
| 25 | | | | | | | 0 | | | | | |
| 26 | | | | | | | 0 | | | | | |
| 27 | | | | | | | 0 | | | | | |
| 28 | | | | | | | 0 | | | | | |
| 29 | | ------ | | | | | 0 | | | | | |
| 30 | | ------ | | | | | 0 | | | | | |
| 31 | | ------ | | ------ | | ------ | 0 | | ------ | | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | .04 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | 0 | 0 | .001 | 0 | 0 | 0 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | 0 | 0 | .04 | 0 | 0 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 0 | 0 | .08 | 0 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 0.04 MEAN .0001 MAX .04 MIN 0 AC-FT .08
WTR YR 1973 TOTAL 0.04 MEAN .0001 MAX .04 MIN 0 AC-FT .08

PEAK DISCHARGE (BASE, 25 CFS).--No peak above base.

## 08394100 PECOS RIVER NEAR HAGERMAN, N. MEX.

LOCATION.--Lat 33°10'08", long 104°18'24", in SE¼SW¼SE¼ sec.23, T.13 S., R.26 E., Chaves County, on left bank 3.4 mi (5.5 km) upstream from Rio Felix, 4.9 mi (7.9 km) north of Hagerman, and at mile 548.3 (882.2 km).

DRAINAGE AREA.--13,630 mi² (35,300 km²), approximately (contributing area).

PERIOD OF RECORD.--February 1968 to current year (operated as a low-flow station only).

GAGE.--Water-stage recorder. Altitude of gage is 3,390 ft (1,033 m), from topographic map.

EXTREMES.--Current year: Maximum discharge not determined; minimum, 1.0 ft³/s (0.28 m³/s) Sept. 2.
Period of record: Maximum discharge not determined; no flow many days June and July 1971.

REMARKS.--Records fair except those above 100 ft³/s (2.83 m³/s), which are poor. Flow partly regulated by Alamorgordo Reservoir (see sta 08384000). Diversions and ground-water withdrawals for irrigation of about 80,000 acres (32,380 hm²) above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 60 | 41 | 51 | 31 | 979 | 640 | 89 | 727 | 2.0 | 22 | 42 | 38 |
| 2 | 66 | 41 | 48 | 31 | 1,010 | 585 | 72 | 331 | 18 | 17 | 42 | 38 |
| 3 | 73 | 41 | 46 | 34 | 965 | 585 | 55 | 206 | 31 | 14 | 42 | 40 |
| 4 | 78 | 42 | 42 | 40 | 937 | 515 | 49 | 191 | 20 | 177 | 46 | 39 |
| 5 | 69 | 42 | 39 | 55 | 917 | 480 | 74 | 206 | 15 | 727 | 55 | 39 |
| 6 | 72 | 41 | 34 | 64 | 965 | 420 | 78 | 375 | 7.2 | 813 | 58 | 41 |
| 7 | 79 | 41 | 35 | 70 | 1,010 | 367 | 51 | 398 | 8.9 | 832 | 49 | 41 |
| 8 | 97 | 45 | 32 | 73 | 1,010 | 380 | 65 | 380 | 13 | 832 | 45 | 41 |
| 9 | 92 | 46 | 31 | 66 | 930 | 411 | 60 | 321 | 12 | 832 | 45 | 42 |
| 10 | 64 | 47 | 47 | 57 | 965 | 425 | 61 | 203 | 12 | 800 | 42 | 42 |
| 11 | 64 | 48 | 77 | 51 | 930 | 569 | 84 | 131 | 19 | 826 | 45 | 42 |
| 12 | 67 | 55 | 94 | 54 | 1,060 | 585 | 114 | 99 | 93 | 852 | 46 | 45 |
| 13 | 66 | 51 | 92 | 52 | 1,530 | 612 | 95 | 78 | 254 | 594 | 47 | 46 |
| 14 | 75 | 47 | 89 | 54 | 1,270 | 733 | 75 | 58 | 156 | 213 | 46 | 45 |
| 15 | 76 | 45 | 79 | 49 | 1,410 | 569 | 52 | 48 | 114 | 163 | 45 | 44 |
| 16 | 75 | 42 | 67 | 39 | - | 623 | 52 | 41 | 66 | 134 | 42 | 42 |
| 17 | 78 | 41 | 61 | 37 | - | 770 | 49 | 32 | 47 | 108 | 42 | 41 |
| 18 | 80 | 40 | 55 | 36 | - | 846 | 33 | 25 | 36 | 99 | 40 | 41 |
| 19 | 72 | 40 | 50 | 567 | - | 776 | 28 | 23 | 36 | 87 | 41 | 40 |
| 20 | 64 | 40 | 47 | 898 | - | 612 | 40 | 19 | 44 | 75 | 42 | 37 |
| 21 | 61 | 44 | 49 | 891 | - | 477 | 28 | 17 | 49 | 72 | 42 | 35 |
| 22 | 58 | 62 | 51 | 944 | - | 477 | 79 | 17 | 39 | 73 | 42 | 30 |
| 23 | 57 | 82 | 55 | 958 | - | 462 | 318 | 15 | 38 | 69 | 42 | 36 |
| 24 | 56 | 82 | 50 | 965 | - | 367 | 306 | 12 | 38 | 61 | 45 | 39 |
| 25 | 56 | 76 | 42 | 965 | - | 317 | 352 | 8.9 | 34 | 55 | 45 | 41 |
| 26 | 58 | 70 | 38 | 958 | - | 256 | 559 | 6.9 | 29 | 50 | 44 | 41 |
| 27 | 55 | 58 | 36 | 972 | - | 263 | - | 6.2 | 27 | 45 | 44 | 48 |
| 28 | 52 | 55 | 35 | 924 | - | 274 | 606 | 4.2 | 26 | 42 | 40 | 47 |
| 29 | 51 | ------ | 31 | 937 | - | 198 | 527 | 3.9 | 25 | 42 | 39 | 44 |
| 30 | 42 | ------ | 29 | 1,010 | - | 123 | 487 | 4.6 | 28 | 42 | 37 | 42 |
| 31 | 42 | ------ | 30 | ------ | - | ------ | - | 3.6 | ------ | 41 | ------ | 42 |
| TOTAL | 2,055 | 1,405 | 1,560 | 11,882 | - | 14,717 | - | 3,991.3 | 1,335.1 | 8,809 | 1,322 | 1,269 |
| MEAN | 66.3 | 50.2 | 50.3 | 396 | - | 491 | - | 129 | 44.5 | 284 | 44.1 | 40.9 |
| MAX | 97 | 82 | 94 | 1,010 | - | 846 | - | 727 | 254 | 852 | 58 | 48 |
| MIN | 42 | 40 | 29 | 31 | - | 123 | - | 3.6 | 2.0 | 14 | 37 | 30 |
| AC-FT | 4,080 | 2,790 | 3,090 | 23,570 | - | 29,190 | - | 7,920 | 2,650 | 17,470 | 2,620 | 2,520 |

## 08394500 RIO FELIX AT OLD HIGHWAY BRIDGE, NEAR HAGERMAN, N. MEX.

LOCATION.--Lat 33°07'30", long 104°20'40", in SW¼SW¼SE¼ sec.4, T.14 S., R.26 E., Chaves County, near left bank on downstream side of abandoned bridge pier, 0.6 mi (1.0 km) upstream from alternate U.S. Highway 285, 1.3 mi (2.1 km) northwest of Hagerman, and 2.7 mi (4.3 km) upstream from mouth. Mouth at Pecos River mile 544.9 (876.7 km).

DRAINAGE AREA.--932 mi² (2,410 km²), contributing area.

PERIOD OF RECORD.--April 1939 to current year. March 1932 to April 1939 at site 1 mi (1.6 km) downstream; records for periods of low flow not equivalent, owing to inflow between sites.

GAGE.--Water-stage recorder. Datum of gage is 3,403.40 ft (1,037.356 m) above mean sea level.

AVERAGE DISCHARGE.--34 calendar years, 15.2 ft³/s (0.430 m³/s), 11,010 acre-ft/yr (13.6 hm³/yr); 20 calendar years (1954-73), 13.4 ft³/s (0.379 m³/s), 9,710 acre-ft/yr (12.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 60 ft³/s (1.70 m³/s) May 20 (wastewater from Hagerman Canal), (gage height, 4.97 ft or 1.515 m); no flow most of time.
Period of record: Maximum discharge, 74,000 ft³/s (2,100 m³/s) Oct. 7, 1954 (gage height, 27.5 ft or 8.38 m, from floodmarks), from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of slope-area measurement at point 5.5 mi (8.8 km) upstream from gage (adjusted for channel storage); no flow for many periods.
Flood in 1954 is the highest since 1894 (information from local residents). Flood of Oct. 1, 1904, is probably second highest. Another major flood occurred in April 1915.

REMARKS.--Records poor. Diversions for irrigation of about 350 acres (142 hm²), 1959 determination, above station.

REVISIONS (WATER YEARS).--WSP 928: 1940(M). WSP 1562: 1939-40, 1941(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2.8 | 13 | 0 | 24 | 0 | 0 | | 0 | | | |
| 2 | 0 | 1.5 | 9.6 | 0 | 12 | 0 | 0 | | 0 | | | |
| 3 | 0 | .09 | .91 | 0 | 2.0 | 0 | 0 | | 0 | | | |
| 4 | 0 | 0 | 9.1 | 0 | 8.4 | 0 | 0 | | 0 | | | |
| 5 | 0 | 0 | 5.3 | 0 | 26 | 0 | 0 | | 0 | | | |
| 6 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | | 0 | | | |
| 7 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | | 0 | | | |
| 8 | 0 | 2.1 | 0 | 0 | 39 | 0 | 0 | | .41 | | | |
| 9 | 0 | 3.5 | 0 | 0 | 18 | 0 | 0 | | 0 | | | |
| 10 | 0 | 9.4 | 13 | 0 | 7.5 | 0 | 0 | | 0 | | | |
| 11 | 0 | 5.3 | 51 | 0 | 6.0 | 0 | 0 | | 0 | | | |
| 12 | 0 | 5.1 | 25 | 0 | 21 | 0 | 0 | | 0 | | | |
| 13 | 0 | 6.9 | 9.2 | 0 | 14 | 0 | 0 | | 0 | | | |
| 14 | 0 | 5.9 | .07 | 0 | 8.4 | 0 | 0 | | 0 | | | |
| 15 | 0 | 6.5 | 0 | 0 | 14 | .12 | 0 | | 0 | | | |
| 16 | 0 | 6.1 | 0 | 0 | 19 | 0 | 0 | | 0 | | | |
| 17 | 0 | 5.9 | 0 | 2.0 | 26 | 0 | 0 | | 0 | | | |
| 18 | 0 | 6.1 | 0 | 4.6 | 31 | 0 | 0 | | 0 | | | |
| 19 | 0 | 5.9 | 0 | 1.3 | 45 | 0 | 0 | | 0 | | | |
| 20 | 0 | 4.6 | 0 | .02 | 55 | 0 | 0 | | 0 | | | |
| 21 | 0 | 2.2 | 0 | 0 | 54 | 0 | 0 | | 0 | | | |
| 22 | 0 | .36 | 0 | 0 | 42 | 0 | 0 | | 0 | | | |
| 23 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | | 0 | | | |
| 24 | 0 | 0 | 0 | 0 | 5.3 | 0 | 0 | | 0 | | | |
| 25 | 0 | 0 | 0 | 0 | 1.8 | 0 | .20 | | 0 | | | |
| 26 | 0 | 0 | 0 | 0 | 1.9 | 0 | 3.6 | | 0 | | | |
| 27 | 0 | .80 | 0 | 19 | .78 | 0 | 5.0 | | 0 | | | |
| 28 | 0 | 6.5 | 0 | 27 | .14 | 0 | 0 | | 0 | | | |
| 29 | 0 | ------ | 0 | 31 | .07 | 0 | 0 | | 0 | | | |
| 30 | 0 | ------ | 0 | 26 | 0 | 0 | 0 | | 0 | | | |
| 31 | .41 | ------ | 0 | ------ | 0 | ------ | 0 | | ------ | | ------ | |
| TOTAL | .41 | 87.55 | 136.18 | 110.92 | 586.29 | .12 | 8.80 | 0 | .41 | 0 | 0 | 0 |
| MEAN | .013 | 3.13 | 4.39 | 3.70 | 18.9 | .004 | .28 | 0 | .014 | 0 | 0 | 0 |
| MAX | .41 | 9.4 | 51 | 31 | 55 | .12 | 5.0 | 0 | .41 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | .8 | 174 | 270 | 220 | 1,160 | .2 | 17 | 0 | .8 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 930.68 MEAN 2.55 MAX 55 MIN 0 AC-FT 1,850
WTR YR 1973 TOTAL 1,522.84 MEAN 4.17 MAX 55 MIN 0 AC-FT 3,020

PEAK DISCHARGE (BASE, 500 CFS).--No peak above base.

## 08395500 PECOS RIVER NEAR LAKE ARTHUR, N. MEX.

LOCATION.--Lat 32°59'18", long 104°19'20", in SW¼NE¼ sec.27, T.15 S., R.26 E., Chaves County, on left bank 400 ft (120 m) upstream from county bridge, 2.5 mi (4.0 km) east of Lake Arthur, 7 mi (11.3 km) upstream from Cottonwood Creek, 11 mi (17.7 km) northeast of Artesia, and at mile 525.1 (844.9 km).

DRAINAGE AREA.--14,760 mi² (38,230 km²), approximately (contributing area).

PERIOD OF RECORD.--August 1938 to current year.

GAGE.--Water-stage recorder and rock control. Datum of gage is 3,327.07 ft (1,014.091 m) above mean sea level.

AVERAGE DISCHARGE.--35 calendar years, 252 ft³/s (7.137 m³/s), 182,600 acre-ft/yr (225 hm³/yr); 20 calendar years (1954-73), 190 ft³/s (5.381 m³/s), 137,700 acre-ft/yr (170 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,020 ft³/s (57.2 m³/s) May 18 (gage height, 5.66 ft or 1.725 m); minimum, 2.8 ft³/s (0.079 m³/s) Aug. 25, 26.

Period of record: Maximum discharge, 49,600 ft³/s (1,410 m³/s) Sept. 24, 1941 (gage height, 21.90 ft or 6.675 m), from rating curve extended above 16,100 ft³/s (456 m³/s) on basis of slope-area measurement at gage height 21.77 ft (6.635 m); no flow at times in 1947, 1953-4, 1962, 1964.

Flood of May 30, 1937, reached a stage of 21.77 ft (6.635 m), discharge, 51,500 ft³/s (1,460 m³/s), on basis of slope-area measurement of peak flow.

REMARKS.--Records good. Flow partly regulated by Alamogordo Reservoir (see sta 08384000). Diversions and ground-water withdrawals for irrigation of about 124,000 acres (50,180 hm²), 1959 determination, above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 60 | 49 | 62 | 18 | 969 | 624 | 79 | 765 | 5.1 | 23 | 49 | 44 |
| 2 | 65 | 50 | 62 | 20 | 947 | 468 | 65 | 501 | 3.7 | 15 | 51 | 44 |
| 3 | 70 | 49 | 60 | 21 | 936 | 433 | 37 | 290 | 8.1 | 15 | 49 | 44 |
| 4 | 77 | 49 | 51 | 21 | 916 | 387 | 28 | 207 | 13 | 13 | 49 | 44 |
| 5 | 80 | 50 | 51 | 18 | 928 | 342 | 22 | 178 | 7.3 | 566 | 52 | 44 |
| 6 | 77 | 49 | 39 | 21 | 984 | 334 | 48 | 204 | 5.5 | 767 | 60 | 44 |
| 7 | 81 | 49 | 30 | 28 | 1,010 | 318 | 35 | 251 | 8.9 | 838 | 61 | 44 |
| 8 | 80 | 49 | 28 | 39 | 1,040 | 321 | 17 | 250 | 8.6 | 825 | 55 | 45 |
| 9 | 76 | 51 | 31 | 59 | 961 | 326 | 29 | 244 | 7.8 | 825 | 50 | 47 |
| 10 | 74 | 52 | 44 | 56 | 946 | 321 | 40 | 211 | 9.9 | 812 | 49 | 47 |
| 11 | 71 | 56 | 69 | 51 | 943 | 342 | 41 | 145 | 12 | 839 | 48 | 47 |
| 12 | 80 | 55 | 111 | 47 | 1,010 | 459 | 65 | 92 | 11 | 865 | 51 | 47 |
| 13 | 80 | 60 | 93 | 43 | 1,250 | 501 | 82 | 70 | 175 | 742 | 51 | 48 |
| 14 | 75 | 56 | 80 | 44 | 1,250 | 670 | 60 | 39 | 109 | 374 | 51 | 50 |
| 15 | 81 | 55 | 66 | 41 | 1,290 | 524 | 55 | 33 | 107 | 220 | 50 | 49 |
| 16 | 82 | 53 | 47 | 37 | 1,640 | 524 | 50 | 26 | 68 | 162 | 48 | 48 |
| 17 | 81 | 53 | 42 | 40 | 1,950 | 615 | 48 | 20 | 38 | 131 | 48 | 47 |
| 18 | 85 | 51 | 37 | 39 | 1,950 | 815 | 43 | 16 | 27 | 112 | 47 | 48 |
| 19 | 85 | 50 | 30 | 240 | 1,930 | 732 | 32 | 13 | 28 | 105 | 46 | 45 |
| 20 | 78 | 49 | 26 | 758 | 1,650 | 623 | 18 | 11 | 20 | 89 | 45 | 42 |
| 21 | 71 | 52 | 24 | 832 | 1,380 | 475 | 48 | 11 | 30 | 84 | 45 | 40 |
| 22 | 68 | 61 | 26 | 844 | 1,320 | 461 | 150 | 7.8 | 33 | 83 | 45 | 38 |
| 23 | 66 | 69 | 29 | 874 | 1,270 | 454 | 248 | 5.2 | 26 | 83 | 46 | 38 |
| 24 | 66 | 86 | 28 | 880 | 1,230 | 415 | 338 | 4.4 | 23 | 79 | 47 | 41 |
| 25 | 65 | 82 | 24 | 892 | 1,210 | 322 | 237 | 3.5 | 18 | 69 | 50 | 41 |
| 26 | 63 | 77 | 24 | 915 | 1,200 | 242 | 420 | 3.2 | 14 | 63 | 52 | 44 |
| 27 | 60 | 72 | 19 | 956 | 1,240 | 209 | 1,480 | 3.5 | 23 | 60 | 48 | 42 |
| 28 | 61 | 63 | 16 | 932 | 1,200 | 190 | 711 | 3.5 | 13 | 54 | 47 | 47 |
| 29 | 60 | ------ | 20 | 937 | 1,160 | 160 | 540 | 4.2 | 17 | 53 | 45 | 43 |
| 30 | 59 | ------ | 19 | 965 | 1,170 | 101 | 580 | 6.0 | 15 | 52 | 44 | 43 |
| 31 | 53 | ------ | 18 | ------ | 995 | ------ | 762 | 6.0 | ------ | 51 | ------ | 44 |
| TOTAL | 2,230 | 1,597 | 1,306 | 10,668 | 37,875 | 12,708 | 6,408 | 3,624.3 | 884.9 | 9,069 | 1,479 | 1,379 |
| MEAN | 71.9 | 57.0 | 42.1 | 356 | 1,222 | 424 | 207 | 117 | 29.5 | 293 | 49.3 | 44.5 |
| MAX | 85 | 86 | 111 | 965 | 1,950 | 815 | 1,480 | 765 | 175 | 865 | 61 | 50 |
| MIN | 53 | 49 | 16 | 18 | 916 | 101 | 17 | 3.2 | 3.7 | 13 | 44 | 38 |
| AC-FT | 4,420 | 3,170 | 2,590 | 21,160 | 75,130 | 25,210 | 12,710 | 7,190 | 1,760 | 17,990 | 2,930 | 2,740 |

CAL YR 1973 TOTAL 89,228.2 MEAN 244 MAX 1,950 MIN 3.2 AC-FT 177,000
WTR YR 1973 TOTAL 84,074.2 MEAN 230 MAX 1,950 MIN 3.2 AC-FT 166,800

PEAK DISCHARGE (BASE, 2,500 CFS).--No peak above base.

## 08396500 PECOS RIVER NEAR ARTESIA, N. MEX.

LOCATION.--Lat 32°50'25", long 104°19'23", in NW¼NW¼ sec.18, T.17 S., R.27 E., Eddy County, near left bank on downstream end of bridge pier on State Highway 83, 4.3 mi (6.9 km) east of Artesia, 7.0 mi (11.3 km) upstream from Rio Penasco, 17 mi (27.4 km) upstream from McMillan Dam, and at mile 507.1 (815.9 km).

DRAINAGE AREA.--15,300 mi² (39,630 km²), approximately (contributing area).

PERIOD OF RECORD.--September 1905 to June 1909, August 1909 to current year. Monthly discharge only for some periods, published in WSP 1312 and 1712. Records for Aug. 22-31, 1934, and October 1936 to April 1937, published in WSP 763 and 828, respectively are not reliable and should not be used. Prior to February 1936, published as "near Dayton."

GAGE.--Water-stage recorder. Datum of gage is 3,291.05 ft (1,003.112 m), Bureau of Reclamation bench mark. Prior to Aug. 27, 1914, nonrecording gage and Aug. 27, 1914, to Feb. 20, 1936, water-stage recorder at site 6.5 mi (10.5 km) downstream at different datum. Feb. 21, 1936, to Apr. 4, 1941, water-stage recorder at site 600 ft (183 m) downstream at different datum.

AVERAGE DISCHARGE.--30 calendar years (1906-8, 1910-36), 363 ft³/s (10.28 m³/s), 263,000 acre-ft/yr (324 hm³/yr), prior to completion of Alamogordo Reservoir; 37 calendar years (1937-73), 270 ft³/s (7.646 m³/s), 195,600 acre-ft/yr (241 hm³/yr); 20 calendar years (1954-73), 186 ft³/s (5.268 m³/s), 134,800 acre-ft/yr (166 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,060 ft³/s (58.3 m³/s) May 18 (gage height, 9.62 ft or 2.932 m); minimum, 3.7 ft³/s (0.10 m³/s) Aug. 23.

Period of record: Maximum discharge probably occurred May 30, 1937, when a discharge of 51,500 ft³/s (1,460 m³/s) was measured by slope-area method at a point 15 mi (24.1 km) upstream (gage height, 14.7 ft or 4.48 m), site and datum then in use; no flow at times in 1934, 1946-47, 1953-54, 1957, 1964-65.

Greatest flood since at least 1893 occurred Oct. 2, 1904, discharge not determined; the peak inflow to Lake McMillan, which includes Rio Penasco and Fourmile Draw, was estimated at 82,000 ft³/s (2,320 m³/s). The second highest flood occurred July 25, 1905, discharge below Rio Penasco, 50,300 ft³/s (1,420 m³/s), based on gain in storage and spill from Lake McMillan. The floods in August 1893 and October 1904 damaged McMillan Dam and washed out Avalon Dam.

REMARKS.--Records fair except those for discharges below 10 ft³/s (0.28 m³/s), which are poor. Flow partly regulated by Alamogordo Reservoir (see sta 08384000) since August 1937. Diversions and ground-water withdrawals for irrigation of about 154,000 acres (62,320 hm²), 1959 determination, above station. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1312 and 1512: 1913, 1915, 1917-18(M), 1920, 1923, 1931-36. WSP 1712: 1906(M), 1908-11(M), 1919, 1921-23(M), 1929, 1931-32(M), 1935-36(M), 1937, 1939(M), 1941(M). See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 68 | 57 | 68 | 30 | 998 | 697 | 57 | 842 | 18 | 10 | 52 | 36 |
| 2 | 69 | 56 | 68 | 27 | 995 | 508 | 50 | 595 | 12 | 22 | 53 | 35 |
| 3 | 78 | 56 | 70 | 24 | 980 | 420 | 44 | 282 | 6.8 | 14 | 51 | 39 |
| 4 | 83 | 54 | 64 | 25 | 966 | 389 | 26 | 197 | 7.6 | 14 | 51 | 40 |
| 5 | 92 | 54 | 58 | 25 | 952 | 331 | 16 | 160 | 13 | 348 | 51 | 40 |
| 6 | 92 | 56 | 57 | 21 | 995 | 315 | 12 | 148 | 9.0 | 736 | 56 | 39 |
| 7 | 97 | 54 | 51 | 25 | 1,030 | 313 | 37 | 220 | 10 | 788 | 64 | 38 |
| 8 | 96 | 58 | 42 | 30 | 1,070 | 313 | 22 | 228 | 11 | 785 | 61 | 41 |
| 9 | 90 | 56 | 40 | 47 | 1,020 | 331 | 9.8 | 217 | 10 | 791 | 54 | 46 |
| 10 | 85 | 58 | 60 | 60 | 1,010 | 322 | 26 | 208 | 8.3 | 788 | 53 | 47 |
| 11 | 87 | 60 | 63 | 58 | 995 | 324 | 42 | 146 | 10 | 806 | 49 | 49 |
| 12 | 89 | 64 | 97 | 56 | 1,020 | 445 | 48 | 90 | 10 | 836 | 52 | 48 |
| 13 | 97 | 63 | 116 | 51 | 1,160 | 470 | 71 | 62 | 101 | 825 | 52 | 48 |
| 14 | 90 | 67 | 100 | 49 | 1,250 | 570 | 69 | 45 | 156 | 458 | 52 | 50 |
| 15 | 88 | 63 | 90 | 48 | 1,190 | 580 | 55 | 20 | 112 | 274 | 52 | 50 |
| 16 | 92 | 59 | 70 | 46 | 1,430 | 470 | 50 | 11 | 84 | 187 | 51 | 49 |
| 17 | 92 | 57 | 58 | 40 | 1,920 | 532 | 39 | 6.8 | 44 | 137 | 51 | 49 |
| 18 | 92 | 56 | 52 | 44 | 2,020 | 736 | 43 | 4.8 | 24 | 112 | 49 | 48 |
| 19 | 98 | 53 | 48 | 41 | 2,020 | 684 | 36 | 4.8 | 21 | 106 | 44 | 45 |
| 20 | 96 | 53 | 41 | 718 | 1,850 | 648 | 28 | 4.6 | 20 | 93 | 46 | 44 |
| 21 | 87 | 56 | 40 | 809 | 1,400 | 515 | 15 | 4.4 | 17 | 82 | 47 | 46 |
| 22 | 81 | 69 | 38 | 833 | 1,310 | 413 | 176 | 4.6 | 30 | 80 | 47 | 48 |
| 23 | 77 | 74 | 41 | 882 | 1,250 | 408 | 191 | 4.4 | 32 | 82 | 47 | 45 |
| 24 | 76 | 80 | 42 | 879 | 1,230 | 406 | 272 | 6.6 | 22 | 80 | 47 | 44 |
| 25 | 73 | 96 | 40 | 882 | 1,210 | 322 | 265 | 5.3 | 20 | 77 | 49 | 47 |
| 26 | 70 | 88 | 38 | 890 | 1,220 | 243 | 352 | 5.0 | 11 | 67 | 51 | 47 |
| 27 | 69 | 83 | 37 | 930 | 1,240 | 192 | 1,210 | 4.6 | 10 | 62 | 50 | 48 |
| 28 | 69 | 78 | 33 | 941 | 1,230 | 169 | 839 | 4.8 | 18 | 59 | 48 | 50 |
| 29 | 68 | ------ | 30 | 949 | 1,220 | 150 | 532 | 5.3 | 13 | 57 | 42 | 53 |
| 30 | 67 | ------ | 32 | 980 | 1,230 | 98 | 568 | 21 | 12 | 54 | 37 | 48 |
| 31 | 65 | ------ | 32 | ------ | 1,110 | ------ | 585 | 13 | ------ | 53 | ------ | 49 |
| TOTAL | 2,573 | 1,778 | 1,716 | 10,440 | 38,521 | 12,314 | 5,785.8 | 3,571.0 | 872.7 | 8,883 | 1,509 | 1,406 |
| MEAN | 83.0 | 63.5 | 55.4 | 348 | 1,243 | 410 | 187 | 115 | 29.1 | 287 | 50.3 | 45.4 |
| MAX | 98 | 96 | 116 | 980 | 2,020 | 736 | 1,210 | 842 | 156 | 836 | 64 | 53 |
| MIN | 65 | 53 | 30 | 21 | 952 | 98 | 9.8 | 4.4 | 6.8 | 10 | 37 | 35 |
| AC-FT | 5,100 | 3,530 | 3,400 | 20,710 | 76,410 | 24,420 | 11,480 | 7,080 | 1,730 | 17,620 | 2,990 | 2,790 |

CAL YR 1973 TOTAL 89,369.5 MEAN 245 MAX 2,020 MIN 4.4 AC-FT 177,300
WTR YR 1973 TOTAL 84,791.5 MEAN 232 MAX 2,020 MIN 4.4 AC-FT 168,200

PEAK DISCHARGE (BASE, 2,000 FT³/S).--May 18 (2,300) 2,060 ft³/s (9.62 ft).

## 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, on right bank 1.2 mi (1.9 km) upstream from U.S. Highway 285, 1.9 mi (3.1 km) northwest of old Dayton railway station, 6 mi (9.7 km) upstream from mouth, 7 mi (11.3 km) south of Artesia, mouth at Pecos River mile 496.4 (798.7 km).

DRAINAGE AREA.--1,060 mi² (2,745 km²), approximately.

PERIOD OF RECORD.--April 1951 to current year. Prior to October 1953, published as "near Dayton."

GAGE.--Water-stage recorder and rock control. Datum of gage is 3,387.17 ft (1,032.409 m) above mean sea level. Prior to May 9, 1968, at site 2.4 mi (3.9 km) downstream, at datum 46.28 ft (14.106 m) lower.

AVERAGE DISCHARGE.--22 calendar years, 5.42 ft³/s (0.153 m³/s), 3,930 acre-ft/yr (4.85 hm³/yr); 20 calendar years (1954-73), 5.85 ft³/s (0.166 m³/s), 4,240 acre-ft/yr (5.23 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1.0 ft³/s (0.028 m³/s) Sept. 19 (gage height, 0.65 ft or 0.198 m), backwater; no flow most of time.

Period of record: Maximum discharge, 29,800 ft³/s (844 m³/s) Aug. 23, 1966 (gage height, 16.4 ft or 5.00 m, from floodmarks), present site and datum, from rating curve extended above 6,000 ft³/s (170 m³/s), on basis of slope-area measurements at gage heights 6.82 ft (2.079 m) and 7.90 ft (2.408 m) at previous site and datum; no flow most of time.

Flood of about Sept. 22, 1941, reached a stage of about 9 ft (2.7 m) previous site and datum (from old logs), and peak discharge for station "near Dunken", about 50 mi (80 km) upstream, was 70,000 ft³/s (1,980 m³/s), as determined for that station in 1956, from floodmarks and rating curve extended above 36,300 ft³/s (1,030 m³/s).

REMARKS.--Records fair. Diversions and ground-water withdrawals for irrigation of about 3,000 acres (1,214 hm²), 1959 determination, above station.

REVISIONS (WATER YEARS).--WSP 1242: 1951(M). WSP 1512: 1956. WSP 1923: 1955.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | 0 | .04 | .08 | .06 | .02 | |
| 2 | | | | | | | 0 | .04 | .08 | .06 | .02 | |
| 3 | | | | | | | 0 | .02 | .08 | .06 | .02 | |
| 4 | | | | | | | .01 | 0 | .08 | .06 | .06 | |
| 5 | | | | | | | .02 | 0 | .08 | .10 | .04 | |
| 6 | | | | | | | .03 | 0 | .08 | .09 | .04 | |
| 7 | | | | | | | .03 | 0 | .08 | .08 | 0 | |
| 8 | | | | | | | .03 | 0 | .06 | .04 | 0 | |
| 9 | | | | | | | .03 | 0 | .04 | .04 | 0 | |
| 10 | | | | | | | .03 | 0 | .09 | .06 | 0 | |
| 11 | | | | | | | .03 | 0 | .08 | .06 | 0 | |
| 12 | | | | | | | .03 | 0 | .06 | .06 | 0 | |
| 13 | | | | | | | .04 | .02 | .06 | .04 | 0 | |
| 14 | | | | | | | .04 | .03 | .06 | .06 | 0 | |
| 15 | | | | | | | .04 | .04 | .12 | .06 | 0 | |
| 16 | | | | | | | .04 | .04 | .40 | .04 | 0 | |
| 17 | | | | | | | .04 | .04 | .10 | .04 | 0 | |
| 18 | | | | | | | .04 | .04 | 0 | .03 | 0 | |
| 19 | | | | | | | .04 | .06 | .55 | .03 | 0 | |
| 20 | | | | | | | .03 | .08 | .02 | .03 | 0 | |
| 21 | | | | | | | .03 | .08 | .03 | .03 | 0 | |
| 22 | | | | | | | .06 | .09 | .08 | .03 | 0 | |
| 23 | | | | | | | .04 | .10 | .09 | .03 | 0 | |
| 24 | | | | | | | .04 | .10 | .10 | .03 | 0 | |
| 25 | | | | | | | .04 | .10 | .15 | .03 | 0 | |
| 26 | | | | | | | .04 | .10 | .15 | .03 | 0 | |
| 27 | | | | | | | .04 | .10 | .10 | .03 | 0 | |
| 28 | | | | | | | .04 | .10 | .08 | .02 | 0 | |
| 29 | | ------ | | | | | .04 | .10 | .04 | .02 | 0 | |
| 30 | | ------ | | | | | .04 | .10 | .04 | .02 | 0 | |
| 31 | | ------ | | ------ | | ------ | .04 | .09 | ------ | .02 | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 1.00 | 1.51 | 3.06 | 1.19 | .20 | 0 |
| MEAN | 0 | 0 | 0 | 0 | 0 | 0 | .032 | .049 | .10 | .045 | .007 | 0 |
| MAX | 0 | 0 | 0 | 0 | 0 | 0 | .06 | .10 | .55 | .10 | .06 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | .02 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 0 | 0 | 2.0 | 3.0 | 6.1 | 2.8 | .4 | 0 |

CAL YR 1973 TOTAL 7.16 MEAN .020 MAX .5 MIN 0 AC-FT 14
WTR YR 1973 TOTAL 41.93 MEAN .11 MAX 34 MIN 0 AC-FT 83

PEAK DISCHARGE (BASE, 750 CFS).--No peak above base.

08399500 PECOS RIVER (KAISER CHANNEL) NEAR LAKEWOOD, N. MEX.

LOCATION.--Lat 32°41'22", long 104°17'53", in NW¼SE¼ sec.5, T.19 S., R.27 E., Eddy County, on left bank 3 mi (4.8 km) upstream from high-water line of Lake McMillan, 6 mi (9.7 km) northeast of Lakewood, 7 mi (11.3 km) northeast of gates in McMillan Dam, 12 mi (19.3 km) southeast of Artesia, and at mile 497 (799.7 km).

PERIOD OF RECORD.--May 1950 to current year. Prior to October 1954, published as Kaiser Lake-McMillan Channel near Lakewood.

GAGE.--Water-stage recorder. Datum of gage is 3,268.53 ft (996.248 m) above mean sea level (Bureau of Reclamation bench mark). Prior to Mar. 23, 1955, at site 3 mi (4.8 km) downstream at datum 7.83 ft (2.387 m) lower. Mar. 23, 1955, to Sept. 30, 1963, at present site at datum 2.00 ft (0.610 m) higher.

AVERAGE DISCHARGE.--23 calendar years, 159 ft³/s (4.50 m³/s), 115,200 acre-ft/yr (142 hm³/yr); 20 calendar years (1954-73), 166 ft³/s (4.70 m³/s), 120,300 acre-ft/yr (148 hm³/yr).

EXTREMES.--Current year: Maximum daily discharge, 1,790 ft³/s (50.7 m³/s) May 19; no flow Aug. 20-29.
Period of record: Maximum daily discharge, 2,920 ft³/s (82.7 m³/s) July 12, 1960; no flow at times in most years.

REMARKS.--Records fair. Flow partly regulated by Alamogordo Reservoir (see sta 08384000). Diversions and ground-water withdrawals for irrigation of about 170,000 acres (68,800 hm²), 1959 determination, above station. Above about 1,500 ft³/s (42.5 m³/s) flow will begin bypassing station and, depending on the magnitude and duration of flow, may reach Lake McMillan.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 62 | 56 | 68 | 24 | 980 | 733 | 68 | 926 | 9.0 | 5.2 | 47 | 34 |
| 2 | 63 | 53 | 66 | 20 | 960 | 553 | 56 | 592 | 8.5 | 6.3 | 46 | 33 |
| 3 | 66 | 53 | 67 | 23 | 946 | 406 | 47 | 314 | 3.5 | 9.8 | 48 | 35 |
| 4 | 71 | 52 | 65 | 22 | 932 | 392 | 32 | 204 | .15 | 6.0 | 46 | 37 |
| 5 | 77 | 52 | 56 | 24 | 946 | 350 | 20 | 156 | 1.6 | 195 | 47 | 37 |
| 6 | 82 | 53 | 55 | 24 | 974 | 294 | 17 | 134 | 6.2 | 669 | 50 | 37 |
| 7 | 81 | 53 | 48 | 22 | 988 | 311 | 25 | 191 | 4.6 | 768 | 59 | 37 |
| 8 | 82 | 55 | 40 | 27 | 1,020 | 303 | 28 | 215 | 6.5 | 751 | 60 | 37 |
| 9 | 79 | 54 | 36 | 34 | 960 | 328 | 16 | 222 | 6.0 | 774 | 53 | 44 |
| 10 | 77 | 55 | 47 | 54 | 946 | 342 | 14 | 231 | 6.4 | 786 | 48 | 47 |
| 11 | 80 | 58 | 58 | 56 | 946 | 364 | 33 | 162 | 6.5 | 791 | 47 | 48 |
| 12 | 82 | 60 | 70 | 52 | 991 | 322 | 37 | 101 | 6.8 | 835 | 45 | 49 |
| 13 | 97 | 60 | 102 | 48 | 1,120 | 450 | 54 | 60 | 16 | 835 | 50 | 48 |
| 14 | 87 | 65 | 90 | 46 | 1,390 | 538 | 70 | 44 | 140 | 436 | 48 | 49 |
| 15 | 83 | 62 | 83 | 44 | 1,300 | 625 | 47 | 24 | 83 | 265 | 47 | 50 |
| 16 | 87 | 59 | 71 | 42 | 1,430 | 479 | 42 | 11 | 73 | 175 | 46 | 50 |
| 17 | 88 | 57 | 54 | 40 | 1,740 | 523 | 38 | 7.2 | 42 | 127 | 46 | 49 |
| 18 | 87 | 56 | 48 | 39 | 1,780 | 684 | 31 | 2.6 | 24 | 108 | 45 | 47 |
| 19 | 91 | 54 | 44 | 38 | 1,790 | 693 | 33 | .38 | 17 | 102 | 43 | 42 |
| 20 | 91 | 53 | 37 | 501 | 1,770 | 687 | 27 | 0 | 14 | 95 | 40 | 42 |
| 21 | 85 | 54 | 32 | 742 | 1,510 | 553 | 18 | 0 | 9.0 | 79 | 42 | 44 |
| 22 | 78 | 62 | 29 | 774 | 1,390 | 406 | 91 | 0 | 13 | 74 | 43 | 43 |
| 23 | 73 | 70 | 30 | 852 | 1,300 | 401 | 118 | 0 | 24 | 74 | 44 | 39 |
| 24 | 72 | 72 | 35 | 846 | 1,230 | 392 | 210 | 0 | 15 | 73 | 45 | 39 |
| 25 | 71 | 87 | 33 | 861 | 1,200 | 336 | 255 | 0 | 10 | 70 | 46 | 40 |
| 26 | 68 | 86 | 30 | 878 | 1,210 | 255 | 224 | 0 | 7.9 | 62 | 48 | 39 |
| 27 | 66 | 82 | 29 | 924 | 1,210 | 179 | 900 | 0 | 2.2 | 56 | 47 | 42 |
| 28 | 67 | 77 | 26 | 940 | 1,250 | 156 | 961 | 0 | 4.9 | 53 | 45 | 42 |
| 29 | 65 | ------ | 22 | 929 | 1,210 | 142 | 436 | 0 | 8.4 | 50 | 42 | 47 |
| 30 | 64 | ------ | 22 | 960 | 1,220 | 104 | 502 | .87 | 6.2 | 48 | 37 | 47 |
| 31 | 63 | ------ | 22 | ------ | 1,180 | ------ | 464 | 6.0 | ------ | 48 | ------ | 42 |
| TOTAL | 2,385 | 1,710 | 1,515 | 9,886 | 37,819 | 12,301 | 4,914 | 3,604.05 | 575.35 | 8,426.3 | 1,400 | 1,316 |
| MEAN | 76.9 | 61.1 | 48.9 | 330 | 1,220 | 410 | 159 | 116 | 19.2 | 272 | 46.7 | 42.5 |
| MAX | 97 | 87 | 102 | 960 | 1,790 | 733 | 961 | 926 | 140 | 835 | 60 | 50 |
| MIN | 62 | 52 | 22 | 20 | 932 | 104 | 14 | 0 | .15 | 5.2 | 37 | 33 |
| AC-FT | 4,730 | 3,390 | 3,010 | 19,610 | 75,010 | 24,400 | 9,750 | 7,150 | 1,140 | 16,710 | 2,780 | 2,610 |

CAL YR 1973 TOTAL 85,851.70 MEAN 235 MAX 1,790 MIN 0 AC-FT 170,300
WTR YR 1973 TOTAL 81,572.40 MEAN 223 MAX 1,790 MIN 0 AC-FT 161,800

## 08400000 FOURMILE DRAW NEAR LAKEWOOD, N. MEX.

LOCATION.--Lat 32°40'20", long 104°22'07", in SW¼NW¼SE¼ sec.10, T.19 S., R.26 E., Eddy County, in left side of channel 360 ft (110 m) downstream from ford on Lakewood-Dayton road, 1.9 mi (3.1 km) downstream from U.S. Highway 285, 2.8 mi (4.5 km) north of Lakewood, 3.7 mi (6.0 km) upstream from mouth, and 11.5 mi (18.5 km) south of Artesia.

DRAINAGE AREA.--265 mi² (686 km²), approximately.

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,299.14 ft (1,005.578 m) above mean sea level. Oct. 1, 1951, to June 19, 1962, at site 1.8 mi (2.9 km) upstream at datum 30.61 ft (9.330 m) higher. June 19, 1962, to Oct. 12, 1966, at site 410 ft (125 m) upstream at datum 6.08 ft (1.853 m) higher.

AVERAGE DISCHARGE.--22 calendar years, 3.06 ft³/s (0.0867 m³/s), 2,220 acre-ft/yr (2.74 hm³/yr); 20 calendar years (1954-73), 3.29 ft³/s (0.0932 m³/s), 2,380 acre-ft/yr (2.93 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 162 ft³/s (4.59 m³/s) Aug. 29 (gage height, 2.25 ft or 0.686 m); no flow most of time.
Period of record: Maximum discharge, 29,300 ft³/s (830 m³/s) Aug. 23, 1966 (gage height, 19.9 ft or 6.07 m, from floodmarks), present datum from rating curve extended above 600 ft³/s (17.0 m³/s) on basis of slope-area measurement of peak flow; no flow most of time.
The flood of Aug. 23, 1966 (information from local resident) is believed to be the greatest since at least 1920.

REMARKS.--Records fair. No surface diversions above station.

REVISIONS (WATER YEARS).--WRD 1968: 1967.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | 0 | 0 | | | |
| 2 | | | | | | | | 0 | 0 | | | |
| 3 | | | | | | | | 0 | 0 | | | |
| 4 | | | | | | | | 0 | 0 | | | |
| 5 | | | | | | | | 0 | 0 | | | |
| 6 | | | | | | | | 0 | 0 | | | |
| 7 | | | | | | | | 0 | 0 | | | |
| 8 | | | | | | | | 0 | 0 | | | |
| 9 | | | | | | | | 0 | 0 | | | |
| 10 | | | | | | | | 0 | .01 | | | |
| 11 | | | | | | | | 0 | 0 | | | |
| 12 | | | | | | | | 0 | 0 | | | |
| 13 | | | | | | | | 0 | 0 | | | |
| 14 | | | | | | | | 0 | 0 | | | |
| 15 | | | | | | | | 0 | 0 | | | |
| 16 | | | | | | | | 0 | 0 | | | |
| 17 | | | | | | | | 0 | 0 | | | |
| 18 | | | | | | | | 0 | 0 | | | |
| 19 | | | | | | | | 0 | 0 | | | |
| 20 | | | | | | | | 0 | 0 | | | |
| 21 | | | | | | | | 0 | 0 | | | |
| 22 | | | | | | | | 0 | 0 | | | |
| 23 | | | | | | | | 0 | 0 | | | |
| 24 | | | | | | | | 0 | 0 | | | |
| 25 | | | | | | | | 0 | 0 | | | |
| 26 | | | | | | | | 0 | 0 | | | |
| 27 | | | | | | | | 0 | 0 | | | |
| 28 | | | | | | | | 0 | 0 | | | |
| 29 | | ------ | | | | | | 12 | 0 | | | |
| 30 | | ------ | | | | | | 1.5 | 0 | | | |
| 31 | | ------ | | ------ | | ------ | | 0 | ------ | | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13.5 | .01 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | .44 | .0003 | 0 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | .01 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | .02 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 13.51 MEAN .037 MAX 12 MIN 0 AC-FT 27
WTR YR 1973 TOTAL 13.51 MEAN .037 MAX 12 MIN 0 AC-FT 27

PEAK DISCHARGE (BASE, 200 CFS).--No peak above base.

## 08400500 LAKE MCMILLAN NEAR LAKEWOOD, N. MEX.

LOCATION.--Lat 32°35'42" long 104°20'49", in NE¼NE¼ sec.11, T.20 S., R.26 E., Eddy County, near outlet gates of McMillan Dam on Pecos River, 3.4 mi (5.5 km) southeast of Lakewood, and at mile 483.8 (778.4 km).

DRAINAGE AREA.--16,990 mi² (44,000 km²), approximately (contributing area).

PERIOD OF RECORD.--January 1939 to September 1965 (monthend contents only), October 1965 to current year. Monthend gage heights January 1918 to December 1938 in files of Pecos River Commission.

GAGE.--Non-recording gage. Datum of gage is 3,241.6 ft (988.04 m) above mean sea level (Bureau of Reclamation datum).

EXTREMES.--Current year: Maximum contents, 32,790 acre-ft (40.4 hm³) June 15, 20-22, 29, 30, gage height, 29.95 ft (7.910 m); minimum, 344 acre-ft (424,000 m³) Oct. 5, gage height, 15.40 ft (4.694 m).
Period of record: Maximum contents observed, 68,500 acre-ft (84.5 hm³) Sept. 26, 1941, gage height, 29.95 ft (9.129 m); no storage for periods on 1944-54, 1957, 1964, 1965.

REMARKS.--Lake is formed by McMillan Dam, an earthfill structure, completed and storage began in 1893. The structure was damaged by floods of October 1893 and Oct. 2, 1904. Capacity, 27,300 acre-ft (33.7 hm³) between gage heights 0.0 ft (sill of outlet gate) and 24.9 ft (7.59 m), crest of spillway 2. Flashboards may be used to increase this capacity. Maximum capacity without spill, 33,620 acre-ft (41.5 hm³) at gage height 26.1 ft (7.96 m) crest of spillway 1. No dead storage. No storage allocated to flood control. Figures given herein represent usable contents and are computed from daily readings at 0800 hours. Gage heights may be affected by variable drawdown due to flow through gates. Water is used for irrigation by Carlsbad Irrigation District.

COOPERATION.--Gage-height record and capacity table furnished by Carlsbad Irrigation District.

GAGE HEIGHT, IN FEET, AT 0800, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 25.05 | 25.10 | 25.10 | 24.40 | 24.70 | 25.15 | 25.90 | 24.70 | 20.10 | 16.90 | 20.10 | 20.45 |
| 2 | 25.05 | 25.10 | 25.10 | 24.30 | 25.00 | 25.40 | 25.80 | 24.95 | 19.90 | 16.50 | 20.10 | 20.45 |
| 3 | 25.05 | 25.10 | 25.10 | 24.20 | 25.00 | 25.50 | 25.55 | 25.15 | 19.75 | 16.05 | 20.10 | 20.50 |
| 4 | 25.05 | 25.10 | 25.10 | 24.15 | 24.95 | 25.60 | 25.35 | 25.15 | 19.60 | 15.50 | 20.15 | 20.50 |
| 5 | 25.05 | 25.10 | 25.10 | 24.10 | 25.00 | 25.70 | 25.25 | 25.05 | 19.45 | 15.40 | 20.15 | 20.50 |
| 6 | 25.05 | 25.10 | 25.05 | 23.95 | 25.00 | 25.75 | 25.10 | 25.00 | 19.30 | 16.10 | 20.20 | 20.50 |
| 7 | 25.10 | 25.10 | 25.05 | 23.85 | 25.05 | 25.80 | 24.95 | 24.95 | 19.20 | 17.05 | 20.20 | 20.50 |
| 8 | 25.15 | 25.10 | 25.05 | 23.75 | 25.15 | 25.85 | 24.80 | 24.90 | 19.15 | 17.65 | 20.20 | 20.50 |
| 9 | 25.15 | 25.10 | 25.05 | 23.55 | 25.15 | 25.90 | 24.60 | 24.80 | 19.10 | 18.15 | 20.25 | 20.50 |
| 10 | 25.15 | 25.10 | 25.05 | 23.35 | 25.00 | 25.90 | 24.45 | 24.70 | 19.10 | 18.70 | 20.25 | 20.55 |
| 11 | 25.15 | 25.10 | 25.05 | 23.20 | 25.00 | 25.85 | 24.30 | 24.60 | 19.15 | 19.15 | 20.30 | 20.55 |
| 12 | 25.15 | 25.10 | 25.05 | 23.00 | 25.00 | 25.80 | 24.20 | 24.50 | 19.15 | 19.60 | 20.30 | 20.50 |
| 13 | 25.15 | 25.10 | 25.05 | 22.85 | 25.00 | 25.85 | 24.10 | 24.40 | 19.15 | 20.10 | 20.35 | 20.55 |
| 14 | 25.15 | 25.10 | 25.05 | 22.65 | 25.00 | 25.90 | 24.05 | 24.25 | 19.10 | 20.55 | 20.35 | 20.55 |
| 15 | 25.15 | 25.10 | 25.05 | 22.45 | 25.10 | 25.95 | 23.95 | 24.05 | 19.20 | 20.70 | 20.35 | 20.55 |
| 16 | 25.15 | 25.10 | 25.05 | 22.25 | 25.05 | 25.90 | 23.90 | 23.80 | 19.35 | 20.75 | 20.40 | 20.60 |
| 17 | 25.15 | 25.10 | 25.05 | 22.00 | 25.05 | 25.85 | 23.85 | 23.50 | 19.30 | 20.80 | 20.40 | 20.60 |
| 18 | 25.15 | 25.10 | 25.05 | 21.80 | 25.05 | 25.75 | 23.70 | 23.20 | 19.35 | 20.75 | 20.40 | 20.60 |
| 19 | 25.15 | 25.10 | 25.05 | 21.50 | 25.00 | 25.90 | 23.60 | 22.95 | 19.30 | 20.70 | 20.40 | 20.65 |
| 20 | 25.15 | 25.10 | 25.05 | 21.25 | 25.00 | 25.95 | 23.45 | 22.75 | 19.30 | 20.65 | 20.40 | 20.65 |
| 21 | 25.15 | 25.10 | 25.05 | 21.45 | 24.95 | 25.95 | 23.35 | 22.50 | 19.20 | 20.60 | 20.40 | 20.65 |
| 22 | 25.15 | 25.10 | 25.05 | 21.75 | 24.95 | 25.95 | 23.35 | 22.25 | 18.90 | 20.60 | 20.40 | 20.65 |
| 23 | 25.15 | 25.10 | 25.05 | 22.10 | 24.80 | 25.90 | 23.30 | 22.05 | 18.65 | 20.60 | 20.40 | 20.65 |
| 24 | 25.15 | 25.10 | 25.00 | 22.45 | 24.85 | 25.85 | 23.35 | 21.75 | 18.40 | 20.55 | 20.40 | 20.65 |
| 25 | 25.15 | 25.10 | 25.00 | 22.80 | 24.80 | 25.80 | 23.35 | 21.45 | 18.30 | 20.55 | 20.40 | 20.65 |
| 26 | 25.15 | 25.10 | 25.00 | 23.20 | 24.85 | 25.85 | 23.35 | 21.25 | 18.20 | 20.50 | 20.40 | 20.65 |
| 27 | 25.15 | 25.10 | 25.00 | 23.45 | 24.90 | 25.90 | 23.30 | 21.10 | 18.10 | 20.50 | 20.40 | 20.65 |
| 28 | 25.10 | 25.10 | 25.00 | 23.85 | 24.90 | 25.90 | 23.80 | 21.00 | 17.80 | 20.40 | 20.45 | 20.65 |
| 29 | 25.10 | ------ | 24.85 | 24.20 | 24.90 | 25.95 | 24.10 | 20.80 | 17.55 | 20.30 | 20.45 | 20.65 |
| 30 | 25.10 | ------ | 24.65 | 24.45 | 24.90 | 25.95 | 24.30 | 20.60 | 17.25 | 20.20 | 20.45 | 20.65 |
| 31 | 25.10 | ------ | 24.50 | ------ | 24.90 | ------ | 24.50 | 20.40 | ------ | 20.10 | ------ | 20.70 |
| MEAN | 25.12 | 25.10 | 25.01 | 23.08 | 24.97 | 25.81 | 24.22 | 23.31 | 18.98 | 19.25 | 20.32 | 20.58 |
| MAX | 25.15 | 25.10 | 25.10 | 24.45 | 25.15 | 25.95 | 25.90 | 25.15 | 20.10 | 20.80 | 20.45 | 20.70 |
| MIN | 25.05 | 25.10 | 24.50 | 21.25 | 24.70 | 25.15 | 23.30 | 20.40 | 17.25 | 15.40 | 20.10 | 20.45 |

CAL YR 1973 MEAN 22.97 MAX 25.95 MIN 15.40
WTR YR 1973 MEAN 24.24 MAX 25.95 MIN 17.25

08400500 Lake McMillan near Lakewood, N. Mex.--Continued

CONTENTS, IN ACRE-FEET, AT 0800, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28,050 | 28,300 | 28,300 | 24,860 | 26,300 | 28,560 | 32,520 | 26,300 | 9,240 | 2,250 | 9,240 | 10,180 |
| 2 | 28,050 | 28,300 | 28,300 | 24,380 | 27,800 | 29,860 | 31,980 | 27,550 | 8,720 | 1,590 | 9,240 | 10,160 |
| 3 | 28,050 | 28,300 | 28,300 | 23,900 | 27,800 | 30,380 | 30,640 | 28,560 | 8,330 | 974 | 9,240 | 10,320 |
| 4 | 28,050 | 28,300 | 28,300 | 23,670 | 27,550 | 30,900 | 29,600 | 28,560 | 7,960 | 415 | 9,370 | 10,320 |
| 5 | 28,050 | 28,300 | 28,300 | 23,440 | 27,800 | 31,440 | 29,080 | 28,050 | 7,600 | 344 | 9,370 | 10,320 |
| 6 | 28,050 | 28,300 | 28,050 | 22,750 | 27,800 | 31,710 | 28,300 | 27,800 | 7,240 | 1,040 | 9,500 | 10,320 |
| 7 | 28,300 | 28,300 | 28,050 | 22,290 | 28,050 | 31,980 | 27,550 | 27,550 | 7,000 | 2,480 | 9,500 | 10,320 |
| 8 | 28,560 | 28,300 | 28,050 | 21,840 | 28,560 | 32,250 | 26,800 | 27,300 | 6,880 | 3,610 | 9,500 | 10,320 |
| 9 | 28,560 | 28,300 | 28,050 | 20,960 | 28,560 | 32,520 | 25,820 | 26,800 | 6,770 | 4,640 | 9,630 | 10,320 |
| 10 | 28,560 | 28,300 | 28,050 | 20,110 | 27,800 | 32,520 | 25,100 | 26,300 | 6,770 | 5,850 | 9,630 | 10,460 |
| 11 | 28,560 | 28,300 | 28,050 | 19,480 | 27,800 | 32,250 | 24,380 | 25,820 | 6,880 | 6,880 | 9,760 | 10,460 |
| 12 | 28,560 | 28,300 | 28,050 | 18,680 | 27,800 | 31,980 | 23,900 | 25,340 | 6,880 | 7,960 | 9,760 | 10,320 |
| 13 | 28,560 | 28,300 | 28,050 | 18,080 | 27,800 | 32,250 | 23,440 | 24,860 | 6,880 | 9,240 | 9,900 | 10,460 |
| 14 | 28,560 | 28,300 | 28,050 | 17,310 | 27,800 | 32,520 | 23,210 | 24,140 | 6,770 | 10,460 | 9,900 | 10,460 |
| 15 | 28,560 | 28,300 | 28,050 | 16,560 | 28,300 | 32,790 | 22,750 | 23,210 | 7,000 | 10,880 | 9,900 | 10,460 |
| 16 | 28,560 | 28,300 | 28,050 | 15,840 | 28,050 | 32,520 | 22,520 | 22,060 | 7,360 | 11,020 | 10,040 | 10,600 |
| 17 | 28,560 | 28,300 | 28,050 | 14,960 | 28,050 | 32,250 | 22,290 | 20,740 | 7,240 | 11,160 | 10,040 | 10,600 |
| 18 | 28,560 | 28,300 | 28,050 | 14,280 | 28,050 | 31,710 | 21,620 | 19,480 | 7,360 | 11,020 | 10,040 | 10,600 |
| 19 | 28,560 | 28,300 | 28,050 | 13,300 | 27,800 | 32,520 | 21,180 | 18,480 | 7,240 | 10,880 | 10,040 | 10,740 |
| 20 | 28,560 | 28,300 | 28,050 | 12,510 | 27,800 | 32,790 | 20,530 | 17,690 | 7,240 | 10,740 | 10,040 | 10,740 |
| 21 | 28,560 | 28,300 | 28,050 | 13,140 | 27,550 | 32,790 | 20,110 | 16,740 | 7,000 | 10,600 | 10,040 | 10,740 |
| 22 | 28,560 | 28,300 | 28,050 | 14,110 | 27,550 | 32,790 | 20,110 | 15,840 | 6,310 | 10,600 | 10,040 | 10,740 |
| 23 | 28,560 | 28,300 | 28,050 | 15,300 | 26,800 | 32,520 | 19,900 | 15,130 | 5,740 | 10,600 | 10,040 | 10,740 |
| 24 | 28,560 | 28,300 | 27,800 | 16,560 | 27,050 | 32,250 | 20,110 | 14,110 | 5,190 | 10,460 | 10,040 | 10,740 |
| 25 | 28,560 | 28,300 | 27,800 | 17,880 | 26,800 | 31,980 | 20,110 | 13,140 | 4,970 | 10,460 | 10,040 | 10,740 |
| 26 | 28,560 | 28,300 | 27,800 | 19,480 | 27,050 | 32,250 | 20,110 | 12,510 | 4,750 | 10,320 | 10,040 | 10,740 |
| 27 | 28,560 | 28,300 | 27,800 | 20,530 | 27,300 | 32,520 | 19,900 | 12,060 | 4,540 | 10,320 | 10,040 | 10,740 |
| 28 | 28,300 | 28,300 | 27,800 | 22,290 | 27,300 | 32,520 | 22,060 | 11,760 | 3,910 | 10,040 | 10,180 | 10,740 |
| 29 | 28,300 | ------ | 27,050 | 23,900 | 27,300 | 32,790 | 23,440 | 11,160 | 3,410 | 9,760 | 10,180 | 10,740 |
| 30 | 28,300 | ------ | 26,060 | 25,100 | 27,300 | 32,790 | 24,380 | 10,600 | 2,840 | 9,500 | 10,180 | 10,740 |
| 31 | 28,300 | ------ | 25,340 | ------ | 27,300 | ------ | 25,340 | 10,040 | ------ | 9,240 | ------ | 10,880 |
| (†) | +250 | 0 | -2,960 | -240 | +2,200 | +5,490 | -7,450 | -15,300 | -7,200 | +6,400 | +940 | +700 |
| MAX | 28,560 | 28,300 | 28,300 | 25,100 | 28,560 | 32,790 | 32,520 | 28,560 | 9,240 | 11,160 | 10,180 | 10,880 |
| MIN | 28,050 | 28,300 | 25,340 | 12,510 | 26,300 | 28,560 | 19,900 | 10,040 | 2,840 | 344 | 9,240 | 10,180 |

CAL YR 1973 MAX 32,790 MIN 344 CHANGE IN CONTENTS -17,170
WTR YR 1973 MAX 32,790 MIN 2,840 CHANGE IN CONTENTS -30,220

† Change in contents, in acre-feet.

## 08401000 PECOS RIVER BELOW MCMILLAN DAM, N. MEX.

LOCATION.--Lat 32°35'40", long 104°20'59", in NW¼NE¼ sec.11, T.20 S., R.26 E., Eddy County, on left bank 700 ft (210 m) downstream from gates in McMillan Dam, 3.4 mi (5.5 km) southeast of Lakewood, and at mile 483.7 (778.3 km).

DRAINAGE AREA.--16,990 mi² (44,000 km²), approximately (contributing area).

PERIOD OF RECORD.--January 1906 to March 1908, January 1909 to December 1911, August 1939 to December 1940, December 1946 to current year (January 1906 and January 1910 to December 1911, gage heights and discharge measurements only). Published as "near Lakewood" 1906-11, and as "below McMillan Dam, near Lakewood" 1939-40.

GAGE.--Water-stage recorder and rock control. Datum if gage is 3,238.21 ft (987.006 m) above mean sea level. See WSP 1732 for history of changes prior to Mar. 12, 1957. Supplemental water-stage recorders on McMillan Dam spillways, No. 1 and 2, Apr. 6, 1960, to Sept. 30, 1970.

AVERAGE DISCHARGE.--30 calendar years (1907, 1909, 1940, 1947-73), 101 ft³/s (2.860 m³/s), 73,170 acre-ft/yr (90.2 hm³/yr); 20 calendar years (1954-73), 110 ft³/s (3.115 m³/s), 79,690 acre-ft/yr (98.3 hm³/yr).

EXTREMES.--Current year: Maximum daily discharge, 1,730 ft³/s (49.0 m³/s) May 19 (gage height, 6.37 ft or 1.942 m); no flow at times. 1939-40, 1947-73: Maximum discharge, 16,500 ft³/s (467 m³/s) Aug. 23, 1966, includes flow of spillways; no flow for many days. Flood of Oct. 2, 1904, may have reached 60,000 ft³/s (1,700 m³/s). This station may have had a higher discharge in August 1893 when part of McMillan Dam was blasted to prevent total destruction of the dam (that flood was described as "highest in 50 years" and it also destroyed Avalon Dam).

REMARKS.--Records good. Flow regulated by Alamogordo Reservoir and Lake McMillan (see sta 08384000, 08400500). Diversions and ground-water withdrawals for irrigation of about 171,000 acres (69,200 hm²), 1959 determination, above station.

REVISIONS (WATER YEARS).--WSP 1512: 1909.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 0 | 202 | 208 | .81 | 74 | .35 | 246 | 254 | .26 | |
| 2 | | | 0 | 128 | 628 | .35 | 456 | .35 | 187 | 251 | .23 | |
| 3 | | | 0 | 128 | 875 | .20 | 433 | 94 | 185 | 246 | .23 | |
| 4 | | | 0 | 128 | 732 | .09 | 300 | 176 | 136 | 70 | .20 | |
| 5 | | | 0 | 170 | 621 | 0 | 246 | 176 | 131 | .09 | .20 | |
| 6 | | | 0 | 195 | 666 | 0 | 246 | 176 | 191 | .09 | .20 | |
| 7 | | | 0 | 197 | 675 | 0 | 246 | 208 | 45 | 86 | .23 | |
| 8 | | | 0 | 207 | 790 | 0 | 246 | 331 | .41 | 174 | .23 | |
| 9 | | | 0 | 291 | 1,060 | 174 | 275 | 369 | .35 | 176 | .26 | |
| 10 | | | 0 | 364 | 1,090 | 280 | 343 | 369 | .41 | 179 | .26 | |
| 11 | | | 0 | 330 | 910 | 280 | 246 | 295 | .26 | 163 | .26 | |
| 12 | | | 0 | 317 | 910 | 280 | 172 | 248 | .26 | 154 | .26 | |
| 13 | | | 0 | 313 | 905 | 280 | 127 | 248 | .26 | 155 | .26 | |
| 14 | | | 0 | 310 | 961 | 280 | 127 | 275 | .26 | 135 | .26 | |
| 15 | | | 0 | 310 | 1,270 | 437 | 88 | 411 | .30 | 114 | .26 | |
| 16 | | | 0 | 326 | 1,320 | 540 | 94 | 491 | .30 | 114 | .26 | |
| 17 | | | 0 | 371 | 1,580 | 540 | 204 | 487 | .30 | 140 | .26 | |
| 18 | | | 0 | 364 | 1,720 | 356 | 222 | 376 | .30 | 154 | .26 | |
| 19 | | | 0 | 350 | 1,730 | 468 | 178 | 321 | .26 | 143 | .26 | |
| 20 | | | 0 | 270 | 1,720 | 312 | 157 | 318 | 26 | 78 | .23 | |
| 21 | | | 0 | 200 | 1,710 | 422 | 145 | 318 | 303 | 78 | .23 | |
| 22 | | | 0 | 176 | 1,500 | 422 | 75 | 312 | 261 | 76 | .23 | |
| 23 | | | 0 | 176 | 1,080 | 426 | 55 | 331 | 229 | 78 | .23 | |
| 24 | | | 0 | 179 | 1,080 | 422 | 90 | 380 | 153 | 87 | .23 | |
| 25 | | | 0 | 181 | 1,080 | 148 | 226 | 309 | 106 | 111 | .20 | |
| 26 | | | 0 | 147 | 1,080 | .35 | 261 | 166 | 106 | 87 | .20 | |
| 27 | | | 0 | 125 | 1,080 | .35 | 170 | 118 | 159 | 102 | .15 | |
| 28 | | | 209 | 125 | 1,080 | .35 | 136 | 226 | 254 | 128 | .02 | |
| 29 | | ------ | 350 | 139 | 1,080 | .35 | 43 | 278 | 261 | 178 | 0 | |
| 30 | | ------ | 282 | 206 | 1,080 | .30 | .81 | 275 | 259 | 92 | 0 | |
| 31 | | ------ | 250 | ------ | 601 | ------ | .49 | 270 | ------ | .35 | ------ | |
| TOTAL | 0 | 0 | 1,091 | 6,925 | 32,822 | 6,070.15 | 5,682.30 | 8,352.70 | 3,241.67 | 3,803.53 | 6.36 | 0 |
| MEAN | 0 | 0 | 35.2 | 231 | 1,059 | 202 | 183 | 269 | 108 | 123 | .21 | 0 |
| MAX | 0 | 0 | 350 | 371 | 1,730 | 540 | 456 | 491 | 303 | 254 | .26 | 0 |
| MIN | 0 | 0 | 0 | 125 | 208 | 0 | .49 | .35 | .26 | .09 | 0 | 0 |
| AC-FT | 0 | 0 | 2,160 | 13,740 | 65,100 | 12,040 | 11,270 | 16,570 | 6,430 | 7,540 | 13 | 0 |

CAL YR 1973 TOTAL 67,994.71 MEAN 186 MAX 1,730 MIN 0 AC-FT 134,900
WTR YR 1973 TOTAL 67,002.53 MEAN 184 MAX 1,730 MIN 0 AC-FT 132,900

## 08401200 SOUTH SEVEN RIVERS NEAR LAKEWOOD, N. MEX.

LOCATION.--Lat 32°35'19", long 104°25'17", in SE¼SE¼NW¼ sec.7, T.20 S., R.26 E., Eddy County, on downstream side of center pier of bridge on U.S. Highway 285, 0.4 mi (0.6 km) south of Seven Rivers, 3.0 mi (4.8 km) upstream from mouth, and 4.0 mi (6.4 km) southwest of Lakewood, mouth at Pecos River mile 480.8 (773.6 km).

DRAINAGE AREA.--220 mi² (570 km²), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,276 ft (999 m), from topographic map. Prior to July 8, 1965, at site 400 ft (120 m) upstream at datum 0.57 ft (0.174 m) higher.

AVERAGE DISCHARGE.--10 calendar years, 5.11 ft³/s (0.145 m³/s), 3,700 acre-ft/yr (4.56 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 474 ft³/s (13.4 m³/s) July 28 (gage height, 6.05 ft or 1.844 m); no flow most of time.
Period of record: Maximum discharge, 25,500 ft³/s (722 m³/s) May 30, 1965 (gage height, 20.0 ft or 6.10 m, from floodmarks), present site and datum, from rating curve extended above 5,700 ft³/s (161 m³/s) on basis of slope-area measurements at gage heights 18.15 ft (5.532 m) and 20.0 ft (6.10 m); no flow most of time.
Maximum discharge since at least 1941, about 30,000 ft³/s (850 m³/s) (gage height, 22.8 ft or 6.95 m, from old debris on left bank former site and datum), from rating curve extended above 5,700 ft³/s (161 m³/s) on basis of slope-area measurement at gage height 21.8 ft (6.64 m). Probable date of flood, Oct. 7, 1954.

REMARKS.--Records poor. No surface diversions above station, ground-water withdrawals for 240 acres (971,300 m²), above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | 0 | | 0 | | | | | |
| 2 | | | | | 0 | | 0 | | | | | |
| 3 | | | | | 0 | | 0 | | | | | |
| 4 | | | | | 0 | | 0 | | | | | |
| 5 | | | | | 0 | | 0 | | | | | |
| 6 | | | | | 0 | | 0 | | | | | |
| 7 | | | | | 0 | | 0 | | | | | |
| 8 | | | | | 0 | | 0 | | | | | |
| 9 | | | | | 0 | | 0 | | | | | |
| 10 | | | | | 0 | | 0 | | | | | |
| 11 | | | | | 20 | | .03 | | | | | |
| 12 | | | | | 3.6 | | 0 | | | | | |
| 13 | | | | | 0 | | 9.4 | | | | | |
| 14 | | | | | 0 | | 0 | | | | | |
| 15 | | | | | 0 | | 0 | | | | | |
| 16 | | | | | 0 | | 0 | | | | | |
| 17 | | | | | 0 | | 0 | | | | | |
| 18 | | | | | 0 | | 0 | | | | | |
| 19 | | | | | 0 | | 0 | | | | | |
| 20 | | | | | 0 | | 0 | | | | | |
| 21 | | | | | 0 | | 0 | | | | | |
| 22 | | | | | 0 | | 11 | | | | | |
| 23 | | | | | 0 | | 0 | | | | | |
| 24 | | | | | 0 | | 0 | | | | | |
| 25 | | | | | 0 | | 0 | | | | | |
| 26 | | | | | 0 | | 0 | | | | | |
| 27 | | | | | 0 | | 0 | | | | | |
| 28 | | | | | 0 | | 40 | | | | | |
| 29 | | ------ | | | 0 | | 20 | | | | | |
| 30 | | ------ | | | 0 | | 0 | | | | | |
| 31 | | ------ | | ------ | 0 | ------ | 0 | | ------ | | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | 23.6 | 0 | 80.43 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | .76 | 0 | 2.59 | 0 | 0 | 0 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | 20 | 0 | 40 | 0 | 0 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 47 | 0 | 160 | 0 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 104.03 MEAN .29 MAX 40 MIN 0 AC-FT 206
WTR YR 1973 TOTAL 104.03 MEAN .29 MAX 40 MIN 0 AC-FT 206

PEAK DISCHARGE (BASE, 450 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 7-28 | 2200 | 6.05 | 474 | | | | |

08401500 PECOS RIVER BELOW MAJOR JOHNSON SPRINGS NEAR CARLSBAD, N. MEX.

LOCATION.--Lat 32°31'54", long 104°22'40", in SW¼NW¼NW¼ sec.27, T.20 S., R.26 E., Eddy County, on left bank, at mouth of Willow Draw 2.4 mi (3.9 km) downstream from South Seven Rivers, 4.2 mi (6.8 km) southeast of Seven Rivers, 6.0 mi (9.7 km) south of Lakewood, 11.5 mi (18.5 km) northwest of Carlsbad, and at mile 478.4 (769.7 km).

DRAINAGE AREA.--17,650 mi² (45,710 km²), approximately (contributing area).

PERIOD OF RECORD.--October 1971 to current year (operated as a low-flow station only). Records for January 1947 to September 1950 at site 0.5 mi (0.8 km) upstream not equivalent owing to spring inflow between sites.

GAGE.--Water-stage recorder. Altitude of gage is 3,202 ft (976 m) from topographic map.

EXTREMES.--Current year: Maximum discharge not determined; minimum, 24 ft³/s (0.68 m³/s) Dec. 25.
Period of record: Maximum discharge not determined; minimum, 11 ft³/s (0.31 m³/s) Mar. 26, 1972.

REMARKS.--Records good. Diversions and ground-water withdrawal for irrigation of about 173,000 acres (70,010 hm²), 1959 determination, above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 62 | 63 | 79 | 246 | 258 | 86 | 89 | 50 | 278 | 263 | 36 | 28 |
| 2 | 64 | 64 | 75 | 179 | 608 | 81 | 467 | 49 | 220 | 260 | 35 | 28 |
| 3 | 61 | 63 | 74 | 179 | 868 | 78 | 461 | 102 | 218 | 258 | 34 | 28 |
| 4 | 61 | 61 | 72 | 177 | 748 | 74 | 351 | 207 | 177 | 126 | 34 | 28 |
| 5 | 64 | 59 | 67 | 209 | 656 | 72 | 290 | 209 | 155 | 52 | 34 | 27 |
| 6 | 65 | 59 | 65 | 259 | 699 | 70 | 290 | 209 | 237 | 30 | 34 | 27 |
| 7 | 75 | 61 | 64 | 239 | 703 | 68 | 290 | 228 | 100 | 77 | 34 | 27 |
| 8 | 76 | 81 | 64 | 244 | 818 | 64 | 290 | 334 | 44 | 185 | 33 | 27 |
| 9 | 76 | 67 | 63 | 316 | 1,060 | 215 | 303 | 379 | 42 | 191 | 33 | 26 |
| 10 | 74 | 63 | 68 | 388 | 1,090 | 324 | 379 | 379 | 42 | 193 | 31 | 26 |
| 11 | 76 | 63 | 64 | 359 | 914 | 324 | 288 | 324 | 40 | 176 | 31 | 26 |
| 12 | 76 | 58 | 71 | 337 | 930 | 326 | 228 | 278 | 39 | 166 | 31 | 27 |
| 13 | 80 | 63 | 65 | 334 | 904 | 332 | 177 | 278 | 39 | 168 | 30 | 27 |
| 14 | 82 | 65 | 60 | 334 | 985 | 329 | 174 | 295 | 38 | 149 | 30 | 27 |
| 15 | 82 | 65 | 72 | 332 | 1,280 | 482 | 144 | 402 | 36 | 123 | 30 | 27 |
| 16 | 82 | 65 | 68 | 340 | 1,330 | 581 | 126 | 467 | 35 | 123 | 29 | 26 |
| 17 | 79 | 65 | 66 | 390 | 1,530 | 581 | 235 | 484 | 35 | 149 | 28 | 26 |
| 18 | 79 | 65 | 64 | 388 | 1,690 | 432 | 260 | 390 | 34 | 170 | 28 | 26 |
| 19 | 84 | 68 | 61 | 382 | 1,670 | 506 | 226 | 329 | 34 | 159 | 28 | 26 |
| 20 | 86 | 66 | 60 | 303 | 1,660 | 348 | 201 | 326 | 33 | 90 | 29 | 26 |
| 21 | 77 | 68 | 54 | 242 | 1,660 | 457 | 193 | 326 | 276 | 90 | 29 | 26 |
| 22 | 79 | 80 | 52 | 224 | 1,520 | 457 | 144 | 324 | 278 | 90 | 30 | 26 |
| 23 | 79 | 79 | 49 | 226 | 1,070 | 457 | 101 | 334 | 239 | 90 | 30 | 26 |
| 24 | 77 | 77 | 49 | 228 | 1,060 | 461 | 110 | 385 | 177 | 95 | 30 | 26 |
| 25 | 75 | 77 | 49 | 231 | 1,060 | 262 | 246 | 337 | 123 | 120 | 30 | 26 |
| 26 | 74 | 77 | 47 | 205 | 1,060 | 74 | 285 | 215 | 125 | 105 | 30 | 25 |
| 27 | 84 | 76 | 47 | 179 | 1,060 | 71 | 224 | 153 | 160 | 111 | 30 | 25 |
| 28 | 73 | 75 | 171 | 181 | 1,060 | 69 | 175 | 233 | 256 | 131 | 29 | 26 |
| 29 | 64 | ------ | 378 | 189 | 1,060 | 66 | 156 | 300 | 268 | 193 | 28 | 25 |
| 30 | 65 | ------ | 321 | 256 | 1,060 | 66 | 52 | 298 | 265 | 143 | 28 | 26 |
| 31 | 63 | ------ | 278 | ------ | 738 | ------ | 51 | 292 | ------ | 40 | ------ | 26 |
| TOTAL | 2,294 | 1,893 | 2,837 | 8,076 | 32,809 | 7,813 | 7,006 | 8,936 | 4,041 | 4,296 | 926 | 819 |
| MEAN | 74.0 | 67.6 | 91.5 | 269 | 1,058 | 260 | 226 | 288 | 135 | 139 | 30.9 | 26.4 |
| MAX | 86 | 81 | 378 | 390 | 1,690 | 581 | 467 | 487 | 278 | 263 | 36 | 28 |
| MIN | 61 | 58 | 47 | 177 | 258 | 64 | 51 | 49 | 33 | 30 | 28 | 25 |
| AC-FT | 4,550 | 3,750 | 5,630 | 16,020 | 65,080 | 15,500 | 13,900 | 17,720 | 8,020 | 8,520 | 1,840 | 1,620 |

CAL YR 1973 TOTAL 81,746 MEAN 224 MAX 1,690 MIN 25 AC-FT 162,100
WTR YR 1973 TOTAL 83,970 MEAN 230 MAX 1,690 MIN 33 AC-FT 166,600

## 08401900 ROCKY ARROYO AT HIGHWAY BRIDGE, NEAR CARLSBAD, N. MEX.

LOCATION.--Lat 32°30'23", long 104°22'28", in SE¼SE¼ sec.3, T.21 S., R.25 E., Eddy County, at downstream end of bridge pier nearest left bank on U.S. Highway 285, 2 mi (3.2 km) upstream from mouth, and 10 mi (16.1 km) northwest of Carlsbad.

DRAINAGE AREA.--285 mi (738 km²), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,248 ft (990 m), from topographic map.

AVERAGE DISCHARGE.--10 calendar years, 8.37 ft³/s (0.237 m³/s) 6,060 acre-ft/yr (7.47 hm³/yr).

EXTREMES.--Current year: No flow during year.
Period of record: Maximum discharge, 31,600 ft³/s (895 m³/s) Aug. 23, 1966 (gage height, 15.35 ft or 4.679 m), from rating curve extended above 5,500 ft³/s (156 m³/s) on basis of slope-area measurement of peak flow; no flow most of time.
Since about 1941 the maximum discharge probably occurred Oct. 7, 1954, discharge 63,600 ft³/s (1,800 m³/s) (gage height, 19.2 ft or 5.85 m, from highwater marks on downstream end of bridge pier), by slope-area measurement at site 5 mi (8.0 km) upstream.

REMARKS.--Records fair. Diversions for irrigation of 220 acres (890,300 m²), above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | |
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| 29 | | ------ | | | | | | | | | | |
| 30 | | ------ | | | | | | | | | | |
| 31 | | ------ | | ------ | | ------ | | | ------ | | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 0.00 MEAN 0 MAX 0 MIN 0 AC-FT 0
WTR YR 1973 TOTAL 0.00 MEAN 0 MAX 0 MIN 0 AC-FT 0

PEAK DISCHARGE (BASE, 1,000 CFS).--No peak above base.

## 08402000 PECOS RIVER AT DAMSITE 3, NEAR CARLSBAD, N. MEX.

LOCATION.--Lat 32°30'40", long 104°19'58", in lot 14, sec.6, T.21 S., R.26 E., Eddy County, on right bank at damsite 3 of Carlsbad project of Bureau of Reclamation, about 1 mi (1.6 km) upstream from flow line of Lake Avalon, 1.3 mi (2.1 km) downstream from Rocky Arroyo, and 8 mi (12.9 km) northwest of Carlsbad.

DRAINAGE AREA.--17,980 mi² (46,570 km²), approximately (contributing area).

PERIOD OF RECORD.--August 1939 to December 1940, August 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,171.31 ft (966.615 m) above mean sea level (Bureau of Reclamation datum). Prior to Aug. 10, 1944, at site 1,000 ft (305 m) downstream, at datum 1.00 ft (0.305 m) higher. Aug. 10, 1944, to Dec. 31, 1966, at present site at datum 1.00 ft (0.305 m) higher.

AVERAGE DISCHARGE.--30 calendar years (1940, 1945-73), 166 ft³/s (4.701 m³/s) 120,300 acre-ft/yr (148 hm³/yr); 20 calendar years (1954-73), 164 ft³/s (4.644 m³/s), 118,800 acre-ft/yr (146 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,660 ft³/s (47.0 m³/s) May 19 (gage height, 4.97 ft or 1.515 m); minimum, 24 ft³/s (0.68 m³/s) Dec. 30.

Period of record: Maximum discharge, 69,000 ft³/s (1,950 m³/s) Aug. 23, 1966 (gage height, 21.32 ft or 6.194 m, present datum from floodmark), from rating curve extended above 25,000 ft³/s (708 m³/s) on basis of slope-area measurement at gage height 19.53 ft (5.953 m) present datum; minimum, 4.3 ft³/s (0.12 m³/s) Aug. 5, 1954.

Peaks which probably exceeded 40,000 ft³/s (1,130 m³/s) occurred in August 1893, Oct. 2, 1904, July 25, 1905, Apr. 17, 1915, Aug. 7, 1916, and May 30, 1937, based primarily on records for station "at Carlsbad." Peak of May 22, 1941, was estimated at 60,000 ft³/s (1,700 m³/s). Floods of 1893 and 1904 originated above McMillan Dam and contributed to the two failures of Avalon Dam.

REMARKS.--Records good. Flow regulated by Alamogordo Reservoir and Lake McMillan (see sta 08384000, 08400500). Diversions and ground-water withdrawals for irrigation of about 173,000 acres (70,010 hm²), 1959 determination, above station. Discharge represents inflow to Lake Avalon.

REVISIONS (WATER YEARS).--WSP 1512: 1946-47(M), 1948(P), 1949, 1950(P). WSP 1712: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 58 | 64 | 71 | 253 | 237 | 92 | 62 | 49 | 305 | 269 | 52 | 30 |
| 2 | 61 | 69 | 69 | 164 | 492 | 76 | 441 | 48 | 234 | 269 | 32 | 30 |
| 3 | 56 | 66 | 66 | 164 | 850 | 74 | 492 | 68 | 228 | 266 | 33 | 30 |
| 4 | 58 | 62 | 64 | 164 | 755 | 69 | 379 | 202 | 195 | 161 | 33 | 29 |
| 5 | 61 | 60 | 60 | 185 | 632 | 69 | 302 | 210 | 146 | 40 | 33 | 28 |
| 6 | 64 | 58 | 58 | 228 | 670 | 66 | 302 | 216 | 247 | 34 | 33 | 28 |
| 7 | 71 | 60 | 58 | 225 | 685 | 66 | 298 | 219 | 132 | 54 | 33 | 28 |
| 8 | 74 | 79 | 56 | 225 | 780 | 64 | 298 | 340 | 49 | 177 | 33 | 28 |
| 9 | 74 | 71 | 55 | 291 | 1,030 | 149 | 298 | 402 | 46 | 185 | 33 | 28 |
| 10 | 76 | 64 | 61 | 383 | 1,100 | 326 | 402 | 405 | 66 | 188 | 32 | 28 |
| 11 | 76 | 61 | 61 | 364 | 911 | 329 | 302 | 361 | 54 | 177 | 32 | 27 |
| 12 | 78 | 58 | 62 | 336 | 928 | 329 | 247 | 295 | 44 | 166 | 32 | 26 |
| 13 | 79 | 58 | 55 | 332 | 906 | 329 | 169 | 295 | 42 | 166 | 32 | 28 |
| 14 | 81 | 62 | 50 | 329 | 944 | 329 | 169 | 302 | 49 | 156 | 61 | 28 |
| 15 | 81 | 61 | 64 | 326 | 1,230 | 448 | 149 | 413 | 40 | 123 | 32 | 29 |
| 16 | 79 | 61 | 66 | 329 | 1,510 | 587 | 113 | 526 | 36 | 123 | 32 | 29 |
| 17 | 78 | 61 | 62 | 387 | 1,480 | 591 | 219 | 530 | 35 | 137 | 31 | 29 |
| 18 | 76 | 60 | 58 | 383 | 1,640 | 472 | 259 | 448 | 34 | 164 | 31 | 28 |
| 19 | 79 | 60 | 55 | 379 | 1,640 | 495 | 234 | 357 | 34 | 164 | 29 | 29 |
| 20 | 81 | 61 | 55 | 308 | 1,640 | 354 | 210 | 354 | 32 | 96 | 30 | 28 |
| 21 | 78 | 61 | 48 | 240 | 1,630 | 460 | 210 | 350 | 228 | 89 | 30 | 28 |
| 22 | 76 | 71 | 45 | 216 | 1,550 | 472 | 154 | 350 | 302 | 90 | 31 | 28 |
| 23 | 81 | 74 | 44 | 216 | 1,100 | 472 | 102 | 354 | 247 | 89 | 32 | 27 |
| 24 | 78 | 72 | 44 | 216 | 1,100 | 472 | 98 | 413 | 199 | 87 | 30 | 28 |
| 25 | 76 | 71 | 44 | 219 | 1,090 | 314 | 228 | 383 | 119 | 113 | 30 | 27 |
| 26 | 72 | 71 | 43 | 193 | 1,090 | 72 | 291 | 250 | 117 | 108 | 30 | 28 |
| 27 | 83 | 71 | 40 | 159 | 1,100 | 69 | 240 | 162 | 139 | 98 | 30 | 28 |
| 28 | 81 | 69 | 128 | 156 | 1,100 | 66 | 172 | 226 | 253 | 119 | 30 | 26 |
| 29 | 67 | ------ | 361 | 156 | 1,100 | 64 | 184 | 315 | 282 | 180 | 30 | 27 |
| 30 | 67 | ------ | 319 | 237 | 1,100 | 64 | 54 | 319 | 275 | 157 | 30 | 25 |
| 31 | 64 | ------ | 275 | ------ | 875 | ------ | 49 | 315 | ------ | 45 | ------ | 28 |
| TOTAL | 2,264 | 1,816 | 2,597 | 7,763 | 32,695 | 7,839 | 7,127 | 9,477 | 4,207 | 4,290 | 942 | 868 |
| MEAN | 73.0 | 64.9 | 83.8 | 259 | 1,055 | 261 | 230 | 306 | 140 | 138 | 31.4 | 28.0 |
| MAX | 83 | 79 | 361 | 387 | 1,640 | 591 | 492 | 530 | 305 | 269 | 33 | 30 |
| MIN | 56 | 58 | 40 | 156 | 237 | 64 | 49 | 48 | 32 | 34 | 29 | 25 |
| AC-FT | 4,490 | 3,600 | 5,150 | 15,400 | 64,850 | 15,550 | 14,140 | 18,800 | 8,340 | 8,510 | 1,870 | 1,720 |

CAL YR 1973 TOTAL 81,885 MEAN 224 MAX 1,640 MIN 25 AC-FT 162,400
WTR YR 1973 TOTAL 83,856 MEAN 230 MAX 1,640 MIN 32 AC-FT 166,300

PEAK DISCHARGE (BASE, 1,700 CFS).--No peak above base.

## 08403500 CARLSBAD MAIN CANAL AT HEAD, NEAR CARLSBAD, N. MEX.

LOCATION.--Lat 32°29'25", long 104°15'08", in N½SW¼SW¼ sec.12, T.21 S., R.26 E., Eddy County, on right bank 220 ft (67 m) downstream from headgates in Avalon Dam, and 5.0 mi (8.0 km) north of Carlsbad. Pecos River mile 469.0 (754.6 km).

PERIOD OF RECORD.--July 1939 to current year (monthly discharge only July 1939 to September 1965). January 1941 to March 1951 published in WSP 1732.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,156.50 ft (962.101 m) above mean sea level (Bureau of Reclamation datum). Prior to March 1951 at site 20 ft (6.1 m) upstream at datum 0.9 ft (0.274 m) higher.

AVERAGE DISCHARGE.--34 calendar years, 110 ft³/s (3.115 m³/s), 79,700 acre-ft/yr (98.3 hm³/yr); 20 calendar years (1954-73), 101 ft³/s (2.860 m³/s), 73,170 acre-ft/yr (90.2 hm³/yr).

EXTREMES.--Current year: Maximum daily discharge, 435 ft³/s (12.3 m³/s) Aug. 16; no flow at times.
Period of record: Maximum daily discharge, 526 ft³/s (14.9 m³/s) Sept. 15, 16, 1946; no flow for many days each year.

REMARKS.--Records good. Carlsbad main canal diverts water from Lake Avalon for irrigation of about 25,000 acres (10,120 hm²) of Carlsbad Irrigation District. About 1,600 acres (648 hm²) most of it above gaging station 08405200 Pecos River at Carlsbad, is irrigated on the left bank. The remaining acreage (most of which is downstream from sta 08405200) is on right bank.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 216 | 152 | 222 | 264 | 87 | 220 | 247 | | |
| 2 | 0 | 0 | 0 | 247 | 194 | 187 | 320 | 116 | 156 | 243 | | |
| 3 | 0 | 0 | 0 | 254 | 220 | 162 | 316 | 146 | 164 | 253 | | |
| 4 | 0 | 0 | 0 | 202 | 207 | 162 | 298 | 154 | 162 | 203 | | |
| 5 | 0 | 0 | 0 | 196 | 169 | 189 | 332 | 161 | 222 | 114 | | |
| 6 | 0 | 44 | 0 | 232 | 187 | 268 | 341 | 196 | 229 | 60 | | |
| 7 | 0 | 67 | 0 | 264 | 213 | 241 | 320 | 222 | 129 | 60 | | |
| 8 | 0 | 19 | 0 | 256 | 243 | 264 | 304 | 288 | 90 | 119 | | |
| 9 | 0 | 0 | 0 | 268 | 243 | 228 | 343 | 332 | 69 | 124 | | |
| 10 | 0 | 0 | 0 | 284 | 256 | 198 | 366 | 345 | 51 | 140 | | |
| 11 | 0 | 0 | 0 | 274 | 234 | 236 | 298 | 314 | 21 | 164 | | |
| 12 | 0 | 0 | 0 | 312 | 200 | 236 | 234 | 280 | 0 | 169 | | |
| 13 | 0 | 0 | 0 | 347 | 169 | 251 | 198 | 302 | 28 | 159 | | |
| 14 | 0 | 0 | 0 | 334 | 159 | 258 | 185 | 328 | 31 | 137 | | |
| 15 | 0 | 0 | 0 | 326 | 127 | 251 | 132 | 370 | 0 | 162 | | |
| 16 | 24 | 0 | 0 | 320 | 156 | 224 | 168 | 435 | 0 | 151 | | |
| 17 | 53 | 0 | 0 | 347 | 159 | 226 | 184 | 427 | 0 | 121 | | |
| 18 | 36 | 0 | .08 | 347 | 215 | 266 | 178 | 360 | 22 | 129 | | |
| 19 | 11 | 0 | 71 | 316 | 241 | 320 | 209 | 310 | 87 | 88 | | |
| 20 | .20 | 0 | 157 | 256 | 236 | 334 | 207 | 341 | 127 | 54 | | |
| 21 | 0 | 0 | 189 | 230 | 300 | 339 | 176 | 351 | 213 | 71 | | |
| 22 | 0 | 0 | 230 | 230 | 306 | 314 | 121 | 343 | 164 | 105 | | |
| 23 | 17 | 0 | 253 | 230 | 308 | 245 | 129 | 349 | 146 | 113 | | |
| 24 | 24 | 0 | 260 | 239 | 282 | 236 | 168 | 322 | 159 | 126 | | |
| 25 | 26 | 0 | 224 | 211 | 292 | 314 | 185 | 272 | 218 | 135 | | |
| 26 | 27 | 0 | 237 | 198 | 256 | 360 | 203 | 209 | 205 | 116 | | |
| 27 | 11 | 0 | 276 | 189 | 205 | 412 | 200 | 254 | 232 | 126 | | |
| 28 | 0 | 0 | 258 | 178 | 243 | 383 | 164 | 274 | 209 | 135 | | |
| 29 | 0 | ------ | 262 | 156 | 224 | 341 | 77 | 300 | 226 | 149 | | |
| 30 | 0 | ------ | 241 | 147 | 228 | 296 | 67 | 290 | 224 | 142 | | |
| 31 | 0 | ------ | 241 | ------ | 268 | ------ | 78 | 253 | ------ | 39 | ------ | |
| TOTAL | 229.20 | 130 | 2,879.08 | 7,606 | 6,892 | 7,963 | 6,765 | 8,731 | 3,804 | 4,154 | 0 | 0 |
| MEAN | 7.39 | 4.64 | 92.9 | 254 | 222 | 265 | 218 | 282 | 127 | 134 | 0 | 0 |
| MAX | 53 | 67 | 276 | 347 | 308 | 412 | 366 | 435 | 232 | 253 | 0 | 0 |
| MIN | 0 | 0 | 0 | 147 | 127 | 162 | 67 | 87 | 0 | 39 | 0 | 0 |
| AC-FT | 455 | 258 | 5,710 | 15,090 | 13,670 | 15,790 | 13,420 | 17,320 | 7,550 | 8,240 | 0 | 0 |

CAL YR 1973 TOTAL 49,153.28 MEAN 135 MAX 435 MIN 0 AC-FT 97,500
WTR YR 1973 TOTAL 49,965.28 MEAN 137 MAX 435 MIN 0 AC-FT 99,110

08403800 LAKE AVALON NEAR CARLSBAD, N. MEX.

LOCATION.--Lat 32°29'27", long 104°15'05", in NW¼SW¼ sec.12, T.21 S., R.26 E., Eddy County, on headwall at outlet gate of dam on Pecos River, 5.0 mi (8.0 km) north of Carlsbad, and at mile 469.0 (754.6 km).

DRAINAGE AREA.--18,070 mi² (46,800 km²), approximately (contributing area).

PERIOD OF RECORD.--January 1939 to September 1965 (monthend contents only). October 1965 to current year. Monthend gage heights January 1919 to December 1938 in files of Pecos River Commission.

GAGE.--Nonrecording gage. Datum of gage is 3,157.0 ft (962.25 m) above mean seal level (levels by Bureau of Reclamation).

EXREMES.--Current year: Maximum contents, 5,520 acre-ft (6.8 hm³) May 8, gage height, 20.95 ft (6.386 m); minimum, 406 acre-ft (500,600 m³) Aug. 4.
Period of record: Maximum contents, 11,000 acre-ft (13.6 hm³) May 22, 1941, gage height, 25.0 ft (7.62 m); no storage at times when natural flow was passing through reservoir.

REMARKS.--Lake is formed by Avalon Dam, an earthfill structure. The original Eddy (Avalon) Dam was completed and storage began in 1893. The dam was destroyed by flood of October 1893 (date of reconstruction not available), was destroyed again by flood of Oct. 2, 1904; present dam rebuilt in 1905-6. Capacity, 4,970 acre-ft (6.1 hm³) between gage heights 0.0 (sill of outlet gates) and 20.4 ft (6.22 m), crest of spillway 2. No dead storage. No storage allocated to flood control. Figures given herein represent usable contents and are computed from daily readings at 0800 hours. Water is used by Carlsbad Irrigation District.

COOPERATION.--Capacity table based on data furnished by Carlsbad Irrigation District.

REVISIONS (WATER YEARS).--WSP 898: 1939.

GAGE HEIGHT, IN FEET, AT 0800, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 19.95 | 20.35 | 20.45 | 16.00 | 15.05 | 20.40 | 16.15 | 15.80 | 15.20 | 15.05 | 14.65 | 16.55 |
| 2 | 19.95 | 20.35 | 20.45 | 16.00 | 15.30 | 20.10 | 15.55 | 15.60 | 15.45 | 15.10 | 14.70 | 16.35 |
| 3 | 20.00 | 20.35 | 20.45 | 15.65 | 16.70 | 19.80 | 16.15 | 15.25 | 15.65 | 15.10 | 14.85 | 16.35 |
| 4 | 20.05 | 20.35 | 20.45 | 15.35 | 18.35 | 19.50 | 16.55 | 14.00 | 15.75 | 15.10 | 14.95 | 16.40 |
| 5 | 20.05 | 20.35 | 20.45 | 15.25 | 19.45 | 19.20 | 16.60 | 15.15 | 15.65 | 14.90 | 15.00 | 16.40 |
| 6 | 20.10 | 20.35 | - | 15.15 | 20.55 | 18.75 | 16.40 | 15.25 | 15.35 | 14.65 | 15.10 | 16.40 |
| 7 | 20.20 | 20.20 | - | 15.05 | 20.80 | 18.20 | 16.20 | 15.20 | 15.45 | 14.65 | 15.20 | 16.45 |
| 8 | 20.25 | 20.20 | - | 14.80 | 20.95 | 17.60 | 16.10 | 15.15 | 15.30 | 14.60 | 15.25 | 16.45 |
| 9 | 20.35 | 20.25 | 20.30 | 14.70 | 20.55 | 17.00 | 15.90 | 15.25 | 15.10 | 14.80 | 15.30 | 16.50 |
| 10 | 20.40 | 20.25 | 20.35 | 14.75 | 20.55 | 16.95 | 15.75 | 15.35 | 15.00 | 15.00 | 15.35 | 16.50 |
| 11 | 20.40 | 20.25 | 20.45 | 15.15 | 20.60 | 17.25 | 15.90 | 15.50 | 15.10 | 15.10 | 15.40 | 16.50 |
| 12 | 20.40 | 20.25 | 20.45 | 15.35 | 20.70 | 17.45 | 15.90 | 15.50 | 15.20 | 15.10 | 15.50 | 16.60 |
| 13 | 20.45 | 20.25 | 20.45 | 15.35 | 20.70 | 17.70 | 15.85 | 15.45 | 15.30 | 15.05 | 15.55 | 16.60 |
| 14 | 20.45 | 20.25 | 20.40 | 15.20 | 20.70 | 17.90 | 15.75 | 15.30 | 15.20 | 15.10 | 15.60 | 16.60 |
| 15 | 20.45 | 20.25 | 20.40 | 15.15 | 20.80 | 18.00 | 15.65 | 15.10 | 15.50 | 15.05 | 15.65 | 16.60 |
| 16 | 20.45 | 20.25 | 20.40 | 15.10 | 20.70 | 18.65 | 15.50 | 15.15 | 15.60 | 14.85 | 15.70 | 16.60 |
| 17 | 20.45 | 20.25 | 20.40 | 15.05 | 20.50 | 19.45 | 15.35 | 15.35 | 15.65 | 14.70 | 15.75 | 16.60 |
| 18 | 20.35 | 20.25 | 20.40 | 15.15 | 20.60 | 20.10 | 15.55 | 15.60 | 15.75 | 14.85 | 15.80 | 16.60 |
| 19 | 20.30 | 20.25 | 20.40 | 15.10 | 20.55 | 20.30 | 15.75 | 15.75 | 15.65 | 14.95 | 15.85 | 16.65 |
| 20 | 20.35 | 20.25 | 20.15 | 15.40 | 20.65 | 20.50 | 15.75 | 15.75 | 15.35 | 15.20 | 15.90 | 16.70 |
| 21 | 20.40 | 20.30 | 19.80 | 15.50 | 20.75 | 20.40 | 15.65 | 15.65 | 14.85 | 15.30 | 15.90 | 16.70 |
| 22 | 20.50 | 20.35 | 19.35 | 15.45 | 20.55 | 20.50 | 15.65 | 15.55 | 15.15 | 15.25 | 15.95 | 16.70 |
| 23 | 20.50 | 20.40 | 18.85 | 15.35 | 20.45 | 20.65 | 15.75 | 15.50 | 15.55 | 15.15 | 16.00 | 16.70 |
| 24 | 20.35 | 20.45 | 18.25 | 15.20 | 20.90 | 20.85 | 15.50 | 15.40 | 15.80 | 15.00 | 16.05 | 16.70 |
| 25 | 20.35 | 20.45 | 17.65 | 15.05 | 20.70 | 20.85 | 15.30 | 15.60 | 15.70 | 14.80 | 16.10 | 16.80 |
| 26 | 20.30 | 20.45 | 17.10 | 15.15 | 20.60 | 20.25 | 15.45 | 15.80 | 15.35 | 14.75 | 16.15 | 16.80 |
| 27 | 20.25 | 20.45 | 16.40 | 15.00 | 20.70 | 19.45 | 15.70 | 15.75 | 14.90 | 14.65 | 16.20 | 16.85 |
| 28 | 20.30 | 20.45 | 15.60 | 14.85 | 20.70 | 18.60 | 15.70 | 15.25 | 14.60 | 14.55 | 16.25 | 16.85 |
| 29 | 20.35 | ------ | 15.35 | 14.75 | 20.75 | 17.70 | 15.85 | 15.10 | 14.80 | 14.50 | 16.30 | 16.85 |
| 30 | 20.35 | ------ | 15.75 | 14.80 | 20.80 | 16.90 | 16.15 | 15.00 | 14.95 | 14.60 | 16.35 | 16.90 |
| 31 | 20.35 | ------ | 15.90 | ------ | 20.80 | ------ | 15.95 | 15.05 | ------ | 14.65 | ------ | 16.90 |
| MEAN | 20.30 | 20.31 | - | 15.19 | 20.08 | 19.03 | 15.84 | 15.36 | 15.33 | 14.91 | 15.61 | 16.61 |
| MAX | 20.50 | 20.45 | - | 16.00 | 20.95 | 20.85 | 16.60 | 15.80 | 15.80 | 15.30 | 16.35 | 16.90 |
| MIN | 19.95 | 20.20 | - | 14.70 | 15.05 | 16.90 | 15.30 | 14.00 | 14.60 | 14.50 | 14.65 | 16.35 |

08403800 Lake Avalon near Carlsbad, N. Mex.--Continued

CONTENTS, IN ACRE-FEET, AT 0800, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4,560 | 4,920 | 5,020 | 1,510 | 928 | 4,970 | 1,610 | 1,380 | 1,010 | 928 | 712 | 1,740 |
| 2 | 4,560 | 4,920 | 5,020 | 1,510 | 1,070 | 4,700 | 1,220 | 1,250 | 1,160 | 955 | 738 | 1,740 |
| 3 | 4,610 | 4,920 | 5,020 | 1,280 | 1,980 | 4,430 | 1,610 | 1,040 | 1,280 | 955 | 818 | 1,740 |
| 4 | 4,660 | 4,920 | 5,020 | 1,100 | 3,210 | 4,160 | 1,880 | 406 | 1,350 | 955 | 872 | 1,770 |
| 5 | 4,660 | 4,920 | 5,020 | 1,040 | 4,120 | 3,890 | 1,910 | 982 | 1,280 | 845 | 900 | 1,770 |
| 6 | 4,700 | 4,920 | 4,970 | 982 | 5,120 | 3,530 | 1,770 | 1,040 | 1,100 | 712 | 955 | 1,770 |
| 7 | 4,790 | 4,790 | 4,920 | 928 | 5,370 | 3,090 | 1,640 | 1,010 | 1,160 | 712 | 1,010 | 1,800 |
| 8 | 4,840 | 4,790 | 4,920 | 791 | 5,520 | 2,625 | 1,580 | 982 | 1,070 | 686 | 1,040 | 1,800 |
| 9 | 4,920 | 4,840 | 4,880 | 738 | 5,120 | 2,190 | 1,440 | 1,040 | 955 | 791 | 1,070 | 1,840 |
| 10 | 4,970 | 4,840 | 4,920 | 764 | 5,120 | 2,160 | 1,550 | 1,100 | 900 | 900 | 1,100 | 1,840 |
| 11 | 4,970 | 4,840 | 5,020 | 982 | 5,170 | 2,360 | 1,440 | 1,190 | 955 | 955 | 1,130 | 1,840 |
| 12 | 4,970 | 4,840 | 5,020 | 1,100 | 5,270 | 2,510 | 1,440 | 1,190 | 1,010 | 955 | 1,190 | 1,910 |
| 13 | 5,020 | 4,840 | 5,020 | 1,100 | 5,270 | 2,700 | 1,410 | 1,160 | 1,070 | 928 | 1,220 | 1,910 |
| 14 | 5,020 | 4,840 | 4,970 | 1,010 | 5,270 | 2,850 | 1,550 | 1,070 | 1,010 | 955 | 1,250 | 1,910 |
| 15 | 5,020 | 4,840 | 4,970 | 982 | 5,370 | 2,930 | 1,280 | 955 | 1,190 | 928 | 1,280 | 1,910 |
| 16 | 5,020 | 4,840 | 4,970 | 955 | 5,270 | 3,450 | 1,190 | 982 | 1,250 | 818 | 1,320 | 1,910 |
| 17 | 5,020 | 4,840 | 4,970 | 928 | 5,070 | 4,120 | 1,100 | 1,100 | 1,280 | 738 | 1,350 | 1,910 |
| 18 | 4,920 | 4,840 | 4,970 | 982 | 5,170 | 4,700 | 1,220 | 1,250 | 1,350 | 818 | 1,380 | 1,910 |
| 19 | 4,880 | 4,840 | 4,970 | 955 | 5,120 | 4,880 | 1,350 | 1,350 | 1,280 | 872 | 1,410 | 1,940 |
| 20 | 4,920 | 4,840 | 4,740 | 1,130 | 5,220 | 5,070 | 1,350 | 1,350 | 1,100 | 1,010 | 1,440 | 1,980 |
| 21 | 4,970 | 4,880 | 4,430 | 1,190 | 5,320 | 4,970 | 1,280 | 1,280 | 818 | 1,070 | 1,440 | 1,980 |
| 22 | 5,070 | 4,920 | 4,020 | 1,160 | 5,120 | 5,070 | 1,280 | 1,220 | 982 | 1,040 | 1,480 | 1,980 |
| 23 | 5,070 | 4,970 | 3,610 | 1,100 | 5,020 | 5,220 | 1,350 | 1,190 | 1,220 | 982 | 1,510 | 1,980 |
| 24 | 4,920 | 5,020 | 3,130 | 1,010 | 5,470 | 5,420 | 1,190 | 1,130 | 1,380 | 900 | 1,540 | 1,980 |
| 25 | 4,920 | 5,020 | 2,660 | 928 | 5,270 | 5,420 | 1,070 | 1,250 | 1,315 | 791 | 1,580 | 2,050 |
| 26 | 4,880 | 5,020 | 2,260 | 982 | 5,170 | 4,840 | 1,160 | 1,380 | 1,100 | 764 | 1,610 | 2,050 |
| 27 | 4,840 | 5,020 | 1,770 | 900 | 5,270 | 4,120 | 1,320 | 1,350 | 845 | 712 | 1,640 | 2,080 |
| 28 | 4,880 | 5,020 | 1,250 | 818 | 5,270 | 3,410 | 1,320 | 1,040 | 686 | 661 | 1,670 | 2,080 |
| 29 | 4,920 | ------ | 1,100 | 764 | 5,320 | 2,700 | 1,410 | 955 | 791 | 636 | 1,700 | 2,080 |
| 30 | 4,920 | ------ | 1,350 | 791 | 5,370 | 2,120 | 1,610 | 900 | 872 | 686 | 1,740 | 2,120 |
| 31 | 4,920 | ------ | 1,440 | ------ | 5,370 | ------ | 1,480 | 928 | ------ | 712 | ------ | 2,120 |
| (†) | +400 | +100 | -3,580 | -649 | +4,580 | -3,250 | -640 | -552 | -56 | -160 | +1,030 | +380 |
| MAX | 5,070 | 5,020 | 5,020 | 1,510 | 5,520 | 5,420 | 1,910 | 1,380 | 1,380 | 1,070 | 1,740 | 2,120 |
| MIN | 4,560 | 4,790 | 1,100 | 738 | 928 | 2,120 | 1,070 | 406 | 686 | 636 | 712 | 1,740 |

CAL YR 1973 MAX 5,520 MIN 406 CHANGE IN CONTENTS -2,400
WTR YR 1973 MAX 5,520 MIN 406 CHANGE IN CONTENTS -1,320

† Change in contents, in acre-feet.

## 08404000 PECOS RIVER BELOW AVALON DAM, N. MEX.

LOCATION.--Lat 32°28'55", long 104°15'47", in SW¼SW¼NE¼ sec.14, T.21 S., R.26 E., Eddy County, on right bank 4,800 ft (1,460 m) below Avalon Dam, 4.5 mi (7.2 km) northwest of Carlsbad, and at mile 468.1 (753.2 km).

DRAINAGE AREA.--18,080 mi² (46,830 km²), approximately (contributing area).

PERIOD OF RECORD.--January 1906 to March 1907, (published as "at Avalon"), June 1951 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,130 ft (954 m), from topographic map. January 1906 to March 1907 non-recording gage at site 0.5 mi (0.8 km) upstream at different datum.

AVERAGE DISCHARGE.--22 calendar years (1952-73) 35.3 ft³/s (1.00 m³/s) 25,570 acre-ft/yr (31.5 km³/yr); 20 calendar years (1954-73), 38.8 ft³/s (1.10 m³/s), 28,110 acre-ft/yr (34.7 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,500 ft³/s (42.5 m³/s) May 17 (gage height, 7.35 ft or 2.240 m); no flow most of time.
Period of record: Maximum discharge, 55,500 ft³/s (1,570 m³/s) Aug. 23, 1966 (gage height, 26.4 ft or 8.05 m, from floodmarks), from rating curve extended above 33,000 ft³/s (935 m³/s) on basis of computation of peak flow over Tansill Dam 5.8 mi (9.3 km) downstream; no flow most of time.
Flood of Oct. 2, 1904, caused in part, by failure of Avalon Dam, probably excedded 90,000 ft³/s (2,550 m³/s) and is probably greatest flood since 1842. Flood of August 1893 is probably the second highest, and was described as "greatest in 50 years"; it damaged McMillan Dam and washed out the original Avalon Dam.

REMARKS.--Records good. Flow regulated by Alamogordo Reservoir, Lake McMillan, and Lake Avalon (see sta 08384000, 08400500, 08403800). Diversions and ground-water withdrawals above station for irrigation of about 198,000 acres (80,130 hm²), 1959 determination. Station bypassed by Carlsbad main canal (see sta 08403500).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 2.0 | | 0 | 26 | | | | | | |
| 2 | 0 | 0 | 1.4 | | 0 | .60 | | | | | | |
| 3 | 0 | 0 | .75 | | 0 | .16 | | | | | | |
| 4 | 0 | 0 | .32 | | 0 | 0 | | | | | | |
| 5 | 0 | 0 | 0 | | 0 | 0 | | | | | | |
| 6 | 0 | 0 | 0 | | 65 | 0 | | | | | | |
| 7 | 0 | 0 | 0 | | 330 | 0 | | | | | | |
| 8 | 0 | 0 | 0 | | 735 | 0 | | | | | | |
| 9 | 0 | 0 | 0 | | 654 | 0 | | | | | | |
| 10 | 0 | 0 | 0 | | 910 | 0 | | | | | | |
| 11 | 0 | 0 | 0 | | 684 | 0 | | | | | | |
| 12 | 0 | 0 | 0 | | 706 | 0 | | | | | | |
| 13 | .04 | 0 | 0 | | 743 | 0 | | | | | | |
| 14 | 7.3 | 0 | 0 | | 767 | 0 | | | | | | |
| 15 | 13 | 0 | 0 | | 1,030 | 0 | | | | | | |
| 16 | 14 | 0 | 0 | | 1,240 | 0 | | | | | | |
| 17 | 2.0 | 0 | 0 | | 1,250 | 0 | | | | | | |
| 18 | .05 | 0 | 0 | | 1,440 | 0 | | | | | | |
| 19 | 0 | 0 | 0 | | 1,380 | 0 | | | | | | |
| 20 | 0 | 0 | 0 | | 1,300 | 6.8 | | | | | | |
| 21 | 0 | 0 | 0 | | 1,380 | 4.3 | | | | | | |
| 22 | 0 | 0 | 0 | | 1,170 | 38 | | | | | | |
| 23 | 0 | 0 | 0 | | 713 | 99 | | | | | | |
| 24 | 0 | 0 | 0 | | 842 | 149 | | | | | | |
| 25 | 0 | 0 | 0 | | 816 | 111 | | | | | | |
| 26 | 0 | 0 | 0 | | 792 | 3.5 | | | | | | |
| 27 | 0 | .08 | 0 | | 816 | .07 | | | | | | |
| 28 | 0 | .52 | 0 | | 804 | 0 | | | | | | |
| 29 | 0 | ------ | 0 | | 816 | 0 | | | | | | |
| 30 | 0 | ------ | 0 | | 836 | 0 | | | | | | |
| 31 | 0 | ------ | 0 | ------ | 682 | ------ | | | ------ | | ------ | |
| TOTAL | 36.39 | .60 | 4.47 | 0 | 22,901 | 438.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 1.17 | .021 | .14 | 0 | 739 | 14.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX | 14 | .52 | 2.0 | 0 | 1,440 | 149 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 72 | 1.2 | 8.9 | 0 | 45,420 | 870 | 0 | 0 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 23,380.89 MEAN 64.1 MAX 1,440 MIN 0 AC-FT 46,380
WTR YR 1973 TOTAL 23,380.89 MEAN 64.1 MAX 1,440 MIN 0 AC-FT 46,380

08405150 DARK CANYON AT CARLSBAD, N. MEX.

LOCATION.--Lat 32°24'24", long 104°13'34", in NE¼NW¼SE¼ sec.7, T.22 S., R.27 E., Eddy County, in downstream side of U.S. Highway 285 (Canal Street) bridge in Carlsbad, and 0.6 mi (1.0 km) upstream from mouth.

DRAINAGE AREA.--451 mi² (1,168 km²), approximately.

PERIOD OF RECORD.--January to December 1973.

GAGE.--Water-stage recorder. Elevation of gage 3,109.10 ft (947.654 m) above mean sea level.

EXTREMES.--No flow during year. The flood of Aug. 23, 1966, reached a discharge of 66,000 ft³/s (1,870 m³/s) as determined by slope-area method at site 1.2 mi (1.9 km) upstream. Another flood of approximately the same magnitude occurred Sept. 20, 1941. Other major peaks occurred July 17, 1906, July 24, 1908, July 24, 1911, Apr. 18, 1915, Aug. 8, 1916, Sept. 15, 1919, Aug. 4, 1925, and May 23, 1941.

REMARKS.--Records good. A Soil Conservation Service flood control project on Hackberry Draw, an upstream tributary, has some effect on flood peaks and flow duration. Ground-water withdrawals above station for irrigation of approximately 2,100 acres (850 hm²), 1973 determination, and for municipal supply for Carlsbad.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| 30 | | ------ | | | | | | | | | | |
| 31 | | ------ | | ------ | | ------ | | | ------ | | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 0 MEAN 0 MAX 0 MIN 0 AC-FT 0

PEAK DISCHARGE (BASE, 500 CFS).--No peak above base.

08405200 PECOS RIVER BELOW DARK CANYON, AT CARLSBAD, N. MEX.

LOCATION.--Lat 32°24'37", long 104°12'58", in NE¼SW¼NW¼ sec.8, T.22 S., R.27 E., Eddy County, on left bank, 700 ft (210 m) downstream from mouth of Dark Canyon, 0.3 mi (0.5 km) downstream from lower Tansill Dam and Bataan recreational area, 0.8 mi (1.3 km) downstream from bridge on U.S. Highway 62-180 in Carlsbad, and at mile 459.0 (738.5 km).

DRAINAGE AREA.--18,550 mi² (48,040 km²), approximately (contributing area).

PERIOD OF RECORD.--January 1970 to current year. No inflow from Dark Canyon during year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,075.19 ft (937.318 m) above mean sea level.

EXTREMES.--Current year: Maximum discharge, 1,430 ft³/s (40.5 m³/s) May 20 (gage height, 3.36 ft or 0.10 m³/s); minimum 0.47 ft³/s (0.013 m³/s).
Period of record: Maximum discharge, 4,020 ft³/s (114 m³/s) Sept. 10, 1972 (gage height, 5.60 ft or 1.707 m); no flow at times. The flood of Aug. 23, 1966, reached a stage of about 22 ft (6.7 m), discharge not determined. (For dates of other historical floods see sta 08404000.)

REMARKS.--Records good. Flow regulated by Alamogordo Reservoir, Lake McMillan, and Lake Avalon (see sta 08384000, 08400500, 08403800), and at low stages by power plant above station. Gage is bypassed on left bank by Carlsbad main canal east which irrigates several hundred acres adjacent to and below gage site, and on right bank by Carlsbad main canal south, which with supplemental ground-water withdrawals irrigates about 23,000 acres (9,310 hm²) below. Diversions and ground-water withdrawals above station for irrigation of about 198,000 acres (80,130 hm²), 1959 determination. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 21 | 18 | 28 | 25 | 21 | 101 | 31 | 22 | 17 | 17 | 15 | 16 |
| 2 | 24 | 24 | 28 | 25 | 21 | 37 | 31 | 21 | 17 | 17 | 14 | 17 |
| 3 | 22 | 24 | 26 | 24 | 22 | 41 | 28 | 22 | 18 | 17 | 13 | 17 |
| 4 | 19 | 25 | 25 | 26 | 22 | 49 | 28 | 22 | 39 | 17 | 14 | 17 |
| 5 | 19 | 25 | 25 | 25 | 24 | 39 | 84 | 21 | 41 | 29 | 13 | 16 |
| 6 | 28 | 22 | 24 | 26 | 25 | 9.2 | 3.8 | 21 | .93 | 18 | 14 | 14 |
| 7 | 25 | 30 | 25 | 31 | 267 | 24 | 1.2 | 21 | 12 | 19 | 16 | 15 |
| 8 | 24 | 33 | 26 | 19 | 656 | 25 | 3.8 | 22 | 19 | 19 | 13 | 13 |
| 9 | 22 | 24 | 25 | 24 | 535 | 25 | 25 | 21 | 19 | 26 | 14 | 14 |
| 10 | 22 | 25 | 39 | 25 | 920 | 25 | 31 | 21 | 27 | 21 | 14 | 13 |
| 11 | 21 | 26 | 28 | 24 | 584 | 25 | 31 | 19 | 21 | 20 | 16 | 14 |
| 12 | 21 | 25 | 30 | 24 | 655 | 28 | 31 | 19 | 21 | 22 | 16 | 14 |
| 13 | 22 | 24 | 30 | 24 | 677 | 33 | 28 | 19 | 19 | 19 | 17 | 13 |
| 14 | 22 | 25 | 28 | 25 | 716 | 28 | 28 | 19 | 32 | 15 | 17 | 13 |
| 15 | 22 | 25 | 28 | 24 | 892 | 29 | 25 | 18 | 30 | 15 | 14 | 13 |
| 16 | 26 | 24 | 28 | 21 | 1,190 | 24 | 25 | 13 | 21 | 15 | 14 | 13 |
| 17 | 30 | 25 | 28 | 22 | 1,170 | 26 | 25 | 12 | 19 | 15 | 16 | 14 |
| 18 | 25 | 26 | 41 | 25 | 1,390 | 25 | 30 | 11 | 19 | 14 | 14 | 17 |
| 19 | 25 | 26 | 88 | 19 | 1,320 | 24 | 26 | 11 | 21 | 14 | 19 | 10 |
| 20 | 30 | 24 | 49 | 24 | 1,210 | 22 | 25 | 14 | 21 | 15 | 11 | 10 |
| 21 | 25 | 31 | 33 | 28 | 1,370 | 24 | 25 | 14 | 21 | 15 | 14 | 11 |
| 22 | 25 | 39 | 26 | 28 | 1,150 | 33 | 33 | 13 | 21 | 15 | 14 | 13 |
| 23 | 26 | 28 | 74 | 25 | 749 | 104 | 25 | 13 | 19 | 15 | 14 | 16 |
| 24 | 26 | 28 | 51 | 28 | 774 | 164 | 24 | 12 | 19 | 15 | 16 | 12 |
| 25 | 25 | 28 | 47 | 26 | 776 | 160 | 24 | 14 | 18 | 13 | 16 | 14 |
| 26 | 28 | 28 | 27 | 26 | 752 | 52 | 21 | 16 | 19 | 13 | 16 | 12 |
| 27 | 24 | 28 | 5.1 | 25 | 783 | 28 | 19 | 16 | 16 | 13 | 17 | 13 |
| 28 | 19 | 28 | 18 | 26 | 776 | 26 | 21 | 16 | 18 | 12 | 12 | 16 |
| 29 | 24 | ------ | 1.8 | 28 | 783 | 31 | 53 | 17 | 18 | 13 | 14 | 12 |
| 30 | 22 | ------ | 13 | 25 | 796 | 31 | 25 | 14 | 17 | 17 | 16 | 15 |
| 31 | 25 | ------ | 24 | ------ | 738 | ------ | 24 | 19 | ------ | 15 | ------ | 9.4 |
| TOTAL | 739 | 738 | 968.9 | 747 | 21,764 | 1,292.2 | 834.8 | 533 | 619.93 | 520 | 443 | 426.4 |
| MEAN | 23.8 | 26.4 | 31.3 | 24.9 | 702 | 43.1 | 26.9 | 17.2 | 20.7 | 16.8 | 14.8 | 13.8 |
| MAX | 30 | 39 | 88 | 31 | 1,390 | 164 | 84 | 22 | 41 | 29 | 19 | 17 |
| MIN | 19 | 18 | 1.8 | 19 | 21 | 9.2 | 1.2 | 11 | .93 | 12 | 11 | 9.4 |
| AC-FT | 1,470 | 1,460 | 1,920 | 1,480 | 43,170 | 2,560 | 1,660 | 1,060 | 1,230 | 1,030 | 879 | 846 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CAL YR 1973 | TOTAL | 29,626.23 | MEAN | 81.2 | MAX | 1,390 | MIN | .93 | AC-FT | 58,760 |
| WTR YR 1973 | TOTAL | 30,228.83 | MEAN | 82.8 | MAX | 1,390 | MIN | .93 | AC-FT | 59,960 |

## 08405500 BLACK RIVER ABOVE MALAGA, N. MEX.

LOCATION.--Lat 32°13'44", long 104°09'02", in SW¼NW¼SW¼ sec.12, T.24 S., R.27 E., Eddy County, on right bank 0.6 mi (1.0 km) upstream from Black River diversion dam, 4.6 mi (7.4 km) west of Malaga, and 7.8 mi (12.6 km) upstream from mouth.

DRAINAGE AREA.--343 mi² (888 km²).

PERIOD OF RECORD.--March to December 1940, December 1946 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,070 ft (936 m), from topographic map. March to December 1940 water-stage recorder and Cippoletti weir at site 0.3 mi (0.5 km) downstream at different datum.

AVERAGE DISCHARGE.--27 calendar years (1947-73), 14.1 ft³/s (0.399 m³/s), 10,220 acre-ft/yr (12.6 hm³/yr); 20 calendar years (1954-73), 14.6 ft³/s (0.413 m³/s), 10,580 acre-ft/yr (13.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 592 ft³/s (16.8 m³/s) July 29 (gage height, 3.12 ft or 0.951 m); minimum, 2.2 ft³/s (0.062 m³/s) May 30, 31.

Period of record: Maximum discharge, 74,600 ft³/s (2,110 m³/s) Aug. 23, 1966 (gage height, 21.7 ft or 6.61 m, from floodmarks), from rating curve extended above 6,000 ft³/s (170 m³/s) on basis of slope-area measurements at gage heights 12.60 and 21.7 ft (3.840 and 6.61 m); minimum, 0.73 ft³/s (0.021 m³/s) June 25, 1969.

The flood of Aug. 23, 1966, exceeded the previous maximum stage which occurred in 1908 by about 1.0 ft (0.30 m), information from local resident. Flood of Sept. 20 or 21, 1941, reached a stage of 19.0 ft (5.79 m), determined in 1947 from well-defined floodmarks, discharge, 33,000 ft³/s (935 m³/s), from rating curve extended above 1,400 ft³/s (39.6 m³/s) on basis of slope-area measurements at gage heights 8.41 and 12.60 ft (2.563 and 3.840 m).

REMARKS.--Records good. Diversions and ground-water withdrawals for irrigation of about 1,000 acres (405 hm²), 1959 determination, above station.

REVISIONS (WATER YEARS).--WSP 1632: 1948, 1949-50(P).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.6 | 12 | 6.2 | 5.6 | 8.7 | 3.8 | 5.6 | 6.9 | 5.4 | 7.2 | 4.5 | 7.2 |
| 2 | 7.2 | 12 | 6.6 | 8.7 | 8.7 | 6.6 | 5.4 | 6.6 | 5.1 | 7.6 | 4.0 | 7.6 |
| 3 | 6.9 | 12 | 6.2 | 9.1 | 8.7 | 6.9 | 5.4 | 5.9 | 5.1 | 7.2 | 4.0 | 7.6 |
| 4 | 6.6 | 12 | 5.9 | 9.1 | 8.3 | 6.2 | 5.4 | 5.4 | 4.8 | 5.9 | 4.0 | 7.6 |
| 5 | 6.6 | 12 | 5.9 | 9.1 | 8.3 | 6.2 | 5.4 | 5.4 | 4.5 | 6.2 | 4.3 | 7.6 |
| 6 | 6.6 | 12 | 6.2 | 9.5 | 8.3 | 6.2 | 5.4 | 5.4 | 4.5 | 6.2 | 4.8 | 7.6 |
| 7 | 6.6 | 11 | 9.1 | 9.9 | 8.0 | 6.6 | 5.4 | 5.6 | 5.6 | 5.6 | 5.9 | 7.6 |
| 8 | 6.6 | 9.9 | 10 | 9.5 | 7.6 | 6.6 | 5.1 | 5.1 | 5.9 | 4.8 | 6.2 | 7.6 |
| 9 | 6.2 | 7.6 | 11 | 9.5 | 7.6 | 6.9 | 5.1 | 5.4 | 5.9 | 4.3 | 6.2 | 7.6 |
| 10 | 5.9 | 6.9 | 11 | 9.9 | 7.6 | 6.9 | 5.4 | 6.6 | 5.9 | 3.8 | 6.6 | 8.0 |
| 11 | 5.9 | 6.6 | 11 | 10 | 8.0 | 7.2 | 5.6 | 5.9 | 5.9 | 3.5 | 6.6 | 8.0 |
| 12 | 5.9 | 6.6 | 10 | 10 | 9.1 | 7.2 | 7.2 | 5.4 | 5.6 | 3.3 | 6.9 | 8.0 |
| 13 | 5.9 | 6.2 | 7.2 | 10 | 8.0 | 8.0 | 6.6 | 5.1 | 5.4 | 3.3 | 6.9 | 8.0 |
| 14 | 5.9 | 5.9 | 5.6 | 10 | 8.7 | 7.2 | 6.2 | 4.8 | 21 | 3.3 | 6.9 | 8.3 |
| 15 | 5.9 | 5.9 | 5.4 | 10 | 9.1 | 7.2 | 6.2 | 4.8 | 82 | 3.3 | 6.9 | 8.3 |
| 16 | 5.9 | 5.9 | 5.4 | 9.5 | 9.1 | 6.9 | 5.9 | 4.8 | 39 | 3.1 | 6.9 | 8.7 |
| 17 | 5.6 | 5.6 | 5.6 | 9.5 | 9.1 | 6.9 | 5.9 | 4.8 | 20 | 2.8 | 6.9 | 7.2 |
| 18 | 5.6 | 5.9 | 5.6 | 9.5 | 8.0 | 6.6 | 5.9 | 4.5 | 9.1 | 2.8 | 6.9 | 5.1 |
| 19 | 5.6 | 5.9 | 5.6 | 9.1 | 7.6 | 6.6 | 6.2 | 4.5 | 6.6 | 3.3 | 6.9 | 4.0 |
| 20 | 5.9 | 5.9 | 5.4 | 8.7 | 7.6 | 6.2 | 6.6 | 4.5 | 5.4 | 3.5 | 6.9 | 3.8 |
| 21 | 5.9 | 6.6 | 4.5 | 9.1 | 8.0 | 6.2 | 6.2 | 4.5 | 5.6 | 3.5 | 6.9 | 3.5 |
| 22 | 5.9 | 7.9 | 3.8 | 9.1 | 8.0 | 6.2 | 6.9 | 4.5 | 5.6 | 3.5 | 6.9 | 3.5 |
| 23 | 9.1 | 7.6 | 3.5 | 9.1 | 7.6 | 6.2 | 6.2 | 4.5 | 5.6 | 3.5 | 6.9 | 3.5 |
| 24 | 11 | 7.2 | 3.5 | 9.1 | 7.2 | 6.2 | 6.2 | 4.5 | 5.4 | 3.8 | 7.2 | 3.5 |
| 25 | 11 | 6.6 | 3.5 | 10 | 7.2 | 6.6 | 5.9 | 4.3 | 5.1 | 3.8 | 7.2 | 3.5 |
| 26 | 11 | 6.6 | 3.5 | 13 | 6.9 | 5.9 | 5.6 | 4.3 | 5.1 | 3.8 | 7.6 | 4.0 |
| 27 | 11 | 6.2 | 3.5 | 9.9 | 5.1 | 5.9 | 5.4 | 4.3 | 5.4 | 4.0 | 7.6 | 4.5 |
| 28 | 11 | 6.2 | 3.3 | 9.5 | 3.3 | 5.6 | 5.9 | 4.5 | 6.2 | 4.0 | 7.2 | 4.5 |
| 29 | 11 | ------ | 3.3 | 9.5 | 2.6 | 5.6 | 102 | 4.5 | 6.6 | 4.0 | 7.2 | 4.5 |
| 30 | 11 | ------ | 3.3 | 9.5 | 2.2 | 5.6 | 25 | 4.8 | 6.9 | 4.0 | 7.2 | 4.5 |
| 31 | 12 | ------ | 3.3 | ------ | 2.2 | ------ | 9.1 | 5.4 | ------ | 4.3 | ------ | 4.5 |
| TOTAL | 234.8 | 222.7 | 183.9 | 284.0 | 226.4 | 192.9 | 300.3 | 157.5 | 310.2 | 133.2 | 190.9 | 189.4 |
| MEAN | 7.57 | 7.95 | 5.93 | 9.47 | 7.30 | 6.43 | 9.69 | 5.08 | 10.3 | 4.30 | 6.36 | 6.11 |
| MAX | 12 | 12 | 11 | 13 | 9.1 | 8.0 | 102 | 6.9 | 82 | 7.6 | 7.6 | 8.7 |
| MIN | 5.6 | 5.6 | 3.3 | 5.6 | 2.2 | 3.8 | 5.1 | 4.3 | 4.5 | 2.8 | 4.0 | 3.5 |
| AC-FT | 466 | 442 | 365 | 563 | 449 | 383 | 596 | 312 | 615 | 264 | 379 | 376 |

CAL YR 1973 TOTAL 2,626.2 MEAN 7.20 MAX 102 MIN 2.2 AC-FT 5,210
WTR YR 1973 TOTAL 2,837.0 MEAN 7.77 MAX 102 MIN 2.2 AC-FT 5,630

PEAK DISCHARGE (BASE, 450 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 7-29 | 0930 | 3.12 | 592 | | | | |

## 08406500 PECOS RIVER NEAR MALAGA, N. MEX.

LOCATION.--Lat 32°12'26", long 104°01'22", in SW¼NW¼NE¼ sec.19, T.24 S., R.29 E., Eddy County, on right bank 3.1 mi (5.0 km) southeast of Malaga, 4.3 mi (6.9 km) downstream from Black River, and at mile 432.0 (695.1 km).

DRAINAGE AREA.--19,190 mi² (49,700 km²), approximately (contributing area).

PERIOD OF RECORD.--May 1920 to current year. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder. Datum of gage is 2,895.64 ft (882.591 m) above mean sea level. May 1, 1920, to Mar. 24, 1949, at datum 3 ft (0.91 m) higher.

AVERAGE DISCHARGE.--16 calendar years (1921-36), 271 ft³/s (7.675 m³/s), 196,300 acre-ft/yr (242 hm³/yr), prior to completion of Alamogordo Reservoir; 37 calendar years (1937-73) 198 ft³/s (5.607 m³/s), 143,500 acre-ft/yr (177 hm³/yr); 20 calendar years (1954-73), 92.9 ft³/s (2.631 m³/s), 67,310 acre-ft/yr (83.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,680 ft³/s (47.6 m³/s) May 21 (gage height, 8.49 ft or 2.588 m); minimum, 18 ft³/s (0.51 m³/s) Apr. 2.

Period of record: Maximum discharge, 120,000 ft³/s (3,400 m³/s) Aug. 23, 1966 (gage height, 42.1 ft or 12.83 m, from floodmarks), from rating curve extended above 36,000 ft³/s (1,020 m³/s), on basis of slope-area measurement at gage height 42.1 ft (12.83 m); minimum, 5.0 ft³/s (0.14 m³/s) Mar. 9, 1965.

The flood of Aug. 23, 1966, exceeded all known floods at this location. A major flood occurred in 1904, discharge not determined. Flood of Aug. 7, 1916, reached a discharge of 70,000 ft³/s (1,980 m³/s) at Carlsbad, 27 mi (43.4 km) upstream. Flood in September 1919 reached a stage of 29.4 ft (8.96 m), present datum, discharge, 40,400 ft³/s (1,140 m³/s).

REMARKS.--Records good except those above 500 ft³/s (14.2 m³/s), which are poor. Flow regulated by storage in Alamogordo Reservoir, Lake McMillan, and Lake Avalon (see sta 08384000, 08400500, 08403800), and by small diversion dams that divert for power or irrigation. Diversions and ground-water withdrawals above station for irrigation of about 202,000 acres (81,800 hm²), 1959 determination. Harroun canal bypasses gage on left bank and irrigates approximately 1,000 acres (405 hm²) adjacent to and below gage. This bypass is not gaged. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1632: 1925, 1932-37.

### DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 46 | 42 | 38 | 22 | 36 | 639 | 34 | 44 | 64 | 54 | 41 | 49 |
| 2 | 43 | 40 | 41 | 20 | 29 | 191 | 40 | 38 | 46 | 69 | 43 | 51 |
| 3 | 46 | 32 | 42 | 26 | 31 | 125 | 45 | 38 | 38 | 57 | 47 | 51 |
| 4 | 48 | 31 | 39 | 24 | 91 | 105 | 41 | 41 | 34 | 45 | 49 | 52 |
| 5 | 48 | 31 | 39 | 20 | 96 | 99 | 34 | 35 | 33 | 49 | 48 | 52 |
| 6 | 46 | 32 | 40 | 21 | 75 | 92 | 37 | 36 | 46 | 56 | 49 | 50 |
| 7 | 49 | 32 | 41 | 22 | 51 | 87 | 67 | 46 | 63 | 64 | 50 | 50 |
| 8 | 50 | 37 | 38 | 22 | 59 | 72 | 44 | 44 | 43 | 56 | 51 | 49 |
| 9 | 48 | 44 | 39 | 26 | 726 | 54 | 35 | 42 | 34 | 56 | 53 | 46 |
| 10 | 44 | 41 | 46 | 24 | 855 | 53 | 26 | 39 | 38 | 52 | 52 | 46 |
| 11 | 43 | 34 | 57 | 33 | 704 | 51 | 26 | 40 | 42 | 47 | 52 | 46 |
| 12 | 44 | 31 | 60 | 41 | 683 | 52 | 32 | 41 | 32 | 44 | 53 | 45 |
| 13 | 45 | 32 | 48 | 33 | 671 | 51 | 43 | 55 | 28 | 40 | 52 | 46 |
| 14 | 43 | 33 | 51 | 25 | 796 | 53 | 42 | 47 | 33 | 54 | 52 | 46 |
| 15 | 43 | 29 | 51 | 29 | 860 | 57 | 53 | 41 | 91 | 60 | 51 | 44 |
| 16 | 43 | 27 | 46 | 28 | 1,260 | 57 | 48 | 39 | 52 | 56 | 50 | 44 |
| 17 | 42 | 27 | 45 | 27 | 1,280 | 53 | 36 | 34 | 61 | 54 | 49 | 44 |
| 18 | 42 | 28 | 42 | 26 | 1,520 | 49 | 35 | 34 | 51 | 50 | 50 | 44 |
| 19 | 40 | 29 | 41 | 22 | 1,600 | 54 | 35 | 32 | 47 | 46 | 50 | 45 |
| 20 | 35 | 29 | 62 | 35 | 1,370 | 49 | 45 | 32 | 47 | 46 | 50 | 43 |
| 21 | 34 | 30 | 74 | 49 | 1,580 | 46 | 41 | 32 | 46 | 45 | 52 | 43 |
| 22 | 35 | 37 | 56 | 34 | 1,480 | 44 | 39 | 35 | 46 | 45 | 49 | 42 |
| 23 | 34 | 55 | 46 | 32 | 1,150 | 38 | 50 | 34 | 45 | 47 | 49 | 43 |
| 24 | 34 | 53 | 36 | 44 | 667 | 56 | 43 | 32 | 45 | 48 | 51 | 46 |
| 25 | 36 | 44 | 69 | 37 | 936 | 126 | 39 | 38 | 48 | 50 | 52 | 47 |
| 26 | 37 | 41 | 58 | 33 | 814 | 203 | 34 | 41 | 48 | 46 | 53 | 43 |
| 27 | 39 | 41 | 54 | 40 | 827 | 167 | 33 | 28 | 49 | 46 | 52 | 43 |
| 28 | 40 | 38 | 61 | 35 | 841 | 71 | 33 | 28 | 42 | 45 | 52 | 43 |
| 29 | 37 | ------ | 45 | 32 | 855 | 46 | 66 | 27 | 43 | 48 | 52 | 43 |
| 30 | 37 | ------ | 32 | 31 | 864 | 35 | 129 | 28 | 49 | 45 | 48 | 45 |
| 31 | 37 | ------ | 31 | ------ | 883 | ------ | 66 | 56 | ------ | 43 | ------ | 43 |
| TOTAL | 1,288 | 1,000 | 1,468 | 893 | 23,690 | 2,875 | 1,371 | 1,177 | 1,384 | 1,563 | 1,502 | 1,424 |
| MEAN | 41.5 | 35.7 | 47.4 | 29.8 | 764 | 95.8 | 44.2 | 38.0 | 46.1 | 50.4 | 50.1 | 45.9 |
| MAX | 50 | 55 | 74 | 49 | 1,600 | 639 | 129 | 56 | 91 | 69 | 53 | 52 |
| MIN | 34 | 27 | 31 | 20 | 29 | 35 | 26 | 27 | 28 | 40 | 41 | 42 |
| AC-FT | 2,550 | 1,980 | 2,910 | 1,770 | 46,990 | 5,700 | 2,720 | 2,330 | 2,750 | 3,100 | 2,980 | 2,820 |

CAL YR 1973 TOTAL 39,635 MEAN 109 MAX 1,600 MIN 20 AC-FT 78,620
WTR YR 1973 TOTAL 38,911 MEAN 107 MAX 1,600 MIN 20 AC-FT 77,180

PEAK DISCHARGE (BASE, 1,800 CFS).--No peak above base.

## 08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, N MEX.

LOCATION.--Lat 32°11'19", long 103°58'43", in SW¼SW¼NW¼ sec.27, T.24 S., R.29 E., Eddy County, on right bank 550 ft (168 m) upstream from Pierce Canyon Crossing, and 6 mi (9.7 km) southeast of Malaga.

DRAINAGE AREA.--19,260 mi² (49,880 km²), approximately (contributing area).

PERIOD OF RECORD.--July 1938 to September 1941, August 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,889.18 ft (880.622 m) above mean sea level. July 1938 to September 1941 at datum 1.19 ft (0.363 m) higher.

AVERAGE DISCHARGE.--24 calendar years (1939, 1940, 1952-73), 93.5 ft³/s (2.648 m³/s) 67,740 acre-ft/yr (83.5 hm³/yr); 20 calendar years (1954-73), 93.9 ft³/s (2.659 m³/s) 68,030 acre-ft/yr (83.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge not determined; minimum, 20 ft³/s (0.57 m³/s) Apr. 2.
Period of record: Maximum gage height, 31.6 ft (9.63 m) from floodmarks, Aug. 23, 1966, (discharge not determined); minimum discharge, 0.54 ft³/s (0.015 m³/s) May 30, 1965.

REMARKS.--Records good. Flow regulated by storage in Alamogordo Reservoir, Lake McMillan, and Lake Avalon (see sta 08384000, 08400500, 08403800, and by several small diversion dams that divert for power or irrigation. Diversions and ground-water withdrawals above station for irrigation of about 202,000 acres (81,750 hm²), 1959 determination. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 898: 1938(M). WSP 1712: 1959.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 51 | 40 | 39 | 29 | 33 | 690 | 34 | 55 | 73 | 53 | 43 | 48 |
| 2 | 46 | 43 | 40 | 23 | 30 | 251 | 37 | 44 | 57 | 69 | 45 | 50 |
| 3 | 47 | 37 | 44 | 24 | 28 | 147 | 42 | 41 | 45 | 68 | 49 | 52 |
| 4 | 49 | 32 | 42 | 28 | 60 | 117 | 45 | 45 | 41 | 52 | 52 | 54 |
| 5 | 51 | 32 | 41 | 24 | 95 | 105 | 36 | 41 | 38 | 53 | 50 | 54 |
| 6 | 50 | 32 | 41 | 22 | 87 | 100 | 33 | 39 | 43 | 58 | 51 | 53 |
| 7 | 51 | 34 | 43 | 24 | 57 | 94 | 62 | 46 | 68 | 66 | 51 | 53 |
| 8 | 52 | 39 | 41 | 23 | 51 | 81 | 54 | 49 | 55 | 63 | 53 | 53 |
| 9 | 53 | 42 | 40 | 25 | 643 | 58 | 40 | 48 | 42 | 58 | 54 | 49 |
| 10 | 48 | 47 | 46 | 26 | 769 | 53 | 31 | 44 | 40 | 58 | 55 | 48 |
| 11 | 45 | 39 | 55 | 28 | 860 | 52 | 28 | 43 | 50 | 52 | 55 | 48 |
| 12 | 45 | 34 | 64 | 39 | 708 | 52 | 32 | 43 | 40 | 50 | 55 | 47 |
| 13 | 46 | 33 | 58 | 38 | 718 | 51 | 38 | 54 | 34 | 46 | 54 | 48 |
| 14 | 45 | 34 | 51 | 29 | 790 | 52 | 45 | 57 | 34 | 49 | 54 | 48 |
| 15 | 44 | 33 | 56 | 26 | 827 | 55 | 50 | 47 | 72 | 65 | 54 | 47 |
| 16 | 44 | 29 | 49 | 28 | 1,220 | 58 | 52 | 46 | 74 | 63 | 53 | 46 |
| 17 | 44 | 30 | 48 | 28 | 1,310 | 55 | 41 | 39 | 59 | 58 | 52 | 47 |
| 18 | 43 | 29 | 45 | 27 | 1,440 | 50 | 38 | 39 | 59 | 55 | 51 | 48 |
| 19 | 42 | 30 | 45 | 24 | 1,590 | 54 | 37 | 38 | 51 | 50 | 52 | 47 |
| 20 | 41 | 31 | 48 | 23 | 1,420 | 52 | 40 | 38 | 49 | 49 | 51 | 47 |
| 21 | 35 | 33 | 87 | 48 | 1,500 | 48 | 46 | 38 | 49 | 48 | 52 | 46 |
| 22 | 35 | 39 | 58 | 39 | 1,500 | 46 | 40 | 38 | 49 | 48 | 51 | 45 |
| 23 | 36 | 49 | 50 | 31 | 1,190 | 41 | 49 | 40 | 48 | 49 | 49 | 45 |
| 24 | 35 | 61 | 37 | 37 | 705 | 41 | 48 | 38 | 49 | 50 | 51 | 47 |
| 25 | 36 | 50 | 53 | 39 | 883 | 106 | 42 | 38 | 49 | 54 | 52 | 49 |
| 26 | 38 | 44 | 64 | 33 | 814 | 171 | 37 | 48 | 53 | 51 | 53 | 47 |
| 27 | 38 | 43 | 51 | 35 | 805 | 196 | 35 | 38 | 51 | 49 | 53 | 45 |
| 28 | 40 | 41 | 66 | 36 | 823 | 99 | 35 | 34 | 49 | 49 | 52 | 45 |
| 29 | 39 | ------ | 58 | 32 | 826 | 54 | 40 | 34 | 45 | 52 | 51 | 45 |
| 30 | 38 | ------ | 38 | 30 | 831 | 40 | 145 | 34 | 50 | 52 | 49 | 47 |
| 31 | 39 | ------ | 36 | ------ | 846 | ------ | 93 | 42 | ------ | 47 | ------ | 46 |
| TOTAL | 1,346 | 1,060 | 1,534 | 898 | 23,459 | 3,069 | 1,425 | 1,318 | 1,516 | 1,684 | 1,547 | 1,494 |
| MEAN | 43.4 | 37.9 | 49.5 | 29.9 | 757 | 102 | 46.0 | 42.5 | 50.5 | 54.3 | 51.6 | 48.2 |
| MAX | 53 | 61 | 87 | 48 | 1,590 | 690 | 145 | 57 | 74 | 69 | 55 | 54 |
| MIN | 35 | 29 | 36 | 22 | 28 | 40 | 28 | 34 | 34 | 46 | 43 | 45 |
| AC-FT | 2,670 | 2,100 | 3,040 | 1,780 | 46,530 | 6,090 | 2,830 | 2,610 | 3,010 | 3,340 | 3,070 | 2,960 |

CAL YR 1973 TOTAL 40,350 MEAN 111 MAX 1,590 MIN 22 AC-FT 80,030
WTR YR 1973 TOTAL 39,656 MEAN 109 MAX 1,590 MIN 22 AC-FT 78,660

## 08407500 PECOS RIVER AT RED BLUFF, N. MEX.

LOCATION.--Lat 32°04'30", long 104°02'21", in SW¼NW¼NE¼ sec.1, T.26 S., R.28 E., Eddy County, on right bank at Red Bluff, 0.2 mi (0.3 km) downstream from Red Bluff Draw, 1.6 mi (2.6 km) northwest of the El Paso Natural Gas (Pecos River) compressor station, 5.2 mi (8.4 km) north of the New Mexico-Texas state line, 5.5 mi (8.8 km) upstream from Delaware River, and at mile 411.3 (661.8 km).

DRAINAGE AREA.--19,540 mi² (50,600 km²), approximately (contributing area).

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,850.05 ft (868.695 m) above mean sea level.

AVERAGE DISCHARGE.--36 calendar years, 188 ft³/s (5.324 m³/s), 136,200 acre-ft/yr (168 hm³/yr); 20 calendar years (1954-73), 97.5 ft³/s (2.761 m³/s), 70,640 acre-ft/yr (87.1 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,400 ft³/s (39.6 m³/s) May 22 (gage height, 6.85 ft or 2.088 m); minimum, 18 ft³/s (0.51 m³/s) April 20.

Period of record: Maximum discharge, 111,000 ft³/s (3,140 m³/s) Aug. 23, 1966 (gage height, 33.32 ft or 10.156 m), from rating curve extended above 30,000 ft³/s (850 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.19 ft³/s (0.005 m³/s) Aug. 1, 1966.

The flood of Aug. 23, 1966, exceeded all known floods at this location. Flood in October 1904 reached a stage of 28.0 ft (8.53 m), from information by Panhandle and Santa Fe Railway Co. (For dates of other historical floods see sta 08405000, 08406500.)

REMARKS.--Records good. Flow regulated by storage in Alamogordo Reservoir, Lake McMillan, and Lake Avalon (see sta 08384000, 08400500, 08403800), and by several small diversion dams that divert for power or irrigation. Diversions and ground-water withdrawals above station for irrigation of about 202,000 acres (81,750 hm²), 1959 determination. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 60 | 41 | 43 | 35 | 32 | 831 | 40 | 76 | 65 | 51 | 48 | 53 |
| 2 | 55 | 43 | 41 | 28 | 36 | 340 | 38 | 54 | 67 | 56 | 44 | 53 |
| 3 | 51 | 42 | 44 | 24 | 32 | 173 | 42 | 46 | 52 | 70 | 47 | 55 |
| 4 | 52 | 35 | 45 | 27 | 34 | 127 | 48 | 46 | 43 | 59 | 51 | 54 |
| 5 | 53 | 32 | 42 | 27 | 89 | 113 | 45 | 48 | 38 | 55 | 53 | 55 |
| 6 | 56 | 32 | 42 | 22 | 96 | 105 | 38 | 43 | 36 | 55 | 53 | 55 |
| 7 | 54 | 34 | 42 | 22 | 75 | 100 | 42 | 42 | 53 | 60 | 54 | 54 |
| 8 | 54 | 39 | 44 | 21 | 55 | 92 | 68 | 51 | 65 | 66 | 54 | 54 |
| 9 | 54 | 39 | 42 | 21 | 350 | 75 | 49 | 56 | 50 | 60 | 56 | 53 |
| 10 | 53 | 45 | 46 | 25 | 554 | 60 | 40 | 88 | 63 | 60 | 58 | 51 |
| 11 | 50 | 44 | 50 | 27 | 884 | 59 | 32 | 46 | 43 | 55 | 58 | 52 |
| 12 | 49 | 36 | 62 | 32 | 633 | 56 | 29 | 45 | 47 | 51 | 54 | 51 |
| 13 | 49 | 33 | 64 | 42 | 643 | 56 | 50 | 46 | 37 | 49 | 60 | 51 |
| 14 | 49 | 32 | 55 | 36 | 676 | 56 | 67 | 60 | 35 | 45 | 58 | 52 |
| 15 | 47 | 34 | 56 | 27 | 739 | 56 | 49 | 52 | 58 | 58 | 56 | 51 |
| 16 | 47 | 31 | 56 | 28 | 917 | 59 | 56 | 46 | 86 | 65 | 56 | 50 |
| 17 | 46 | 30 | 52 | 30 | 1,180 | 59 | 53 | 43 | 56 | 60 | 55 | 50 |
| 18 | 46 | 30 | 50 | 28 | 1,180 | 55 | 45 | 38 | 62 | 58 | 54 | 50 |
| 19 | 45 | 30 | 47 | 27 | 1,380 | 52 | 42 | 38 | 54 | 53 | 54 | 49 |
| 20 | 45 | 30 | 46 | 23 | 1,320 | 56 | 39 | 36 | 50 | 50 | 53 | 49 |
| 21 | 40 | 34 | 71 | 32 | 1,240 | 52 | 47 | 35 | 49 | 49 | 54 | 49 |
| 22 | 36 | 42 | 70 | 50 | 1,370 | 49 | 68 | 36 | 49 | 48 | 55 | 49 |
| 23 | 35 | 41 | 54 | 34 | 1,180 | 47 | 44 | 38 | 49 | 49 | 53 | 48 |
| 24 | 35 | 56 | 46 | 32 | 784 | 41 | 53 | 38 | 47 | 50 | 53 | 49 |
| 25 | 36 | 56 | 38 | 53 | 820 | 65 | 47 | 34 | 46 | 52 | 54 | 51 |
| 26 | 38 | 47 | 65 | 48 | 825 | 136 | 42 | 39 | 50 | 54 | 56 | 52 |
| 27 | 40 | 45 | 54 | 33 | 800 | 201 | 36 | 46 | 49 | 51 | 58 | 50 |
| 28 | 39 | 44 | 59 | 40 | 825 | 136 | 36 | 32 | 49 | 50 | 54 | 49 |
| 29 | 42 | ------ | 66 | 36 | 831 | 72 | 38 | 32 | 45 | 51 | 55 | 49 |
| 30 | 40 | ------ | 50 | 32 | 841 | 52 | 141 | 31 | 46 | 53 | 55 | 50 |
| 31 | 40 | ------ | 38 | ------ | 857 | ------ | 134 | 123 | ------ | 49 | ------ | 50 |
| TOTAL | 1,436 | 1,077 | 1,580 | 942 | 21,278 | 3,431 | 1,598 | 1,484 | 1,539 | 1,692 | 1,623 | 1,588 |
| MEAN | 46.3 | 38.5 | 51.0 | 31.4 | 686 | 114 | 51.5 | 47.9 | 51.3 | 54.6 | 54.1 | 51.2 |
| MAX | 60 | 56 | 71 | 53 | 1,380 | 831 | 141 | 123 | 86 | 70 | 60 | 55 |
| MIN | 35 | 30 | 38 | 21 | 32 | 41 | 29 | 31 | 35 | 45 | 44 | 48 |
| AC-FT | 2,850 | 2,140 | 3,130 | 1,870 | 42,200 | 6,810 | 3,170 | 2,940 | 3,050 | 3,360 | 3,220 | 3,150 |

CAL YR 1973 TOTAL 39,268 MEAN 108 MAX 1,380 MIN 21 AC-FT 77,890
WTR YR 1973 TOTAL 38,799 MEAN 106 MAX 1,380 MIN 21 AC-FT 76,960

PEAK DISCHARGE (BASE, 1,800 CFS).--No peak above base.

## 08408500 DELAWARE RIVER NEAR RED BLUFF, N. MEX.

LOCATION.--Lat 32°01'23", long 104°03'15", in NE¼SW¼SE¼ sec.23, T.26 S., R.28 E., Eddy County, near center of channel on downstream side of pier of bridge on U.S. Highway 285, 2.1 mi (3.4 km) northwest of the New Mexico-Texas state line, 3.6 mi (5.8 km) southwest of Red Bluff, 3.7 mi (6.0 km) upstream from mouth, and 14 mi (22.5 km) south of Malaga. Mouth at Pecos River mile 405.8 (652.9 km).

DRAINAGE AREA.--689 mi² (1,785 km²).

PERIOD OF RECORD.--April 1912 to September 1913, May 1914 to June 1915, October 1937 to current year. Published as "near Malaga" 1912-13, and as "near Angeles, Tex." 1914-15.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,900.66 ft (884.121 m) above mean sea level. Prior to May 1914, at site 3 mi (4.8 km) upstream at different datum. May 1914 to June 1915 at site 2.5 mi (4.0 km) downstream at different datum.

AVERAGE DISCHARGE.--36 calendar years (1938-73), 13.9 ft³/s (0.394 m³/s), 10,070 acre-ft/yr (12.4 hm³/yr); 20 calendar years (1954-73), 15.7 ft³/s (0.445 m³/s), 11,370 acre-ft/yr (14.0 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,010 ft³/s (28.6 m³/s) Aug. 31 (gage height, 4.10 ft or 1.250 m); no flow at times.
Period of record: Maximum discharge, 81,400 ft³/s (2,310 m³/s) Oct. 2, 1955 (gage height, 27.0 ft or 8.23 m, from floodmarks), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurements at gage heights 8.65 ft (2.637 m), 12.84 ft (3.914 m), 18.00 ft (5.486 m), and 27.0 ft (8.230 m); no flow many days most years.
Maximum stage known since at least 1911 is that of Oct. 2, 1955. Flood of June 27, 1938, reached a stage of 18.00 ft (5.486 m), from floodmark.

REMARKS.--Records poor. One small upstream diversion.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.3 | 2.9 | 2.7 | 2.6 | 2.0 | .90 | 0 | .72 | 6.7 | .51 | 1.1 | 2.1 |
| 2 | 2.9 | 2.7 | 2.6 | 2.6 | 1.8 | .87 | 0 | .31 | 3.5 | .49 | .96 | 2.3 |
| 3 | 2.9 | 2.7 | 2.4 | 2.5 | 1.8 | .77 | 0 | .13 | .44 | .45 | .97 | 2.1 |
| 4 | 2.7 | 2.7 | 2.4 | 2.5 | 1.9 | .58 | 0 | .02 | .43 | .45 | 1.1 | 2.1 |
| 5 | 2.6 | 2.8 | 2.4 | 2.7 | 2.2 | .44 | 0 | 0 | .19 | 1.3 | 1.2 | 2.1 |
| 6 | 3.5 | 2.7 | 1.9 | 2.8 | 2.1 | .41 | 0 | 0 | .01 | 1.4 | 1.4 | 2.2 |
| 7 | 3.9 | 3.0 | 2.1 | 2.8 | 2.0 | .38 | 0 | .39 | 0 | 1.3 | 1.4 | 2.2 |
| 8 | 3.5 | 4.1 | 2.1 | 2.6 | 1.7 | .39 | 0 | .06 | 0 | 1.1 | 1.5 | 2.3 |
| 9 | 2.9 | 3.8 | 2.3 | 2.7 | 1.6 | .33 | 0 | 0 | .62 | 3.3 | 1.4 | 2.3 |
| 10 | 2.8 | 3.0 | 2.9 | 2.7 | 1.5 | .29 | 0 | 9.9 | 19 | 1.4 | 1.7 | 2.4 |
| 11 | 2.8 | 2.9 | 2.5 | 2.8 | 1.5 | .30 | 0 | 2.2 | 15 | .79 | 1.9 | 2.3 |
| 12 | 2.9 | 2.8 | 2.4 | 2.9 | 1.4 | .31 | 0 | .42 | 3.8 | .67 | 2.1 | 2.4 |
| 13 | 2.8 | 2.6 | 2.3 | 5.0 | 1.7 | .32 | 0 | .19 | 1.4 | .65 | 2.0 | 2.3 |
| 14 | 2.8 | 2.5 | 2.1 | 4.2 | 2.5 | .36 | 5.5 | 0 | .69 | .72 | 1.7 | 2.3 |
| 15 | 2.9 | 2.5 | 2.1 | 2.8 | 3.2 | .25 | 4.5 | 0 | 54 | .77 | 1.1 | 2.3 |
| 16 | 2.9 | 2.5 | 2.1 | 2.7 | 3.0 | .11 | 1.0 | 0 | 22 | .77 | 1.2 | 2.3 |
| 17 | 2.9 | 2.9 | 2.1 | 2.7 | 2.5 | .02 | .22 | 0 | 6.6 | .77 | 1.3 | 2.4 |
| 18 | 2.8 | 2.8 | 2.1 | 2.8 | 2.0 | 0 | 3.3 | 0 | 3.3 | .77 | 1.4 | 2.4 |
| 19 | 2.7 | 2.6 | 2.1 | 2.4 | 1.6 | 0 | 12 | 0 | 1.9 | .78 | 1.4 | 2.2 |
| 20 | 3.0 | 2.6 | 2.2 | 2.4 | 1.4 | 0 | 1.2 | 0 | 1.2 | .79 | 1.4 | 2.1 |
| 21 | 3.0 | 3.5 | 2.3 | 2.4 | 1.4 | 0 | .45 | 0 | .99 | .73 | 1.4 | 2.1 |
| 22 | 2.9 | 6.4 | 2.1 | 2.4 | 1.6 | 0 | .21 | 0 | .90 | .70 | 1.5 | 2.3 |
| 23 | 2.9 | 5.4 | 2.0 | 2.4 | 1.4 | 0 | .05 | 0 | .75 | .72 | 1.7 | 2.3 |
| 24 | 2.9 | 4.3 | 2.0 | 2.4 | 1.2 | 0 | 0 | 0 | .67 | .76 | 1.9 | 2.3 |
| 25 | 2.9 | 3.3 | 2.3 | 2.4 | .97 | 0 | 0 | 0 | .56 | .79 | 2.0 | 2.3 |
| 26 | 2.9 | 2.9 | 2.9 | 2.4 | .74 | 0 | .12 | 0 | .45 | .84 | 2.1 | 2.3 |
| 27 | 2.7 | 2.9 | 2.8 | 2.4 | .62 | 0 | 0 | 0 | .32 | .87 | 2.0 | 2.3 |
| 28 | 2.6 | 2.9 | 2.9 | 2.4 | .54 | 0 | 0 | 0 | .35 | .98 | 1.9 | 2.4 |
| 29 | 2.6 | ------ | 2.8 | 2.4 | .62 | 0 | 0 | 0 | .41 | 1.0 | 1.9 | 2.4 |
| 30 | 2.8 | ------ | 2.5 | 2.3 | .65 | 0 | 19 | 0 | .48 | 1.1 | 2.0 | 2.3 |
| 31 | 2.9 | ------ | 2.6 | ------ | .71 | ------ | 4.8 | 100 | ------ | 1.1 | ------ | 2.2 |
| TOTAL | 89.6 | 88.7 | 73.0 | 81.1 | 49.85 | 7.03 | 52.35 | 114.34 | 146.66 | 28.77 | 46.63 | 70.3 |
| MEAN | 2.89 | 3.17 | 2.35 | 2.70 | 1.61 | .23 | 1.69 | 3.69 | 4.89 | .93 | 1.55 | 2.27 |
| MAX | 3.9 | 6.4 | 2.9 | 5.0 | 3.2 | .90 | 19 | 100 | 54 | 3.3 | 2.1 | 2.4 |
| MIN | 2.3 | 2.5 | 1.9 | 2.3 | .54 | 0 | 0 | 0 | 0 | .45 | .96 | 2.1 |
| AC-FT | 178 | 176 | 145 | 161 | 99 | 14 | 104 | 227 | 291 | 57 | 92 | 139 |

CAL YR 1973 TOTAL 848.33 MEAN 2.32 MAX 100 MIN 0 AC-FT 1,680
WTR YR 1973 TOTAL 936.83 MEAN 2.57 MAX 100 MIN 0 AC-FT 1,860

PEAK DISCHARGE (BASE, 1,700 CFS).--No peak above base.

## 08410000 RED BLUFF RESERVOIR NEAR ORLA, TEX.

LOCATION.--Lat 31°54'05", long 103°54'40", Reeves County, at right end of Bluff Dam on Pecos River, 3 mi (4.8 km) upstream from Salt (Screwbean) Draw, and 4.5 mi (7.2 km) north of Orla.

DRAINAGE AREA.--20,720 mi² (53,660 km²), approximately (contributing area).

PERIOD OF RECORD.--February 1937 to current year. Monthly contents only for some periods, published in WSP 1312.

GAGE.--Nonrecording gage read at irregular intervals. Datum of gage is 0.43 ft (0.131 m), revised, below sea level.

EXTREMES.--Current year: Maximum contents observed, 86,300 acre-ft (106 hm³) June 4 (gage height, 2,813.4 ft or 857.52 m); minimum observed, 49,100 acre-ft (60.5 hm³) Jan. 1, 2 (gage height, 2,803.7 ft or 854.57 m).
Period of record: Maximum contents observed, 352,000 acre-ft (434 hm³) Sept. 27-28, 1941 (gage height, 2,846.2 ft or 867.52 m, observed on nonrecording gage at service spillway, affected by variable drawdown due to flow through tainter gates); minimum observed, 11,080 acre-ft (13.7 hm³) May 13, 1948 (gage height, 2,781.4 ft or 847.77 m).

REMARKS.--Reservoir is formed by a rock-faced earthfill dam 9,200 ft (2,800 m) long. Dam completed and storage began in September 1936. The concrete service spillway is equipped with 12 tainter gates 25 ft (7.6 m) wide by 15 ft (4.6 m) high. The emergency spillway, located on the right bank, is 790 ft (241 m) long. Water is used for power development and irrigation from Mentone to Grandfalls. Inflow partly regulated by major reservoirs above station include Alamogordo Reservoir, Lake McMillan, and Lake Avalon, with a total combined capacity of 154,400 acre-ft (190 hm³). Also several small diversion dams divert water for power and irrigation. Contents computed from intermittent gage readings; figures given herein represent total contents. Data regarding dam and reservoir are given in the following table:

| | Gage height (feet) | Capacity (acre-feet) |
|---|---|---|
| Crest of emergency spillway | 2,845.0 | 340,000 |
| Top of tainter gates (top of conservation storage) | 2,842.0 | 310,000 |
| Crest of service spillway | 2,827.0 | 166,500 |
| Bottom of two 7.0- by 9.0-foot conduits | 2,764.0 | 3,000 |

COOPERATION.--Gage-height records and capacity curve furnished by Red Bluff Water Power and Control District. Capacity curve based on Geological Survey topographic map, survey of 1925.

CONTENTS, IN ACRE-FEET, AT 0800, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 49,100 | 51,500 | 53,350 | 55,450 | 49,700 | 84,500 | 75,500 | 72,300 | 58,250 | 53,000 | 54,750 | 56,500 |
| 2 | 49,100 | 51,800 | 53,700 | 55,450 | 49,700 | 85,400 | 75,500 | 72,300 | 57,550 | 53,000 | 54,750 | 56,500 |
| 3 | 49,400 | 51,800 | 53,700 | 55,100 | 49,700 | 85,850 | 75,100 | 72,300 | 56,850 | 53,000 | 54,750 | 56,500 |
| 4 | 49,400 | 51,800 | 53,700 | 54,400 | 49,400 | 86,300 | 75,100 | 71,900 | 56,150 | 53,350 | 54,750 | 56,500 |
| 5 | 49,400 | 51,800 | 53,700 | 53,700 | 49,400 | 85,850 | 75,100 | 71,900 | 55,450 | 53,350 | 54,750 | 56,500 |
| 6 | 49,400 | 51,800 | 53,700 | 53,000 | 49,400 | 85,850 | 74,700 | 71,900 | 54,750 | 53,350 | 55,100 | 56,500 |
| 7 | 49,700 | 52,100 | 54,050 | 52,700 | 49,400 | 85,850 | 74,700 | 71,500 | 54,050 | 53,350 | 55,100 | 56,500 |
| 8 | 49,700 | 52,100 | 54,050 | 52,400 | 49,400 | 85,400 | 74,300 | 71,500 | 53,350 | 53,700 | 55,100 | 56,500 |
| 9 | 49,700 | 52,100 | 54,050 | 52,100 | 49,400 | 84,950 | 74,300 | 71,500 | 53,350 | 53,700 | 55,100 | 56,500 |
| 10 | 50,000 | 52,100 | 54,050 | 51,800 | 50,000 | 84,500 | 73,900 | 71,500 | 53,350 | 53,700 | 55,100 | 56,500 |
| 11 | 50,300 | 52,100 | 54,050 | 51,500 | 50,900 | 84,050 | 73,500 | 71,100 | 54,050 | 53,700 | 55,450 | 56,500 |
| 12 | 50,300 | 52,100 | 54,400 | 51,200 | 52,400 | 83,600 | 72,700 | 71,100 | 54,050 | 53,700 | 55,450 | 56,500 |
| 13 | 50,600 | 52,400 | 54,400 | 50,900 | 53,000 | 82,700 | 72,300 | 71,100 | 54,050 | 53,700 | 55,450 | 56,500 |
| 14 | 50,600 | 52,400 | 54,400 | 50,600 | 53,700 | 81,800 | 71,500 | 71,100 | 54,050 | 53,700 | 55,450 | 56,500 |
| 15 | 50,600 | 52,400 | 54,400 | 50,600 | 54,750 | 81,800 | 73,500 | 70,300 | 54,050 | 53,700 | 55,450 | 56,500 |
| 16 | 50,600 | 52,400 | 54,750 | 50,600 | 56,150 | 81,350 | 73,100 | 69,500 | 54,050 | 53,700 | 55,800 | 56,500 |
| 17 | 50,900 | 52,400 | 54,750 | 50,600 | 57,900 | 80,900 | 72,700 | 69,100 | 54,050 | 54,050 | 55,800 | 56,500 |
| 18 | 50,900 | 52,700 | 54,750 | 50,300 | 60,000 | 80,450 | 72,700 | 68,700 | 54,400 | 54,050 | 55,800 | 56,500 |
| 19 | 50,900 | 52,700 | 54,750 | 50,300 | 61,750 | 79,550 | 72,700 | 68,300 | 54,400 | 54,050 | 56,150 | 56,500 |
| 20 | 50,900 | 52,700 | 54,750 | 50,300 | 64,700 | 78,650 | 72,700 | 67,900 | 54,400 | 54,050 | 56,150 | 56,500 |
| 21 | 51,200 | 52,700 | 55,100 | 50,300 | 67,100 | 77,750 | 72,300 | 67,500 | 54,400 | 54,050 | 56,150 | 56,500 |
| 22 | 51,200 | 52,700 | 55,100 | 50,300 | 69,900 | 77,300 | 72,300 | 66,300 | 54,400 | 54,050 | 56,150 | 56,500 |
| 23 | 51,200 | 53,000 | 55,100 | 50,300 | 76,400 | 76,850 | 72,300 | 65,500 | 54,400 | 54,400 | 56,150 | 56,500 |
| 24 | 51,200 | 53,000 | 55,100 | 50,000 | 73,400 | 76,400 | 71,900 | 64,700 | 54,050 | 54,400 | 56,150 | 56,500 |
| 25 | 51,500 | 53,350 | 55,100 | 50,000 | 75,950 | 75,950 | 71,500 | 63,900 | 54,050 | 54,400 | 56,150 | 56,500 |
| 26 | 51,500 | 53,350 | 55,100 | 50,000 | 76,850 | 75,500 | 71,500 | 63,150 | 53,700 | 54,400 | 56,500 | 56,500 |
| 27 | 51,500 | 53,350 | 55,450 | 50,000 | 77,750 | 75,500 | 71,900 | 62,100 | 53,700 | 54,400 | 56,500 | 56,500 |
| 28 | 51,500 | 53,350 | 55,450 | 49,700 | 79,100 | 75,500 | 71,900 | 61,400 | 53,350 | 54,750 | 56,500 | 56,500 |
| 29 | 51,500 | ------- | 55,450 | 49,700 | 80,450 | 75,500 | 71,900 | 60,700 | 53,350 | 54,750 | 56,500 | 56,500 |
| 30 | 51,500 | ------- | 55,450 | 49,700 | 81,800 | 75,500 | 71,900 | 59,650 | 53,350 | 54,750 | 56,500 | 56,500 |
| 31 | 51,500 | ------- | 55,450 | ------- | 81,800 | ------- | 71,900 | 58,950 | ------- | 54,750 | ------- | 56,500 |
| MAX | 51,500 | 53,350 | 55,450 | 55,450 | 81,800 | 86,300 | 75,500 | 72,300 | 58,250 | 54,750 | 56,500 | 56,500 |
| MIN | 49,100 | 51,500 | 53,350 | 49,700 | 49,400 | 75,500 | 71,500 | 58,950 | 53,350 | 53,000 | 54,750 | 56,500 |
| (†) | 2,804.5 | 2,805.1 | 2,805.7 | 2,803.9 | 2,812.4 | 2,811.0 | 2,810.1 | 2,806.7 | 2,805.1 | 2,805.5 | 2,806.0 | 2,806.0 |
| (‡) | +2,400 | +1,850 | +2,100 | -5,750 | +32,100 | -6,300 | -3,600 | -12,950 | -5,600 | +1,400 | +1,750 | 0 |

CAL YR 1973..... MAX 86,300 MIN 49,100 ‡ 7,400
WTR YR 1973..... MAX 86,300 MIN 44,900 ‡ 8,450

† Gage height, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 08412500 PECOS RIVER NEAR ORLA, TEX.

LOCATION.--Lat 31°52'21", long 103°49'52", Reeves County, on right bank at bridge on Farm Road 652, 5.5 mi (8.8 km) downstream from Salt (Screwbean) Draw, 5.9 mi (9.5 km) northeast of Orla, and 8.5 mi (13.7 km) downstream from Red Bluff Reservoir.

DRAINAGE AREA.--21,210 mi² (54,930 km²), approximately (contributing area).

PERIOD OF RECORD.--May 1937 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,730.86 ft (832.366 m) above mean sea level. Prior to Nov. 16, 1969, at site 6.9 mi (11.1 km) downstream at datum 12.81 ft (3.904 m) lower.

AVERAGE DISCHARGE.--36 calendar years, 185 ft³/s (5.239 m³/s), 134,000 acre-ft/yr (165 hm³/yr); 20 calendar years (1954-73), 91.7 ft³/s (2.597 m³/s), 66,440 acre-ft/yr (81.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,750 ft³/s (49.6 m³/s) July 15 (gage height, 11.62 ft or 3.542 m); minimum, 4.4 ft³/s (0.12 m³/s) Nov. 25-28.
Period of record: Maximum discharge, 23,700 ft³/s (671 m³/s) Sept. 29, 1941 (gage height, 20.74 ft or 6.322 m, site and datum then in use); no flow at times in 1946 and 1965.

REMARKS.--Records good. Flow largely regulated by Red Bluff Reservoir (see sta 08410000) and reservoirs above Carlsbad, N. Mex. Occasional runoff from draws between dam and station. Many diversions above Red Bluff Reservoir for irrigation. Water quality records for the current year are published in Part 2 of report for Texas.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11 | 8.3 | 14 | 6.7 | 30 | 50 | 101 | 39 | 461 | 74 | 30 | 44 |
| 2 | 9.8 | 8.3 | 14 | 11 | 29 | 52 | 104 | 38 | 452 | 72 | 27 | 45 |
| 3 | 9.1 | 7.8 | 13 | 372 | 30 | 52 | 105 | 39 | 450 | 70 | 25 | 46 |
| 4 | 10 | 8.1 | 12 | 352 | 31 | 53 | 104 | 37 | 446 | 71 | 24 | 46 |
| 5 | 11 | 8.7 | 11 | 237 | 49 | 52 | 103 | 37 | 441 | 85 | 21 | 46 |
| 6 | 11 | 8.2 | 11 | 235 | 49 | 66 | 98 | 37 | 438 | 82 | 19 | 46 |
| 7 | 12 | 8.2 | 12 | 234 | 48 | 183 | 92 | 42 | 445 | 469 | 20 | 46 |
| 8 | 14 | 8.6 | 13 | 230 | 50 | 198 | 84 | 48 | 446 | 245 | 22 | 45 |
| 9 | 13 | 9.1 | 13 | 232 | 66 | 202 | 75 | 57 | 200 | 208 | 23 | 42 |
| 10 | 12 | 9.8 | 13 | 233 | 196 | 203 | 171 | 40 | 134 | 204 | 22 | 41 |
| 11 | 12 | 10 | 13 | 232 | 195 | 211 | 604 | 38 | 246 | 187 | 19 | 41 |
| 12 | 11 | 10 | 14 | 232 | 200 | 486 | 542 | 37 | 97 | 146 | 19 | 41 |
| 13 | 11 | 11 | 13 | 211 | 198 | 387 | 367 | 37 | 85 | 115 | 18 | 39 |
| 14 | 10 | 9.8 | 11 | 44 | 201 | 200 | 397 | 44 | 79 | 51 | 18 | 38 |
| 15 | 10 | 10 | 9.1 | 43 | 202 | 192 | 947 | 385 | 136 | 46 | 17 | 37 |
| 16 | 9.8 | 9.1 | 9.8 | 42 | 204 | 190 | 313 | 357 | 153 | 42 | 14 | 37 |
| 17 | 9.1 | 9.8 | 9.1 | 44 | 203 | 186 | 168 | 218 | 105 | 39 | 13 | 37 |
| 18 | 8.2 | 9.8 | 8.2 | 46 | 202 | 183 | 354 | 211 | 89 | 37 | 12 | 38 |
| 19 | 8.2 | 10 | 8.2 | 47 | 35 | 199 | 62 | 214 | 84 | 37 | 11 | 36 |
| 20 | 7.7 | 10 | 8.2 | 48 | 17 | 419 | 46 | 212 | 80 | 38 | 11 | 35 |
| 21 | 8.6 | 11 | 7.2 | 49 | 20 | 439 | 45 | 228 | 79 | 38 | 11 | 34 |
| 22 | 8.6 | 16 | 7.7 | 51 | 20 | 366 | 66 | 432 | 79 | 40 | 9.8 | 35 |
| 23 | 8.6 | 35 | 8.4 | 53 | 22 | 218 | 52 | 442 | 78 | 37 | 8.7 | 36 |
| 24 | 8.2 | 26 | 8.6 | 54 | 46 | 227 | 50 | 439 | 108 | 37 | 7.9 | 34 |
| 25 | 8.2 | 18 | 8.6 | 54 | 48 | 202 | 51 | 438 | 103 | 37 | 5.1 | 33 |
| 26 | 8.2 | 16 | 8.2 | 51 | 49 | 101 | 51 | 435 | 182 | 34 | 4.4 | 34 |
| 27 | 9.1 | 14 | 6.7 | 52 | 47 | 114 | 49 | 435 | 183 | 33 | 4.4 | 34 |
| 28 | 8.2 | 13 | 6.7 | 54 | 47 | 73 | 46 | 433 | 92 | 32 | 4.7 | 35 |
| 29 | 8.2 | ------ | 7.2 | 55 | 48 | 77 | 44 | 439 | 76 | 32 | 37 | 35 |
| 30 | 7.3 | ------ | 7.2 | 54 | 48 | 94 | 44 | 440 | 74 | 33 | 43 | 35 |
| 31 | 8.6 | ------ | 7.7 | ------ | 48 | ------ | 42 | 442 | ------ | 34 | ------ | 33 |
| TOTAL | 301.7 | 333.6 | 313.8 | 3,658.7 | 2,678 | 5,675 | 5,377 | 6,770 | 6,121 | 2,705 | 521.0 | 1,204 |
| MEAN | 9.73 | 11.9 | 10.1 | 122 | 86.4 | 189 | 173 | 218 | 204 | 87.3 | 17.4 | 38.8 |
| MAX | 14 | 35 | 14 | 372 | 204 | 486 | 947 | 442 | 461 | 469 | 43 | 46 |
| MIN | 7.3 | 7.8 | 6.7 | 6.7 | 17 | 50 | 42 | 37 | 74 | 32 | 4.4 | 33 |
| AC-FT | 598 | 662 | 622 | 7,260 | 5,310 | 11,260 | 10,670 | 13,430 | 12,140 | 5,370 | 1,030 | 2,390 |

CAL YR 1973 TOTAL 35,658.8 MEAN 97.7 MAX 947 MIN 4.4 AC-FT 70,730
WTR YR 1973 TOTAL 33,080.3 MEAN 90.6 MAX 947 MIN 6.7 AC-FT 65,610

## 08477000 MIMBRES RIVER NEAR MIMBRES, N. MEX.

LOCATION.--Lat 32°52'28", long 107°59'05", in SE¼NW¼ sec.33, T.16 S., R.11 W., Grant County, on left bank 0.7 mi (1.1 km) downstream from Bear Canyon, 1.5 mi (2.4 km) northwest of Mimbres, and at mile 74.8 (120.4 km).

DRAINAGE AREA.--152 mi² (394 km²).

PERIOD OF RECORD.--June 1921 to September 1930 (fragmentary), October 1930 to current year. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder. Datum of gage is 5,972 ft (1,820.3 m) above mean sea level. Prior to Sept. 12, 1923, at site 10 ft (3 m) downstream at datum 0.3 ft (0.09 m) higher. Sept. 12, 1923, to Jan. 17, 1934, at datum of 0.1 ft (0.03 m) lower.

AVERAGE DISCHARGE.--43 calendar years, 11.0 ft³/s (0.312 m³/s), 7,970 acre-ft/yr (9.83 hm³/yr); 20 calendar years (1954-73), 11.6 ft³/s (0.329 m³/s), 8,400 acre-ft/yr (10.4 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 146 ft³/s (4.13 m³/s) May 14 (gage height, 3.39 ft or 1.033 m); minimum, 2.8 ft³/s (0.079 m³/s) June 28.
Period of record: Maximum discharge determined, 3,370 ft³/s (95.4 m³/s) Oct. 20, 1972 (gage height, 7.49 ft or 2.283 m), from rating curve extended above 600 ft³/s (17.0 m³/s) on basis of slope-area measurements at gage heights 6.20 ft (1.890 m) and 7.49 ft (2.283 m); minimum, 0.7 ft³/s (0.020 m³/s) Aug. 10, 1951.

REMARKS.--Records fair except those for March through May, which are poor. Some regulation by Bear Canyon Reservoir 1.3 mi (2.1 km) upstream capacity, 700 acre-ft (863,000 m³). Diversions for irrigation of about 300 acres (121 hm²) above station.

REVISIONS (WATER YEARS).--WSP 1282: Drainage area. WSP 1512: 1931, 1933(M), 1935(M), 1937(M), 1938, 1939-40(M), 1941, 1942-43(M), 1944, 1945(M), 1946, 1947(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13 | 11 | 86 | 59 | 105 | 17 | 4.0 | 24 | 6.0 | 4.8 | 3.4 | 5.6 |
| 2 | 13 | 11 | 86 | 59 | 97 | 14 | 6.0 | 23 | 6.1 | 4.6 | 3.4 | 5.6 |
| 3 | 13 | 11 | 84 | 58 | 74 | 12 | 4.0 | 20 | 6.2 | 4.2 | 3.4 | 5.6 |
| 4 | 13 | 10 | 83 | 57 | 69 | 13 | 4.5 | 19 | 6.1 | 4.0 | 3.3 | 5.7 |
| 5 | 12 | 10 | 78 | 53 | 76 | 13 | 4.0 | 15 | 6.1 | 3.9 | 3.3 | 5.5 |
| 6 | 12 | 10 | 72 | 50 | 87 | 11 | 4.0 | 11 | 7.5 | 3.9 | 3.4 | 5.3 |
| 7 | 12 | 12 | 66 | 50 | 78 | 9.2 | 4.0 | 8.3 | 8.6 | 4.1 | 3.5 | 5.6 |
| 8 | 12 | 19 | 60 | 52 | 66 | 8.1 | 5.0 | 6.7 | 7.9 | 4.0 | 3.6 | 6.3 |
| 9 | 12 | 19 | 58 | 53 | 60 | 6.6 | 4.5 | 6.0 | 7.9 | 4.1 | 3.7 | 6.7 |
| 10 | 12 | 18 | 56 | 50 | 61 | 8.1 | 4.0 | 5.6 | 8.1 | 4.1 | 3.5 | 6.5 |
| 11 | 11 | 18 | 54 | 58 | 64 | 6.5 | 5.0 | 5.0 | 7.8 | 4.1 | 3.2 | 6.1 |
| 12 | 11 | 20 | 58 | 71 | 61 | 3.2 | 15 | 4.9 | 7.7 | 4.1 | 3.2 | 6.1 |
| 13 | 10 | 17 | 64 | 85 | 65 | 3.8 | 11 | 4.4 | 6.6 | 4.0 | 3.3 | 6.1 |
| 14 | 10 | 17 | 64 | 100 | 125 | 3.3 | 12 | 4.2 | 5.7 | 4.0 | 3.4 | 6.1 |
| 15 | 10 | 17 | 59 | 113 | 132 | 5.4 | 14 | 4.4 | 5.8 | 3.9 | 3.4 | 6.3 |
| 16 | 11 | 18 | 60 | 110 | 118 | 6.2 | 18 | 4.4 | 5.6 | 3.8 | 3.6 | 6.1 |
| 17 | 12 | 20 | 78 | 106 | 103 | 6.3 | 13 | 4.6 | 5.8 | 3.8 | 3.6 | 6.2 |
| 18 | 11 | 19 | 92 | 103 | 92 | 5.9 | 13 | 4.8 | 5.5 | 3.6 | 3.7 | 6.2 |
| 19 | 12 | 26 | 96 | 97 | 83 | 4.8 | 12 | 5.5 | 5.7 | 3.4 | 4.0 | 6.2 |
| 20 | 13 | 32 | 101 | 89 | 76 | 7.9 | 11 | 7.0 | 5.3 | 3.4 | 4.1 | 5.9 |
| 21 | 13 | 40 | 108 | 75 | 58 | 11 | 10 | 8.6 | 5.0 | 3.4 | 4.1 | 5.9 |
| 22 | 13 | 49 | 104 | 67 | 46 | 9.9 | 9.7 | 9.6 | 5.1 | 3.4 | 4.2 | 5.9 |
| 23 | 12 | 50 | 98 | 66 | 41 | 10 | 9.6 | 10 | 5.4 | 3.5 | 4.1 | 5.9 |
| 24 | 12 | 62 | 89 | 75 | 38 | 9.5 | 8.5 | 10 | 5.1 | 3.4 | 4.3 | 5.6 |
| 25 | 12 | 66 | 82 | 83 | 33 | 8.0 | 7.9 | 10 | 5.1 | 3.4 | 4.3 | 5.5 |
| 26 | 11 | 66 | 74 | 94 | 31 | 3.6 | 7.7 | 10 | 5.6 | 3.5 | 4.6 | 5.5 |
| 27 | 11 | 76 | 72 | 104 | 27 | 3.1 | 22 | 9.0 | 5.5 | 3.5 | 4.6 | 5.5 |
| 28 | 11 | 89 | 70 | 112 | 26 | 2.9 | 18 | 8.0 | 5.3 | 3.6 | 4.6 | 5.3 |
| 29 | 11 | ------ | 68 | 120 | 25 | 3.0 | 13 | 7.8 | 5.3 | 3.4 | 5.0 | 5.3 |
| 30 | 11 | ------ | 64 | 118 | 21 | 3.6 | 12 | 7.4 | 5.1 | 3.4 | 5.6 | 5.3 |
| 31 | 12 | ------ | 58 | ------ | 19 | ------ | 12 | 6.3 | ------ | 3.4 | ------ | 5.0 |
| TOTAL | 364 | 833 | 2,342 | 2,387 | 2,057 | 229.9 | 298.4 | 284.5 | 184.5 | 117.7 | 115.4 | 180.4 |
| MEAN | 11.7 | 29.8 | 75.5 | 79.6 | 66.4 | 7.66 | 9.63 | 9.18 | 6.15 | 3.80 | 3.85 | 5.82 |
| MAX | 13 | 89 | 108 | 120 | 132 | 17 | 22 | 24 | 8.6 | 4.8 | 5.6 | 6.7 |
| MIN | 10 | 10 | 54 | 50 | 19 | 2.9 | 4.0 | 4.2 | 5.0 | 3.4 | 3.2 | 5.0 |
| AC-FT | 722 | 1,650 | 4,650 | 4,730 | 4,080 | 456 | 592 | 564 | 366 | 233 | 229 | 358 |

CAL YR 1973 TOTAL 9,393.8 MEAN 25.7 MAX 132 MIN 2.9 AC-FT 18,630
WTR YR 1973 TOTAL 13,561.3 MEAN 37.2 MAX 1,070 MIN 2.9 AC-FT 26,900

PEAK DISCHARGE (BASE, 290 FT³/S).--NO PEAK ABOVE BASE.

## 08481500 RIO TULAROSA NEAR BENT, N. MEX.

LOCATION.--Lat 33°08'41", long 105°53'50", in SE¼NW¼ sec.32, T.13 S., R.11 E., Otero County (revised), on right bank 50 ft (15 m) downstream from bridge on U.S. Highway 70, 2.6 mi (4.2 km) west of Bent, and 8.5 mi (13.7 km) northeast of Tularosa.

DRAINAGE AREA.--120 mi² (310 km²), approximately.

PERIOD OF RECORD.--December 1947 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5,450 ft (1,660 m), from topographic map.

AVERAGE DISCHARGE.--26 calendar years, 9.47 ft³/s (0.268 m³/s), 6,860 acre-ft/yr (8.46 hm³/yr); 20 calendar years (1954-73), 8.90 ft³/s (0.252 m³/s), 6,450 acre-ft/yr (7.95 hm³/yr).

EXTREMES.--Current year: Maximum discharge about 2,140 ft³/s (60.6 m³/s) Aug. 30 (gage height 3.94 ft or 1.201 m); minimum, 1.0 ft³/s (0.028 m³/s) Sept. 9.

Period of record: Maximum discharge, 4,280 ft³/s (121 m³/s) June 18, 1965 (gage height, 5.02 ft or 1.530 m), from rating curve extended above 160 ft³/s (4.53 m³/s) on basis of slope-area measurement of peak flow; no flow May 14, 1955, result of unusual regulation.

A major flood probably occurred Sept. 3, 1938, when a peak of 9,640 ft³/s (273 m³/s) was computed for station near Tularosa. Another flood may have occurred July 2, 1914.

REMARKS.--Records poor. Diversion for irrigation of about 1,000 acres (405 hm²), 1959 determination, above station. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1312: 1949(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11 | 10 | 9.4 | 10 | 8.9 | 7.2 | 6.5 | 9.5 | 6.1 | 8.6 | 11 | 11 |
| 2 | 10 | 9.9 | 9.5 | 9.9 | 9.2 | 6.4 | 5.4 | 9.9 | 5.1 | 8.0 | 10 | 10 |
| 3 | 11 | 10 | 9.2 | 9.9 | 8.3 | 5.4 | 5.5 | 9.9 | 4.1 | 7.7 | 10 | 11 |
| 4 | 11 | 10 | 9.5 | 9.5 | 9.2 | 6.3 | 7.0 | 11 | 4.8 | 8.9 | 10 | 11 |
| 5 | 11 | 10 | 9.2 | 9.5 | 9.9 | 7.3 | 6.7 | 11 | 4.9 | 8.9 | 9.9 | 11 |
| 6 | 12 | 10 | 8.9 | 9.9 | 7.2 | 9.2 | 6.0 | 9.5 | 5.0 | 8.9 | 10 | 11 |
| 7 | 12 | 10 | 9.1 | 9.9 | 7.2 | 9.2 | 5.9 | 9.5 | 5.3 | 9.2 | 10 | 11 |
| 8 | 12 | 9.5 | 9.2 | 8.0 | 7.5 | 9.9 | 5.6 | 9.5 | 4.8 | 9.2 | 9.9 | 11 |
| 9 | 12 | 9.6 | 8.9 | 9.2 | 9.2 | 9.9 | 5.6 | 10 | 3.9 | 9.5 | 9.9 | 9.9 |
| 10 | 12 | 9.5 | 9.2 | 7.1 | 8.3 | 9.5 | 6.3 | 11 | 6.9 | 9.5 | 9.9 | 9.9 |
| 11 | 12 | 9.9 | 9.2 | 9.2 | 6.7 | 8.6 | 5.8 | 10 | 6.8 | 9.5 | 9.9 | 8.6 |
| 12 | 12 | 10 | 9.4 | 8.3 | 9.5 | 14 | 7.0 | 9.9 | 7.1 | 9.2 | 9.5 | 9.9 |
| 13 | 11 | 10 | 9.5 | 8.2 | 10 | 11 | 7.9 | 7.7 | 7.0 | 8.6 | 8.9 | 11 |
| 14 | 11 | 9.7 | 9.3 | 8.9 | 10 | 7.2 | 9.2 | 12 | 7.1 | 8.9 | 9.5 | 11 |
| 15 | 10 | 9.9 | 9.5 | 8.9 | 9.9 | 7.2 | 2.7 | 12 | 7.0 | 9.5 | 9.5 | 11 |
| 16 | 10 | 9.8 | 9.4 | 8.6 | 11 | 7.7 | 2.6 | 12 | 6.6 | 9.5 | 9.9 | 11 |
| 17 | 9.9 | 9.7 | 9.5 | 8.0 | 11 | 7.7 | 6.4 | 12 | 6.7 | 9.5 | 10 | 11 |
| 18 | 9.4 | 9.8 | 10 | 7.5 | 11 | 5.9 | 17 | 12 | 8.1 | 9.5 | 10 | 11 |
| 19 | 9.4 | 9.9 | 9.9 | 8.9 | 10 | 5.9 | 5.8 | 11 | 9.9 | 9.2 | 11 | 11 |
| 20 | 10 | 9.7 | 9.9 | 9.9 | 6.7 | 5.8 | 3.7 | 12 | 10 | 9.2 | 12 | 12 |
| 21 | 9.6 | 9.7 | 9.5 | 9.5 | 6.2 | 6.0 | 5.9 | 12 | 9.5 | 8.9 | 12 | 12 |
| 22 | 9.8 | 9.5 | 9.8 | 7.4 | 6.1 | 6.2 | 6.5 | 12 | 9.5 | 8.9 | 11 | 10 |
| 23 | 10 | 9.5 | 9.8 | 7.2 | 8.9 | 5.4 | 6.7 | 7.5 | 9.5 | 8.9 | 11 | 11 |
| 24 | 10 | 9.8 | 9.8 | 7.1 | 7.7 | 6.2 | 5.7 | 5.2 | 6.9 | 9.2 | 11 | 11 |
| 25 | 11 | 9.6 | 10 | 8.6 | 9.5 | 6.9 | 6.0 | 5.2 | 9.5 | 9.5 | 11 | 11 |
| 26 | 10 | 9.5 | 11 | 9.5 | 8.3 | 7.2 | 5.8 | 4.8 | 9.2 | 9.9 | 11 | 11 |
| 27 | 10 | 9.9 | 11 | 9.5 | 8.9 | 8.2 | 7.0 | 4.5 | 9.5 | 9.9 | 11 | 11 |
| 28 | 9.9 | 9.6 | 11 | 9.2 | 8.6 | 9.1 | 8.0 | 6.2 | 9.9 | 9.5 | 11 | 11 |
| 29 | 10 | ------ | 10 | 8.6 | 8.3 | 8.6 | 6.7 | 8.3 | 9.5 | 9.9 | 11 | 11 |
| 30 | 10 | ------ | 10 | 8.3 | 9.2 | 8.6 | 9.2 | 54 | 8.9 | 10 | 11 | 11 |
| 31 | 10 | ------ | 10 | ------ | 8.0 | ------ | 47 | 6.4 | ------ | 11 | ------ | 11 |
| TOTAL | 329.0 | 274.0 | 299.6 | 264.2 | 270.4 | 233.7 | 243.1 | 337.5 | 219.1 | 286.6 | 311.8 | 335.3 |
| MEAN | 10.6 | 9.79 | 9.66 | 8.81 | 8.72 | 7.79 | 7.84 | 10.9 | 7.30 | 9.25 | 10.4 | 10.8 |
| MAX | 12 | 10 | 11 | 10 | 11 | 14 | 47 | 54 | 10 | 11 | 12 | 12 |
| MIN | 9.4 | 9.5 | 8.9 | 7.1 | 6.1 | 5.4 | 2.6 | 4.5 | 3.9 | 7.7 | 8.9 | 8.6 |
| AC-FT | 653 | 543 | 594 | 524 | 536 | 464 | 482 | 669 | 435 | 568 | 618 | 665 |

CAL YR 1973 TOTAL 3,404.3 MEAN 9.33 MAX 54 MIN 2.6 AC-FT 6,750
WTR YR 1973 TOTAL 3,379.9 MEAN 9.26 MAX 54 MIN 2.6 AC-FT 6,700

PEAK DISCHARGE (BASE, 125 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 6-12 | 1600 | 3.06 | about 140 | 7-31 | 1530 | 3.50 | about 1,100 |
| 7-14 | 1430 | 2.78 | about 150 | 8-30 | 0145 | 3.94 | about 2,100 |
| 7-18 | 2015 | 2.94 | about 270 | | | | |

NOTE.--Stage-discharge relation indefinite above 15 cfs.

## 08486250 TULAROSA VALLEY TRIBUTARY NEAR WHITE SANDS, N. MEX.

LOCATION.--Lat 32°24'11", long 106°28'46", in SW¼SW¼ sec.7, T.22 S., R.5 E., Dona Ana County, on right upstream wingwall of culvert on paved road 1.2 mi (1.9 km) north of entrance gate to White Sands Missile Range, and 2.6 mi (4.2 km) south of U. S. Highway 70.

DRAINAGE AREA.--17.2 mi² (44.5 km²).

PERIOD OF RECORD.--August 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,230 ft (1,289.3 m) from topographic map.

AVERAGE DISCHARGE.--8 calendar years, .094 ft³/s (0.0027 m³/s), 68 acre-ft/yr (83,800 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 66 ft³/s (1.87 m³/s) July 17 (gage height, 2.75 ft or 0.838 m); no flow for most of time.
Period of record: Maximum discharge, 1,460 ft³/s (41.3 m³/s) Aug. 31, 1969 (gage height, 5.85 ft or 1.783 m) from rating curve extended on basis of slope-area measurements at gage heights 4.34 ft (1.323 m) 5.64 ft (1.719 m), and 5.85 ft (1.783 m); no flow for most of time.

REMARKS.--Records poor.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | 0 | | | | | |
| 2 | | | | | | | 0 | | | | | |
| 3 | | | | | | | 0 | | | | | |
| 4 | | | | | | | 0 | | | | | |
| 5 | | | | | | | 0 | | | | | |
| 6 | | | | | | | 0 | | | | | |
| 7 | | | | | | | 0 | | | | | |
| 8 | | | | | | | 0 | | | | | |
| 9 | | | | | | | 0 | | | | | |
| 10 | | | | | | | .07 | | | | | |
| 11 | | | | | | | 0 | | | | | |
| 12 | | | | | | | 0 | | | | | |
| 13 | | | | | | | 0 | | | | | |
| 14 | | | | | | | .62 | | | | | |
| 15 | | | | | | | .52 | | | | | |
| 16 | | | | | | | 0 | | | | | |
| 17 | | | | | | | 2.5 | | | | | |
| 18 | | | | | | | 0 | | | | | |
| 19 | | | | | | | 0 | | | | | |
| 20 | | | | | | | 0 | | | | | |
| 21 | | | | | | | 0 | | | | | |
| 22 | | | | | | | 0 | | | | | |
| 23 | | | | | | | 0 | | | | | |
| 24 | | | | | | | 0 | | | | | |
| 25 | | | | | | | 2.2 | | | | | |
| 26 | | | | | | | 1.4 | | | | | |
| 27 | | | | | | | 0 | | | | | |
| 28 | | | | | | | .64 | | | | | |
| 29 | | ------ | | | | | 0 | | | | | |
| 30 | | ------ | | | | | .60 | | | | | |
| 31 | | ------ | | ------ | | ------ | 0 | | ------ | | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 8.55 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | 0 | 0 | .28 | 0 | 0 | 0 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | 0 | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 8.55 MEAN .023 MAX 2.5 MIN 0 AC-FT 17
WTR YR 1973 TOTAL 20.85 MEAN .057 MAX 4.0 MIN 0 AC-FT 41

PEAK DISCHARGE (BASE, 50 FT³/S).--JULY 17 (1900) 66 FT³/S (2.75 FT).

## 08486260 TULAROSA VALLEY TRIBUTARY AT WHITE SANDS, N. MEX.

LOCATION.--Lat 32°22'05", long 106°28'44", in SE¼NE¼ sec.25, T.22 S., R.4 E., Dona Ana County, on left upstream wingwall of culvert 2,000 ft (600 m) south of Raritan Avenue in White Sands.

DRAINAGE AREA.--21.0 mi² (54.4 km²).

PERIOD OF RECORD.--August 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,230 ft (1,289.3 m) from topographic map.

AVERAGE DISCHARGE.--8 calendar years, 0.109 ft³/s (0.0031 m³/s), 79 acre-ft/yr (97,400 m³/yr).

EXTREMES.--Current year: Maximum discharge, 172 ft³/s (4.87 m³/s) July 17 (gage height, 3.42 ft or 1.042 m); no flow for most of time.
Period of record: Maximum discharge, 909 ft³/s (25.7 m³/s) Aug. 31, 1969 (gage height, 5.45 ft or 1.661 m), from rating curve extended above 50 ft³/s (1.42 m³/s) on basis of slope-area measurements at gage heights 4.04 ft or 1.231 m (4.7 ft or 1.43 m, outside), 5.24 ft or 1.597 m (5.7 ft or 1.74 m, outside), 5.45 ft or 1.661 m, and 5.78 ft or 1.762 m; no flow most of time.

REMARKS.--Records poor.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | 0 | | | | | |
| 2 | | | | | | | 0 | | | | | |
| 3 | | | | | | | 0 | | | | | |
| 4 | | | | | | | 0 | | | | | |
| 5 | | | | | | | 0 | | | | | |
| 6 | | | | | | | 0 | | | | | |
| 7 | | | | | | | 0 | | | | | |
| 8 | | | | | | | 0 | | | | | |
| 9 | | | | | | | 0 | | | | | |
| 10 | | | | | | | 0 | | | | | |
| 11 | | | | | | | 0 | | | | | |
| 12 | | | | | | | 0 | | | | | |
| 13 | | | | | | | 0 | | | | | |
| 14 | | | | | | | 3.4 | | | | | |
| 15 | | | | | | | 6.8 | | | | | |
| 16 | | | | | | | 0 | | | | | |
| 17 | | | | | | | 10 | | | | | |
| 18 | | | | | | | 0 | | | | | |
| 19 | | | | | | | 0 | | | | | |
| 20 | | | | | | | 0 | | | | | |
| 21 | | | | | | | 0 | | | | | |
| 22 | | | | | | | 0 | | | | | |
| 23 | | | | | | | 0 | | | | | |
| 24 | | | | | | | 0 | | | | | |
| 25 | | | | | | | 0 | | | | | |
| 26 | | | | | | | 0 | | | | | |
| 27 | | | | | | | 0 | | | | | |
| 28 | | | | | | | 5.6 | | | | | |
| 29 | | ------ | | | | | 0 | | | | | |
| 30 | | ------ | | | | | 0 | | | | | |
| 31 | | ------ | | ------ | | ------ | 0 | | ------ | | ------ | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 25.8 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | 0 | 0 | .83 | 0 | 0 | 0 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 | 0 |

CAL YR 1973 TOTAL 25.80 MEAN .071 MAX 10 MIN 0 AC-FT 51
WTR YR 1973 TOTAL 40.17 MEAN .11 MAX 10 MIN 0 AC-FT 80

PEAK DISCHARGE (BASE, 350 FT³/S).--NO PEAK ABOVE BASE.

## 09346400 SAN JUAN RIVER NEAR CARRACAS, COLO.

LOCATION.--Lat 37°00'49", long 107°18'42", in SE¼SW¼ sec.17, T.32 N., R.4 W., Archuleta County, on right bank just upstream from flow line of Navajo Reservoir, 3 mi (5 km) northwest of Carracas, 7.2 mi (11.6 km) upstream from Piedra River, and at mile 332.8 (535.5 km).

DRAINAGE AREA.--1,230 mi² (3,190 km²), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 6,090 ft (1,856 m) from river-profile map.

AVERAGE DISCHARGE.--12 calendar years, 615 ft³/s (17.42 m³/s), 445,600 acre-ft/yr (549 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 6,720 ft³/s (190 m³/s) May 19 (gage height, 6.71 ft or 2.045 m); minimum daily, 85 ft³/s (2.41 m³/s) Dec. 6.
Period of record: Maximum discharge, 9,730 ft³/s (276 m³/s) Sept. 6, 1970 (gage height, 8.34 ft or 2.542 m), from rating curve extended above 5,700 ft³/s (161 m³/s) on basis of slope-area measurement of peak flow; minimum, about 5 ft³/s (0.14 m³/s) Dec. 10, 1961, result of freezeup.
Other major floods occurred Sept. 5 or 6, 1909; Oct. 5, 1911; June 29, 1927.

REMARKS.--Records good except those for September, October, and winter periods, which are poor. Diversions for irrigation of about 11,000 acres (44.5 km²) above atation. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 180 | 185 | 480 | 970 | 2,260 | 3,610 | 3,100 | 371 | 407 | 140 | 120 | 100 |
| 2 | 190 | 180 | 500 | 950 | 1,960 | 3,310 | 2,930 | 355 | 315 | 150 | 130 | 110 |
| 3 | 185 | 180 | 540 | 900 | 1,780 | 3,330 | 2,650 | 376 | 267 | 130 | 130 | 105 |
| 4 | 185 | 190 | 560 | 910 | 1,910 | 3,420 | 2,440 | 355 | 246 | 130 | 130 | 95 |
| 5 | 190 | 180 | 584 | 950 | 2,070 | 2,740 | 2,160 | 356 | 225 | 140 | 130 | 90 |
| 6 | 180 | 170 | 488 | 1,050 | 2,020 | 2,460 | 1,910 | 351 | 209 | 150 | 120 | 85 |
| 7 | 190 | 175 | 498 | 1,180 | 1,800 | 2,730 | 1,750 | 384 | 207 | 120 | 120 | 90 |
| 8 | 180 | 180 | 530 | 1,240 | 1,820 | 3,250 | 1,550 | 360 | 207 | 130 | 125 | 100 |
| 9 | 190 | 170 | 512 | 1,300 | 2,080 | 4,000 | 1,550 | 307 | 207 | 140 | 130 | 95 |
| 10 | 180 | 170 | 455 | 1,380 | 2,490 | 5,560 | 1,870 | 293 | 268 | 150 | 130 | 100 |
| 11 | 170 | 170 | 480 | 1,450 | 3,470 | 5,610 | 1,690 | 272 | 541 | 160 | 120 | 110 |
| 12 | 170 | 180 | 506 | 1,700 | 3,450 | 5,500 | 1,480 | 251 | 334 | 150 | 120 | 115 |
| 13 | 180 | 170 | 626 | 2,100 | 3,480 | 4,940 | 1,270 | 237 | 298 | 160 | 125 | 110 |
| 14 | 190 | 160 | 500 | 2,410 | 5,540 | 5,080 | 1,090 | 232 | 278 | 170 | 130 | 115 |
| 15 | 200 | 140 | 480 | 2,440 | 3,960 | 5,860 | 1,090 | 245 | 260 | 180 | 120 | 105 |
| 16 | 190 | 140 | 512 | 1,700 | 4,010 | 2,900 | 1,000 | 257 | 238 | 190 | 110 | 100 |
| 17 | 190 | 150 | 596 | 1,960 | 4,030 | 2,590 | 914 | 230 | 224 | 200 | 110 | 110 |
| 18 | 185 | 160 | 680 | 2,310 | 4,060 | 2,590 | 1,030 | 205 | 207 | 200 | 110 | 120 |
| 19 | 180 | 170 | 728 | 1,690 | 5,250 | 2,630 | 1,100 | 224 | 193 | 200 | 110 | 115 |
| 20 | 190 | 150 | 916 | 1,300 | 5,360 | 2,460 | 1,000 | 223 | 179 | 190 | 120 | 100 |
| 21 | 180 | 170 | 1,290 | 1,310 | 4,920 | 2,540 | 900 | 295 | 162 | 180 | 130 | 100 |
| 22 | 170 | 165 | 892 | 1,430 | 4,220 | 2,660 | 800 | 329 | 151 | 170 | 120 | 105 |
| 23 | 175 | 180 | 723 | 1,780 | 3,560 | 2,690 | 698 | 243 | 150 | 160 | 125 | 105 |
| 24 | 180 | 190 | 735 | 2,050 | 3,360 | 2,800 | 632 | 230 | 147 | 160 | 115 | 110 |
| 25 | 180 | 200 | 860 | 2,110 | 3,430 | 3,110 | 578 | 253 | 156 | 150 | 125 | 100 |
| 26 | 185 | 250 | 831 | 2,130 | 3,110 | 3,470 | 530 | 313 | 165 | 140 | 110 | 95 |
| 27 | 190 | 300 | 1,000 | 2,160 | 3,790 | 3,830 | 500 | 247 | 169 | 130 | 100 | 105 |
| 28 | 180 | 400 | 930 | 2,350 | 2,920 | 3,960 | 465 | 214 | 160 | 150 | 90 | 105 |
| 29 | 180 | ------ | 980 | 2,330 | 2,640 | 3,520 | 445 | 201 | 155 | 120 | 95 | 100 |
| 30 | 185 | ------ | 970 | 2,430 | 2,900 | 3,510 | 425 | 311 | 150 | 110 | 95 | 100 |
| 31 | 190 | ------ | 960 | ------ | 3,390 | ------ | 425 | 545 | ------ | 110 | ------ | 95 |
| TOTAL | 5,690 | 5,225 | 21,342 | 49,950 | 99,040 | 104,660 | 39,972 | 9,066 | 6,875 | 4,700 | 3,545 | 3,190 |
| MEAN | 184 | 187 | 688 | 1,665 | 3,195 | 3,489 | 1,289 | 292 | 229 | 152 | 118 | 103 |
| MAX | 200 | 400 | 1,290 | 2,440 | 5,360 | 5,610 | 3,100 | 545 | 541 | 200 | 130 | 120 |
| MIN | 170 | 140 | 455 | 900 | 1,780 | 2,460 | 425 | 201 | 147 | 110 | 90 | 85 |
| AC-FT | 11,290 | 10,360 | 42,330 | 99,080 | 196,400 | 207,600 | 79,280 | 17,980 | 13,640 | 9,320 | 7,030 | 6,330 |

CAL YR 1973 TOTAL 353,255 MEAN 968 MAX 5,610 MIN 85 AC-FT 700,700
WTR YR 1973 TOTAL 383,502 MEAN 1,051 MAX 5,610 MIN 83 AC-FT 760,700

PEAK DISCHARGE (BASE, 2,500 CFS).--MAY 19 (0530) 6,720 CFS (6.71 FT); JUNE 10 (1215) 6,630 CFS (6.85 FT).

## 09349800 PIEDRA RIVER NEAR ARBOLES, COLO.

LOCATION.--Lat 37°05'18", long 107°23'50", in NE¼SW¼ sec.21, T.33 N., R.5 W., Archuleta County, on left bank 3 mi (5 km) downstream from Ignacio Creek, 5.2 mi (8.4 km) northeast of Arboles Post Office, and 8 mi (13 km) upstream from mouth.

DRAINAGE AREA.--629 mi² (1,630 km²).

PERIOD OF RECORD.--August 1962 to current year. Gage operated 1895-1899, 1910-1927 at a site 7.5 mi (12.1 km) downstream at altitude 6,000 ft (1,830 m). Low flow records probably not equivalent.

GAGE.--Water-stage recorder. Datum of gage is 6,147.52 ft (1,873.764 m) above mean sea level from Colorado State Highway Department bench mark.

AVERAGE DISCHARGE.--11 calendar years, 352 ft³/s (9.969 m³/s), 255,000 acre-ft/yr (314 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 4,380 ft³/s (124 m³/s) May 19 (gage height, 5.15 ft or 1.570 m); minimum, 40 ft³/s (1.13 m³/s) Dec. 27.
Period of record: Maximum discharge, 8,370 ft³/s (237 m³/s) Sept. 6, 1970 (gage height, 6.38 ft or 1.945 m recorded, 7.55 ft or 2.301 m from floodmarks), from rating curve extended above 3,300 ft³/s (93.5 m³/s) on basis of slope-area measurement of peak flow; minimum, 11 ft³/s (0.31 m³/s) Dec. 9, 1963, Oct. 1, 1966.
Other major floods occurred Sept. 5 or 6, 1909; Oct. 5, 1911.

REMARKS.--Records good except those for winter periods, which are poor. Diversions for irrigation of about 2,800 acres (11.3 km²) above station. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 142 | 122 | 370 | 552 | 2,490 | 2,460 | 1,820 | 241 | 211 | 92 | 82 | 67 |
| 2 | 145 | 120 | 590 | 534 | 2,070 | 2,360 | 1,710 | 220 | 184 | 88 | 80 | 70 |
| 3 | 154 | 133 | 590 | 492 | 2,020 | 2,100 | 1,530 | 214 | 154 | 88 | 82 | 74 |
| 4 | 142 | 130 | 380 | 450 | 2,310 | 2,340 | 1,510 | 208 | 142 | 86 | 84 | 70 |
| 5 | 145 | 125 | 545 | 500 | 2,470 | 1,960 | 1,220 | 205 | 128 | 92 | 82 | 67 |
| 6 | 139 | 128 | 305 | 590 | 2,120 | 1,840 | 1,140 | 211 | 122 | 96 | 78 | 57 |
| 7 | 139 | 139 | 296 | 700 | 1,750 | 2,050 | 1,000 | 208 | 118 | 98 | 76 | 74 |
| 8 | 139 | 145 | 310 | 580 | 1,890 | 2,380 | 924 | 211 | 110 | 98 | 78 | 76 |
| 9 | 151 | 145 | 315 | 550 | 2,260 | 2,780 | 933 | 178 | 106 | 96 | 76 | 78 |
| 10 | 157 | 145 | 296 | 750 | 2,780 | 3,180 | 942 | 166 | 133 | 104 | 76 | 72 |
| 11 | 136 | 151 | 545 | 888 | 3,320 | 3,160 | 814 | 157 | 244 | 108 | 74 | 72 |
| 12 | 128 | 157 | 550 | 1,120 | 3,460 | 3,050 | 726 | 151 | 214 | 112 | 72 | 70 |
| 13 | 136 | 157 | 385 | 1,350 | 3,220 | 2,920 | 661 | 145 | 187 | 112 | 72 | 70 |
| 14 | 148 | 160 | 540 | 1,670 | 3,670 | 3,520 | 577 | 136 | 163 | 116 | 74 | 67 |
| 15 | 157 | 145 | 505 | 1,820 | 3,440 | 2,700 | 577 | 139 | 145 | 116 | 74 | 72 |
| 16 | 163 | 145 | 515 | 1,260 | 3,360 | 2,020 | 554 | 133 | 133 | 118 | 67 | 55 |
| 17 | 166 | 160 | 565 | 1,350 | 3,360 | 1,750 | 480 | 125 | 124 | 116 | 65 | 72 |
| 18 | 163 | 166 | 580 | 1,850 | 3,380 | 1,740 | 516 | 118 | 116 | 116 | 62 | 72 |
| 19 | 157 | 166 | 590 | 1,360 | 4,000 | 1,750 | 584 | 118 | 108 | 118 | 67 | 74 |
| 20 | 151 | 184 | 468 | 1,010 | 3,950 | 1,610 | 516 | 120 | 104 | 116 | 68 | 74 |
| 21 | 139 | 163 | 640 | 942 | 3,630 | 1,640 | 445 | 125 | 102 | 110 | 68 | 70 |
| 22 | 130 | 160 | 498 | 915 | 3,290 | 1,670 | 400 | 160 | 96 | 108 | 67 | 72 |
| 23 | 145 | 157 | 425 | 1,270 | 2,840 | 1,720 | 355 | 145 | 92 | 104 | 67 | 80 |
| 24 | 142 | 163 | 420 | 1,880 | 2,700 | 1,790 | 305 | 133 | 94 | 102 | 65 | 74 |
| 25 | 142 | 178 | 415 | 2,130 | 2,710 | 1,810 | 284 | 151 | 92 | 98 | 72 | 80 |
| 26 | 142 | 205 | 462 | 2,420 | 3,180 | 1,920 | 268 | 181 | 96 | 94 | 72 | 70 |
| 27 | 148 | 241 | 528 | 2,600 | 2,740 | 2,180 | 260 | 172 | 96 | 92 | 68 | 57 |
| 28 | 130 | 305 | 522 | 3,090 | 2,160 | 2,220 | 244 | 145 | 92 | 92 | 67 | 60 |
| 29 | 133 | ------ | 522 | 3,290 | 2,070 | 2,030 | 232 | 133 | 92 | 88 | 76 | 58 |
| 30 | 135 | ------ | 552 | 3,270 | 2,220 | 1,980 | 235 | 151 | 92 | 88 | 72 | 60 |
| 31 | 128 | ------ | 540 | ------ | 2,390 | ------ | 244 | 229 | ------ | 86 | ------ | 58 |
| TOTAL | 4,470 | 4,495 | 12,564 | 41,183 | 87,250 | 66,330 | 21,786 | 5,129 | 3,890 | 3,148 | 2,185 | 2,142 |
| MEAN | 144 | 161 | 405 | 1,373 | 2,815 | 2,211 | 703 | 165 | 130 | 102 | 72.8 | 69.1 |
| MAX | 166 | 305 | 640 | 3,290 | 4,000 | 3,520 | 1,820 | 241 | 244 | 118 | 84 | 80 |
| MIN | 128 | 120 | 296 | 450 | 1,750 | 1,610 | 232 | 118 | 92 | 86 | 62 | 55 |
| AC-FT | 8,870 | 8,920 | 24,920 | 81,690 | 173,100 | 131,600 | 43,210 | 10,170 | 7,720 | 6,240 | 4,330 | 4,250 |

CAL YR 1973 TOTAL 254,570 MEAN 697 MAX 4,000 MIN 55 AC-FT 504,900
WTR YR 1973 TOTAL 282,412 MEAN 774 MAX 4,140 MIN 34 AC-FT 560,200

PEAK DISCHARGE (BASE, 1,500 CFS).--MAY 19 (0530) 4,380 CFS (5.15 FT).

## 09354500 LOS PINOS RIVER AT LA BOCA, COLO.

LOCATION.--Lat 37°00'37", long 107°35'49", in S½ sec.15, T.32 N., R.7 W., La Plata County, on downstream end of right abutment of the Denver & Rio Grande Western Railroad Co. bridge, at southeast edge of La Boca, 0.1 mi (0.2 km) upstream from Spring Creek, and 13 mi (21 km) upstream from mouth.

DRAINAGE AREA.--510 mi² (1,320 km²), approximately.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733.

GAGE.--Water-stage recorder. Datum of gage is 6,143.58 ft (1,872.563 m) above mean sea level.

AVERAGE DISCHARGE.--23 calendar years, 204 ft³/s (5.777 m³/s), 147,800 acre-ft/yr (182 hm³/yr); 20 calendar years (1954-73), 208 ft³/s (5.891 m³/s) 150,700 acre-ft/yr (186 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,580 ft³/s (73.1 m³/s) May 15 (gage height, 6.71 ft or 2.045 m); minimum 32 ft³/s (0.91 m³/s) Dec. 4.
Period of record: Maximum discharge, 6,400 ft³/s (181 m³/s) July 27, 1957 (gage height, 8.95 ft or 2.728 m), from rating curve extended above 5,100 ft³/s (144 m³/s); minimum determined, 13 ft³/s (0.37 m³/s) Apr. 23, 1951 (may have been lower during periods of freezeup).
A major flood occurred Oct. 5, 1911 at this location.

REMARKS.--Records good except those for winter periods, which are poor. Flow regulated by Vallecito Reservoir 24 mi (39 km) upstream since April 1941, (see sta 09353000). Diversions for irrigation of about 33,000 acres (134 km²) above station. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 150 | 160 | 290 | 626 | 1,480 | 1,080 | 1,790 | 267 | 434 | 263 | 57 | 65 |
| 2 | 130 | 150 | 340 | 554 | 1,370 | 1,420 | 1,790 | 255 | 355 | 242 | 59 | 60 |
| 3 | 130 | 150 | 404 | 480 | 1,320 | 1,430 | 1,740 | 207 | 336 | 244 | 62 | 53 |
| 4 | 140 | 150 | 421 | 515 | 1,340 | 1,660 | 1,480 | 207 | 289 | 232 | 60 | 46 |
| 5 | 145 | 150 | 397 | 748 | 1,410 | 1,450 | 1,180 | 221 | 206 | 141 | 59 | 48 |
| 6 | 130 | 160 | 340 | 1,000 | 1,370 | 1,320 | 1,140 | 310 | 182 | 85 | 50 | 45 |
| 7 | 130 | 180 | 326 | 1,110 | 1,220 | 549 | 1,140 | 407 | 181 | 63 | 56 | 59 |
| 8 | 130 | 170 | 355 | 956 | 1,000 | 254 | 1,190 | 224 | 175 | 54 | 54 | 70 |
| 9 | 120 | 160 | 322 | 853 | 776 | 1,040 | 1,150 | 204 | 165 | 57 | 53 | 68 |
| 10 | 150 | 170 | 310 | 908 | 940 | 1,130 | 996 | 192 | 289 | 66 | 53 | 90 |
| 11 | 150 | 180 | 302 | 1,320 | 980 | 1,280 | 924 | 187 | 374 | 71 | 60 | 95 |
| 12 | 140 | 160 | 322 | 1,490 | 1,560 | 1,280 | 970 | 174 | 263 | 68 | 56 | 95 |
| 13 | 150 | 140 | 430 | 1,510 | 1,650 | 1,710 | 992 | 169 | 236 | 58 | 74 | 90 |
| 14 | 140 | 140 | 375 | 1,340 | 2,010 | 2,290 | 974 | 155 | 231 | 52 | 74 | 90 |
| 15 | 145 | 150 | 360 | 1,360 | 2,330 | 2,230 | 977 | 168 | 245 | 49 | 70 | 95 |
| 16 | 150 | 150 | 375 | 1,090 | 2,090 | 1,800 | 904 | 165 | 231 | 51 | 80 | 90 |
| 17 | 150 | 140 | 422 | 1,100 | 2,090 | 1,500 | 701 | 155 | 215 | 49 | 76 | 90 |
| 18 | 160 | 150 | 479 | 1,190 | 2,100 | 1,160 | 734 | 168 | 196 | 51 | 74 | 95 |
| 19 | 160 | 150 | 617 | 948 | 2,150 | 1,090 | 706 | 177 | 309 | 47 | 78 | 90 |
| 20 | 180 | 140 | 852 | 804 | 2,140 | 1,060 | 657 | 210 | 749 | 40 | 80 | 90 |
| 21 | 170 | 141 | 1,320 | 762 | 2,190 | 1,040 | 613 | 242 | 948 | 42 | 74 | 90 |
| 22 | 150 | 139 | 584 | 714 | 2,440 | 1,140 | 601 | 288 | 961 | 41 | 76 | 90 |
| 23 | 130 | 140 | 437 | 781 | 2,390 | 1,500 | 550 | 224 | 882 | 59 | 82 | 95 |
| 24 | 130 | 169 | 462 | 901 | 2,280 | 1,760 | 428 | 259 | 625 | 41 | 68 | 90 |
| 25 | 140 | 178 | 618 | 962 | 2,290 | 1,780 | 393 | 298 | 441 | 55 | 74 | 90 |
| 26 | 140 | 187 | 706 | 1,040 | 2,290 | 1,840 | 351 | 371 | 456 | 56 | 78 | 85 |
| 27 | 150 | 203 | 692 | 1,090 | 2,170 | 2,170 | 290 | 324 | 388 | 56 | 80 | 90 |
| 28 | 150 | 236 | 572 | 1,190 | 1,800 | 2,180 | 267 | 308 | 253 | 60 | 80 | 85 |
| 29 | 140 | ------ | 542 | 1,250 | 1,500 | 2,080 | 282 | 284 | 257 | 56 | 80 | 90 |
| 30 | 140 | ------ | 626 | 1,520 | 1,250 | 1,800 | 286 | 451 | 273 | 54 | 80 | 90 |
| 31 | 140 | ------ | 706 | ------ | 972 | ------ | 287 | 533 | ------ | 54 | ------ | 80 |
| TOTAL | 4,460 | 4,393 | 15,304 | 30,112 | 52,678 | 44,043 | 26,463 | 7,782 | 11,145 | 2,537 | 2,057 | 2,519 |
| MEAN | 144 | 157 | 494 | 1,004 | 1,699 | 1,468 | 854 | 251 | 372 | 81.8 | 68.6 | 81.3 |
| MAX | 180 | 236 | 1,320 | 1,520 | 2,440 | 2,290 | 1,790 | 533 | 961 | 263 | 82 | 95 |
| MIN | 120 | 130 | 290 | 480 | 776 | 254 | 267 | 155 | 165 | 39 | 50 | 45 |
| AC-FT | 8,850 | 8,710 | 30,360 | 59,730 | 104,500 | 87,360 | 52,490 | 15,440 | 22,110 | 5,030 | 4,080 | 5,000 |

CAL YR 1973 TOTAL 205,493 MEAN 558 MAX 2,440 MIN 39 AC-FT 403,600
WTR YR 1973 TOTAL 212,546 MEAN 582 MAX 2,440 MIN 74 AC-FT 421,600

## 09355000 SPRING CREEK AT LA BOCA, COLO.

LOCATION.--Lat 37°00'46", long 107°35'42", in S½ sec.15, T.32 N., R.7 W., La Plata County, on right bank in an excavated channel, 0.2 mi (0.3 km) upstream from mouth, and 0.2 mi (0.3 km) east of La Boca.

DRAINAGE AREA.--58 mi² (150 km²), approximately.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733.

GAGE.--Water-stage recorder. Altitude of gage is 6,160 ft (1,878 m) from topographic map.

AVERAGE DISCHARGE.--23 calendar years, 29.7 ft³/s (0.841 m³/s), 21,520 acre-ft/yr (26.5 hm³/yr); 20 calendar years (1954-73), 30.1 ft³/s (0.852 m³/s) 21,810 acre-ft/yr (26.9 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 370 ft³/s (10.5 m³/s) Mar. 30 (gage height, 2.23 ft or 0.680 m); minimum 1.5 ft³/s (0.042 m³/s) Jan. 8.
Period of record: Maximum discharge, 1,980 ft³/s (56.1 m³/s) Sept. 6, 1970 (gage height, 4.62 ft or 1.408 m), from rating curve extended above 160 ft³/s (4.53 m³/s) on basis of field estimate of peak flow; maximum gage height, 5.98 ft (1.823 m) Mar. 9, 1960 (backwater from ice); minimum discharge, 0.6 ft³/s (0.017 m³/s) Nov. 27, 1959.

REMARKS.--Records good except those for winter periods, which are poor. Part of flow is return waste from irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.1 | 2.2 | 89 | 57 | 72 | 36 | 70 | 70 | 70 | 56 | 6.7 | 4.0 |
| 2 | 1.8 | 2.0 | 80 | 49 | 68 | 53 | 69 | 70 | 69 | 52 | 5.9 | 5.5 |
| 3 | 1.9 | 2.0 | 84 | 40 | 66 | 62 | 67 | 66 | 66 | 47 | 5.9 | 3.0 |
| 4 | 2.1 | 2.2 | 72 | 35 | 66 | 109 | 69 | 66 | 64 | 46 | 5.5 | 2.5 |
| 5 | 2.0 | 2.1 | 52 | 28 | 70 | 63 | 70 | 76 | 73 | 38 | 5.5 | 2.7 |
| 6 | 1.8 | 2.5 | 46 | 23 | 68 | 67 | 69 | 70 | 73 | 21 | 5.9 | 2.5 |
| 7 | 1.7 | 2.6 | 50 | 19 | 59 | 56 | 69 | 31 | 72 | 16 | 5.1 | 2.9 |
| 8 | 1.5 | 2.4 | 55 | 16 | 48 | 42 | 70 | 41 | 69 | 12 | 5.1 | 3.5 |
| 9 | 1.9 | 2.1 | 41 | 13 | 40 | 43 | 72 | 69 | 70 | 9.9 | 4.7 | 4.5 |
| 10 | 2.0 | 2.3 | 41 | 19 | 45 | 57 | 76 | 70 | 115 | 9.3 | 4.7 | 5.0 |
| 11 | 2.1 | 2.5 | 47 | 35 | 50 | 62 | 69 | 70 | 128 | 10 | 4.7 | 5.5 |
| 12 | 1.9 | 1.9 | 51 | 51 | 64 | 57 | 69 | 72 | 76 | 8.7 | 4.7 | 5.5 |
| 13 | 2.2 | 2.0 | 89 | 55 | 80 | 69 | 72 | 69 | 66 | 8.1 | 4.7 | 5.0 |
| 14 | 2.0 | 1.8 | 55 | 51 | 100 | 88 | 72 | 64 | 67 | 7.5 | 4.3 | 5.0 |
| 15 | 2.1 | 1.8 | 51 | 51 | 66 | 73 | 72 | 63 | 67 | 8.1 | 4.3 | 5.5 |
| 16 | 2.2 | 2.0 | 64 | 24 | 46 | 69 | 70 | 63 | 64 | 8.1 | 4.7 | 5.0 |
| 17 | 2.3 | 1.9 | 80 | 28 | 33 | 64 | 72 | 60 | 64 | 8.1 | 4.3 | 5.0 |
| 18 | 2.4 | 1.9 | 94 | 44 | 35 | 67 | 83 | 62 | 60 | 8.7 | 4.7 | 5.5 |
| 19 | 2.2 | 2.0 | 116 | 36 | 35 | 66 | 88 | 60 | 56 | 8.1 | 4.3 | 5.0 |
| 20 | 2.5 | 2.1 | 111 | 21 | 35 | 67 | 80 | 69 | 60 | 8.1 | 4.7 | 5.0 |
| 21 | 2.5 | 3.0 | 106 | 20 | 37 | 69 | 75 | 76 | 60 | 8.1 | 5.1 | 5.0 |
| 22 | 1.9 | 4.0 | 62 | 16 | 43 | 69 | 76 | 118 | 62 | 9.3 | 4.7 | 5.0 |
| 23 | 1.8 | 8.1 | 47 | 24 | 47 | 70 | 76 | 83 | 62 | 11 | 4.7 | 5.5 |
| 24 | 1.9 | 12 | 39 | 37 | 59 | 75 | 72 | 88 | 60 | 8.7 | 4.6 | 5.0 |
| 25 | 2.0 | 46 | 39 | 45 | 57 | 73 | 69 | 81 | 69 | 8.1 | 4.3 | 5.0 |
| 26 | 2.0 | 66 | 37 | 51 | 69 | 72 | 70 | 86 | 89 | 8.1 | 4.5 | 4.5 |
| 27 | 2.1 | 81 | 42 | 54 | 67 | 69 | 67 | 83 | 84 | 7.1 | 4.7 | 5.0 |
| 28 | 2.2 | 107 | 36 | 58 | 62 | 69 | 67 | 76 | 67 | 7.1 | 4.7 | 4.5 |
| 29 | 2.1 | ------ | 67 | 62 | 52 | 66 | 76 | 75 | 66 | 6.7 | 4.7 | 5.0 |
| 30 | 1.9 | ------ | 152 | 78 | 47 | 69 | 78 | 99 | 56 | 6.7 | 4.7 | 5.0 |
| 31 | 2.0 | ------ | 76 | ------ | 36 | ------ | 76 | 86 | ------ | 6.3 | ------ | 4.0 |
| TOTAL | 65.1 | 369.4 | 2,111 | 1,158 | 1,722 | 1,971 | 2,250 | 2,232 | 2,122 | 477.9 | 147.1 | 139.6 |
| MEAN | 2.04 | 13.2 | 68.1 | 37.9 | 55.5 | 65.7 | 72.6 | 72.0 | 70.7 | 15.4 | 4.90 | 4.50 |
| MAX | 2.5 | 107 | 152 | 78 | 100 | 109 | 88 | 118 | 128 | 56 | 6.7 | 5.5 |
| MIN | 1.5 | 1.8 | 36 | 13 | 35 | 36 | 67 | 31 | 56 | 6.3 | 4.3 | 2.5 |
| AC-FT | 125 | 733 | 4,190 | 2,260 | 3,420 | 3,910 | 4,460 | 4,430 | 4,210 | 948 | 292 | 277 |

CAL YR 1973 TOTAL 14,743.1 MEAN 40.4 MAX 152 MIN 1.5 AC-FT 29,240
WTR YR 1973 TOTAL 17,255.8 MEAN 47.3 MAX 702 MIN 1.5 AC-FT 34,230

PEAK DISCHARGE (BASE, 180 CFS)

| DATE | TIME | G.H. | DISCHARGE | DATE | TIME | G.H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 3-19 | 2000 | 1.96 | 271 | 8-22 | 0615 | 1.75 | 208 |
| 3-30 | 1900 | 2.23 | 370 | 9-11 | 0200 | 1.84 | 226 |

09355100 NAVAJO RESERVOIR NEAR ARCHULETA, N. MEX.

LOCATION.--Lat 36°48'28", long 107°36'31", in SW¼SE¼ sec.18, T.30 N., R.7 W., San Juan County, in gage shaft of outlet works structure near right abutment of Navajo Dam on San Juan River, 5.5 mi (8.8 km) east of Archuleta, 33 mi (53 km) east of Farmington, and at mile 298.6 (480.4 km).

DRAINAGE AREA.--3,230 mi² (8,370 km²), approximately.

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1968 dead storage included.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum daily contents, 1,731,000 acre-ft (2.13 km³) July 2-4 (elevation, 6,087.25 ft or 1,855.394 m); minimum daily 888,200 acre-ft (1.10 km³) Feb. 27, 28 (elevation, 6,017.63 ft or 1,834.174 m).
Period of record: Maximum daily contents, 1,731,000 acre-ft (2.13 km³) July 2-4, 1973 (elevation, 6,087.25 ft or 1,855.394 m); minimum daily after June 1964 (initial filling period), 234,300 acre-ft (289 hm³) Mar. 10, 11, 1965 (elevation, 5,906.36 ft or 1,800.259 m).

REMARKS.--Reservoir is formed by earth-rock-fill dam, completed in June 1963; storage began June 27, 1962. Capacity, 1,708,600 acre-ft (2.11 km³) between elevation 5,720 ft (1,743 m) upstream toe of dam and 6,085 ft (1,855 m) crest of spillway. Usable capacity 1,696,000 acre-ft (2.09 km³) above elevation 5,774.9 ft (1,760.19 m) minimum operating level. Dead storage below elevation 5,774.9 ft (1,760.19 m) is 12,600 acre-ft (15.5 hm³). Figures given herein are usable contents. Reservoir is used for irrigation storage, river regulation, desilting, flood control, and recreation.

COOPERATION.--Records furnished by Bureau of Reclamation.

Capacity table (elevation, in feet and contents, in thousands of acre-feet)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6,015 | 864.5 | 6,035 | 1,056.7 | 6,055 | 1,281.3 | 6,075 | 1,546.2 |
| 6,020 | 910.1 | 6,040 | 1,109.4 | 6,060 | 1,343.5 | 6,080 | 1,619.5 |
| 6,025 | 957.2 | 6,045 | 1,164.3 | 6,065 | 1,408.3 | 6,085 | 1,696.0 |
| 6,030 | 1,006.0 | 6,050 | 1,221.6 | 6,070 | 1,475.8 | 6,090 | 1,775.7 |

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 981.8 | 943.9 | 891.0 | 976.5 | 1,185 | 1,514 | 1,729 | 1,639 | 1,488 | 1,391 | 1,300 | 1,206 |
| 2 | 980.6 | 942.0 | 894.5 | 978.9 | 1,194 | 1,523 | 1,731 | 1,633 | 1,483 | 1,388 | 1,296 | 1,204 |
| 3 | 979.7 | 939.8 | 897.5 | 981.4 | 1,201 | 1,534 | 1,731 | 1,628 | 1,478 | 1,385 | 1,293 | 1,201 |
| 4 | 978.7 | 937.6 | 900.2 | 983.1 | 1,208 | 1,547 | 1,731 | 1,624 | 1,473 | 1,382 | 1,290 | 1,199 |
| 5 | 977.9 | 935.7 | 902.3 | 985.4 | 1,215 | 1,555 | 1,729 | 1,619 | 1,468 | 1,379 | 1,287 | 1,196 |
| 6 | 976.6 | 934.2 | 904.0 | 989.2 | 1,221 | 1,564 | 1,726 | 1,614 | 1,463 | 1,376 | 1,284 | 1,193 |
| 7 | 975.7 | 932.5 | 905.6 | 994.6 | 1,226 | 1,572 | 1,724 | 1,610 | 1,458 | 1,374 | 1,281 | 1,189 |
| 8 | 974.8 | 931.1 | 907.3 | 997.5 | 1,231 | 1,579 | 1,721 | 1,605 | 1,453 | 1,370 | 1,278 | 1,186 |
| 9 | 973.9 | 929.2 | 909.5 | 1,000 | 1,237 | 1,590 | 1,718 | 1,600 | 1,449 | 1,368 | 1,275 | 1,183 |
| 10 | 973.0 | 927.4 | 911.3 | 1,003 | 1,246 | 1,603 | 1,716 | 1,595 | 1,446 | 1,365 | 1,272 | 1,180 |
| 11 | 972.1 | 925.7 | 913.0 | 1,010 | 1,258 | 1,617 | 1,716 | 1,590 | 1,442 | 1,361 | 1,268 | 1,177 |
| 12 | 971.0 | 924.1 | 914.7 | 1,018 | 1,271 | 1,632 | 1,714 | 1,584 | 1,439 | 1,359 | 1,265 | 1,173 |
| 13 | 969.9 | 922.4 | 917.1 | 1,027 | 1,285 | 1,644 | 1,714 | 1,579 | 1,435 | 1,355 | 1,262 | 1,171 |
| 14 | 969.0 | 920.6 | 918.8 | 1,036 | 1,300 | 1,659 | 1,714 | 1,574 | 1,431 | 1,352 | 1,259 | 1,168 |
| 15 | 968.2 | 918.8 | 920.3 | 1,046 | 1,314 | 1,668 | 1,713 | 1,569 | 1,427 | 1,350 | 1,255 | 1,165 |
| 16 | 967.4 | 916.2 | 921.8 | 1,053 | 1,326 | 1,674 | 1,710 | 1,564 | 1,423 | 1,346 | 1,252 | 1,162 |
| 17 | 966.6 | 913.4 | 923.8 | 1,060 | 1,339 | 1,677 | 1,706 | 1,559 | 1,420 | 1,343 | 1,249 | 1,158 |
| 18 | 966.3 | 910.5 | 926.2 | 1,070 | 1,352 | 1,679 | 1,703 | 1,553 | 1,417 | 1,340 | 1,246 | 1,155 |
| 19 | 965.3 | 907.9 | 928.8 | 1,076 | 1,368 | 1,682 | 1,700 | 1,548 | 1,415 | 1,337 | 1,243 | 1,152 |
| 20 | 965.0 | 905.1 | 933.1 | 1,081 | 1,387 | 1,685 | 1,698 | 1,543 | 1,413 | 1,334 | 1,240 | 1,149 |
| 21 | 964.6 | 902.2 | 939.2 | 1,086 | 1,403 | 1,687 | 1,694 | 1,538 | 1,411 | 1,331 | 1,237 | 1,145 |
| 22 | 963.4 | 899.6 | 943.2 | 1,090 | 1,418 | 1,690 | 1,690 | 1,534 | 1,410 | 1,328 | 1,234 | 1,142 |
| 23 | 961.3 | 896.9 | 946.0 | 1,097 | 1,431 | 1,692 | 1,686 | 1,529 | 1,409 | 1,327 | 1,231 | 1,139 |
| 24 | 959.1 | 894.5 | 948.6 | 1,105 | 1,440 | 1,695 | 1,681 | 1,524 | 1,407 | 1,325 | 1,228 | 1,136 |
| 25 | 957.3 | 892.1 | 951.7 | 1,114 | 1,451 | 1,699 | 1,676 | 1,519 | 1,405 | 1,322 | 1,225 | 1,132 |
| 26 | 955.3 | 890.0 | 954.7 | 1,124 | 1,464 | 1,705 | 1,671 | 1,515 | 1,403 | 1,319 | 1,222 | 1,130 |
| 27 | 953.4 | 888.2 | 958.2 | 1,136 | 1,476 | 1,712 | 1,665 | 1,510 | 1,401 | 1,315 | 1,219 | 1,126 |
| 28 | 951.5 | 888.2 | 961.7 | 1,147 | 1,484 | 1,718 | 1,660 | 1,505 | 1,398 | 1,312 | 1,216 | 1,122 |
| 29 | 949.6 | ------ | 965.5 | 1,159 | 1,490 | 1,724 | 1,654 | 1,500 | 1,396 | 1,309 | 1,212 | 1,119 |
| 30 | 947.5 | ------ | 969.4 | 1,174 | 1,497 | 1,727 | 1,650 | 1,496 | 1,393 | 1,306 | 1,209 | 1,116 |
| 31 | 945.8 | ------ | 972.8 | ------ | 1,504 | ------ | 1,644 | 1,492 | ------ | 1,303 | ------ | 1,113 |
| MAX | 981.8 | 943.9 | 972.8 | 1,174 | 1,504 | 1,727 | 1,731 | 1,639 | 1,488 | 1,391 | 1,300 | 1,206 |
| MIN | 945.8 | 888.2 | 891.0 | 976.5 | 1,185 | 1,514 | 1,644 | 1,492 | 1,393 | 1,303 | 1,209 | 1,113 |
| (†) | 6,023.80 | 6,017.63 | 6,026.63 | 6,045.81 | 6,072.05 | 6,086.98 | 6,081.64 | 6,071.16 | 6,063.85 | 6,056.76 | 6,048.96 | 6,040.33 |
| (‡) | -37.0 | -57.6 | +84.6 | +201.2 | +330.0 | +223.0 | -83.0 | -152.0 | -99.0 | -90.0 | -94.0 | -96.0 |

CAL YR 1973 +130.2
WTR YR 1973 +494.9

(†) ELEVATION, IN FEET, AT END OF MONTH.
(‡) CHANGE IN CONTENTS, IN THOUSANDS OF ACRE-FEET.

## 09355500 SAN JUAN RIVER NEAR ARCHULETA, N. MEX.

LOCATION.--Lat 36°48'05", long 107°41'51", in NW¼ sec.20, T.30 N., R.8 W., San Juan County, on left bank 0.5 mi (0.8 km) upstream from Gobernador Canyon, 0.8 mi (1.3 km) northeast of Archuleta, 7.2 mi (11.6 km) downstream from Navajo Dam, and at mile 291.4 (468.9 km).

DRAINAGE AREA.--3,260 mi² (8,440 km²), approximately.

PERIOD OF RECORD.--December 1954 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,655 ft (1723.6 m) from river-profile survey. Prior to Dec. 29, 1959, at site 5.0 mi (8.0 km) upstream at altitude 55 ft (17 m) higher. Dec. 29, 1959 to Dec. 15, 1964, at site 0.4 mi (0.6 km) upstream at altitude 5 ft (1.5 m) higher.

AVERAGE DISCHARGE.--18 calendar years, 1,168 ft³/s (33.08 m³/s), 846,200 acre-ft/yr (1,040 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 5,620 ft³/s (159 m³/s) July 3,4 (gage height, 6.45 ft or 1.966 m); minimum, 198 ft³/s (5.61 m³/s) Mar. 22.
Period of record: Maximum discharge, 18,900 ft³/s (535 m³/s) July 27, 1957 (gage height, 11.00 ft or 3.353 m, site and datum then in use); minimum determined, 8 ft³/s (0.23 m³/s) Feb. 28, 1963.

REMARKS.--Records good. Flow completely regulated by Navajo Dam (see sta 09355100) except for minor inflow from 30 mi² (78 km²) intervening drainage area. Diversions above station for irrigation of about 47,000 acres (190 km²). Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 2125: 1958.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1,110 | 1,530 | 486 | 498 | 480 | 2,420 | 5,530 | 4,040 | 3,480 | 2,080 | 1,920 | 1,960 |
| 2 | 1,100 | 1,530 | 462 | 492 | 598 | 1,870 | 5,400 | 3,980 | 3,480 | 2,080 | 1,960 | 1,960 |
| 3 | 1,040 | 1,530 | 462 | 480 | 1,620 | 1,220 | 5,470 | 3,720 | 3,480 | 2,080 | 1,980 | 1,480 |
| 4 | 1,030 | 1,540 | 462 | 486 | 2,280 | 788 | 5,620 | 3,480 | 3,480 | 2,100 | 1,980 | 1,260 |
| 5 | 1,030 | 1,540 | 474 | 492 | 2,280 | 724 | 5,500 | 3,460 | 3,480 | 2,080 | 1,960 | 2,000 |
| 6 | 1,030 | 1,540 | 504 | 498 | 2,280 | 764 | 5,250 | 3,460 | 3,420 | 1,990 | 1,960 | 1,920 |
| 7 | 1,030 | 1,540 | 504 | 498 | 2,260 | 1,080 | 5,200 | 3,460 | 3,340 | 1,990 | 1,960 | 1,990 |
| 8 | 980 | 1,540 | 516 | 498 | 2,120 | 1,860 | 5,050 | 3,480 | 3,100 | 2,000 | 1,960 | 1,990 |
| 9 | 1,030 | 1,540 | 522 | 498 | 2,060 | 2,410 | 4,930 | 3,480 | 3,100 | 1,990 | 1,960 | 1,990 |
| 10 | 1,050 | 1,540 | 516 | 498 | 2,050 | 2,460 | 4,680 | 3,400 | 3,220 | 1,990 | 1,960 | 1,990 |
| 11 | 1,050 | 1,540 | 510 | 504 | 2,000 | 2,460 | 4,020 | 3,480 | 3,200 | 2,020 | 1,960 | 1,990 |
| 12 | 1,010 | 1,540 | 510 | 510 | 2,020 | 2,460 | 3,900 | 3,480 | 3,240 | 2,020 | 1,960 | 1,990 |
| 13 | 1,000 | 1,530 | 516 | 510 | 1,980 | 2,640 | 3,080 | 3,480 | 3,220 | 2,020 | 1,960 | 1,990 |
| 14 | 1,000 | 1,530 | 516 | 510 | 1,980 | 3,200 | 2,080 | 3,310 | 3,000 | 2,000 | 1,980 | 1,990 |
| 15 | 1,000 | 1,520 | 516 | 510 | 2,100 | 3,320 | 3,790 | 3,480 | 2,540 | 2,000 | 1,990 | 1,990 |
| 16 | 1,000 | 1,750 | 516 | 504 | 2,460 | 3,800 | 3,960 | 3,500 | 2,480 | 2,000 | 1,990 | 1,990 |
| 17 | 1,000 | 2,050 | 510 | 498 | 2,470 | 3,820 | 3,940 | 3,500 | 2,390 | 2,000 | 1,990 | 1,990 |
| 18 | 910 | 2,040 | 504 | 504 | 2,460 | 3,860 | 4,100 | 3,500 | 2,120 | 1,990 | 1,990 | 2,000 |
| 19 | 828 | 2,040 | 504 | 498 | 2,460 | 3,880 | 4,060 | 3,500 | 2,080 | 2,020 | 1,990 | 2,000 |
| 20 | 836 | 2,040 | 504 | 504 | 2,460 | 3,860 | 4,020 | 3,500 | 2,060 | 2,000 | 1,990 | 1,990 |
| 21 | 836 | 2,040 | 504 | 504 | 2,460 | 3,900 | 4,040 | 3,500 | 2,020 | 2,000 | 1,990 | 1,990 |
| 22 | 1,090 | 2,040 | 248 | 504 | 2,460 | 3,940 | 4,080 | 3,380 | 2,030 | 2,000 | 1,990 | 1,990 |
| 23 | 1,510 | 2,040 | 235 | 504 | 2,460 | 3,980 | 4,060 | 3,380 | 2,020 | 2,000 | 1,990 | 1,990 |
| 24 | 1,520 | 2,040 | 375 | 504 | 2,460 | 4,020 | 4,060 | 3,420 | 2,030 | 1,510 | 1,990 | 1,990 |
| 25 | 1,510 | 2,040 | 400 | 504 | 2,440 | 4,060 | 4,060 | 3,440 | 2,030 | 1,060 | 1,990 | 1,990 |
| 26 | 1,510 | 2,040 | 486 | 510 | 2,440 | 4,120 | 4,060 | 3,460 | 2,020 | 1,960 | 1,960 | 1,990 |
| 27 | 1,520 | 2,040 | 498 | 510 | 2,440 | 4,330 | 4,060 | 3,500 | 2,020 | 1,980 | 1,960 | 1,990 |
| 28 | 1,530 | 1,580 | 498 | 510 | 2,440 | 4,650 | 4,020 | 3,500 | 2,020 | 1,980 | 1,960 | 1,990 |
| 29 | 1,520 | ------ | 498 | 492 | 2,420 | 4,980 | 4,040 | 3,500 | 2,060 | 1,990 | 1,960 | 1,990 |
| 30 | 1,530 | ------ | 498 | 480 | 2,420 | 5,180 | 4,040 | 3,500 | 2,050 | 1,750 | 1,960 | 1,990 |
| 31 | 1,530 | ------ | 498 | ------ | 2,420 | ------ | 4,040 | 3,500 | ------ | 1,980 | ------ | 1,990 |
| TOTAL | 35,630 | 48,810 | 14,752 | 15,012 | 67,278 | 91,976 | 133,940 | 108,750 | 80,210 | 60,460 | 59,150 | 60,350 |
| MEAN | 1,149 | 1,743 | 476 | 500 | 2,170 | 3,066 | 4,321 | 3,508 | 2,674 | 1,950 | 1,972 | 1,947 |
| MAX | 1,530 | 2,050 | 522 | 510 | 2,470 | 5,180 | 5,620 | 4,040 | 3,480 | 2,100 | 1,990 | 2,000 |
| MIN | 828 | 1,520 | 235 | 480 | 480 | 724 | 2,080 | 3,310 | 2,020 | 1,060 | 1,920 | 1,260 |
| AC-FT | 70,670 | 96,810 | 29,260 | 29,780 | 133,400 | 182,400 | 265,700 | 215,700 | 159,100 | 119,900 | 117,300 | 119,700 |

CAL YR 1973 TOTAL 776,518 MEAN 2,127 MAX 5,620 MIN 235 AC-FT 1,540,000
WTR YR 1973 TOTAL 658,860 MEAN 1,805 MAX 5,620 MIN 235 AC-FT 1,307,000

## 09363500 ANIMAS RIVER NEAR CEDAR HILL, N. MEX.

LOCATION.--Lat 37°02'17", long 107°52'25", in sec.7, T.32 N., R.9 W., La Plata County, Colorado, on right bank 0.8 mi (1.3 km) downstream from Florida River, 2.5 mi (4.0 km) upstream from Colorado-New Mexico State line, and 8.5 mi (13.7 km) north of Cedar Hill.

DRAINAGE AREA.--1,090 mi² (2,820 km²), approximately.

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for October and November 1933, published in WSP 1313.

GAGE.--Water-stage recorder. Altitude of gage is 5,960 ft (1,817 m) from topographic map. Prior to Sept. 14, 1937, at datum between 1.52 ft (0.46 m) and 1.36 ft (0.41 m) higher. Sept. 15, 1937, to Sept. 30, 1946, at datum 1.36 ft (0.41 m) higher.

AVERAGE DISCHARGE.--40 calendar years, 898 ft³/s (25.43 m³/s), 650,600 acre-ft/yr (802 m³/yr); 20 calendar years (1954-73), 854 ft³/s (24.19 m³/s), 618,700 acre-ft/yr (763 m³/yr).

EXTREMES.--Current year: Maximum discharge, 9,410 ft³/s (266 m³/s) May 20 (gage height, 10.00 ft or 3.048 m); minimum, 210 ft³/s (5.95 m³/s) Dec. 7.
Period of record: Maximum discharge, 13,100 ft³/s (371 m³/s) June 19, 1949 (gage height, 11.45 ft or 3.490 m); minimum, 63 ft³/s (1.78 m³/s) Jan. 21, 1935.
A flood in October 1911 exceeded all other known floods at this location.

REMARKS.--Records fair except those for winter periods, which are poor. Diversions for irrigation of about 20,000 acres (80.9 km²) above station. During water years 1944-49, Twin Rocks Canal diverted above station for irrigation below. Slight regulation by Lemon Dam about 30 mi (48 km) upstream on Florida River since November 1963 (capacity, 40,100 acre-ft or 49.4 hm³). Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1563: 1940 and 1946 (monthly figures only).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 385 | 374 | 554 | 1,030 | 2,730 | 4,490 | 6,000 | 1,080 | 880 | 412 | 321 | 258 |
| 2 | 392 | 353 | 571 | 962 | 2,280 | 4,210 | 5,800 | 1,030 | 776 | 396 | 311 | 262 |
| 3 | 400 | 345 | 645 | 907 | 2,120 | 3,850 | 5,200 | 1,010 | 725 | 380 | 289 | 266 |
| 4 | 405 | 372 | 661 | 834 | 2,340 | 3,850 | 4,800 | 1,010 | 676 | 370 | 271 | 254 |
| 5 | 400 | 376 | 630 | 880 | 2,780 | 3,410 | 4,400 | 1,000 | 641 | 365 | 269 | 235 |
| 6 | 390 | 378 | 581 | 1,100 | 2,710 | 3,270 | 4,010 | 993 | 602 | 365 | 265 | 220 |
| 7 | 390 | 390 | 560 | 1,210 | 2,350 | 3,550 | 3,680 | 982 | 584 | 355 | 264 | 210 |
| 8 | 380 | 388 | 595 | 1,010 | 2,340 | 4,200 | 3,420 | 979 | 566 | 340 | 262 | 220 |
| 9 | 380 | 372 | 591 | 951 | 2,700 | 5,230 | 3,260 | 912 | 554 | 350 | 258 | 240 |
| 10 | 390 | 362 | 592 | 1,100 | 3,470 | 7,200 | 3,450 | 864 | 620 | 380 | 262 | 260 |
| 11 | 400 | 369 | 579 | 1,310 | 4,830 | 8,200 | 3,340 | 832 | 664 | 390 | 254 | 239 |
| 12 | 365 | 387 | 583 | 1,450 | 5,720 | 8,000 | 3,320 | 784 | 824 | 380 | 258 | 239 |
| 13 | 360 | 372 | 606 | 1,550 | 5,420 | 7,150 | 3,060 | 760 | 739 | 365 | 262 | 246 |
| 14 | 385 | 351 | 599 | 1,650 | 5,160 | 7,500 | 2,780 | 725 | 704 | 355 | 254 | 250 |
| 15 | 375 | 333 | 590 | 1,610 | 5,230 | 6,860 | 2,650 | 732 | 662 | 350 | 246 | 246 |
| 16 | 385 | 326 | 619 | 1,430 | 5,340 | 4,850 | 2,500 | 703 | 620 | 350 | 242 | 239 |
| 17 | 395 | 336 | 668 | 1,470 | 5,360 | 3,960 | 2,270 | 692 | 602 | 340 | 239 | 239 |
| 18 | 380 | 343 | 728 | 1,580 | 6,130 | 4,120 | 2,250 | 661 | 578 | 335 | 235 | 250 |
| 19 | 380 | 346 | 818 | 1,450 | 7,750 | 4,180 | 2,510 | 645 | 554 | 335 | 242 | 246 |
| 20 | 390 | 342 | 1,060 | 1,270 | 8,850 | 4,120 | 2,530 | 643 | 530 | 330 | 258 | 240 |
| 21 | 385 | 345 | 1,490 | 1,230 | 8,390 | 4,350 | 2,290 | 680 | 518 | 322 | 242 | 240 |
| 22 | 365 | 370 | 930 | 1,290 | 7,260 | 4,520 | 2,010 | 728 | 500 | 322 | 250 | 248 |
| 23 | 355 | 370 | 816 | 1,400 | 5,810 | 4,640 | 1,740 | 734 | 482 | 322 | 254 | 250 |
| 24 | 355 | 372 | 779 | 1,660 | 5,320 | 4,770 | 1,540 | 675 | 482 | 326 | 254 | 270 |
| 25 | 365 | 390 | 864 | 1,750 | 5,300 | 4,830 | 1,410 | 760 | 470 | 322 | 254 | 260 |
| 26 | 385 | 412 | 983 | 1,920 | 5,190 | 5,280 | 1,350 | 840 | 488 | 330 | 270 | 240 |
| 27 | 390 | 440 | 1,040 | 2,180 | 4,630 | 5,620 | 1,290 | 872 | 464 | 324 | 239 | 230 |
| 28 | 375 | 501 | 951 | 2,610 | 3,880 | 6,600 | 1,240 | 760 | 452 | 317 | 290 | 240 |
| 29 | 390 | ------ | 942 | 2,710 | 3,580 | 6,700 | 1,170 | 725 | 434 | 320 | 322 | 300 |
| 30 | 540 | ------ | 1,070 | 3,050 | 3,810 | 6,300 | 1,140 | 760 | 424 | 327 | 254 | 350 |
| 31 | 405 | ------ | 1,080 | ------ | 4,300 | ------ | 1,110 | 888 | ------ | 319 | ------ | 390 |
| TOTAL | 12,037 | 10,415 | 23,775 | 44,554 | 143,080 | 155,810 | 87,520 | 25,459 | 18,015 | 10,794 | 7,889 | 7,877 |
| MEAN | 388 | 372 | 767 | 1,485 | 4,615 | 5,194 | 2,823 | 821 | 601 | 348 | 263 | 254 |
| MAX | 540 | 501 | 1,490 | 3,050 | 8,850 | 8,200 | 6,000 | 1,080 | 880 | 412 | 322 | 390 |
| MIN | 355 | 326 | 554 | 834 | 2,120 | 3,270 | 1,110 | 643 | 424 | 317 | 235 | 210 |
| AC-FT | 23,880 | 20,660 | 47,160 | 88,370 | 283,800 | 309,000 | 173,600 | 50,500 | 35,730 | 21,410 | 15,650 | 15,620 |

CAL YR 1973 TOTAL 547,225 MEAN 1,499 MAX 8,850 MIN 210 AC-FT 1,085,000
WTR YR 1973 TOTAL 595,648 MEAN 1,632 MAX 8,850 MIN 288 AC-FT 1,181,000

PEAK DISCHARGE (BASE, 4,000 CFS).-- MAY 20 (1715) 9,410 CFS (10.00 FT); JUNE 14 (1815) 8,130 CFS (9.72 FT).

## 09364500 ANIMAS RIVER AT FARMINGTON, N. MEX.

LOCATION.--Lat 36°43'17", long 108°12'05", in SW¼SW¼ sec.15, T.29 N., R.13 W., San Juan County, in Boyd City Park, on right bank 900 ft (274 m) upstream from bridge on former State Highway 17, 0.4 mi (0.6 km) downstream from bridge on State Highway 17, and 1.5 mi (2.4 km) upstream from mouth. Prior to Nov. 1, 1973 at site 900 ft (274 m) downstream.

DRAINAGE AREA.--1,360 mi² (3,520 km²), approximately.

PERIOD OF RECORD.--June 1904 to October 1905 (published as "near Farmington"). September 1912 to current year. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder. Altitude of gage is 5,280 ft (1,609 m) from topographic map. Prior to Nov. 1, 1905, nonrecording gage at old bridge 0.1 mi (0.2 km) upstream at different datum. Sept. 17, 1912 to Oct. 4, 1938, water-stage recorder at site 0.8 mi (1.3 km) downstream at lower datums (datum lowered 2.0 ft or 0.61 m Aug. 15, 1927, and raised 0.2 ft or 0.06 m Dec. 16, 1929). Prior to Nov. 1, 1973 at site 900 ft (274 m) downstream at datum 1.74 ft (0.53 m) lower.

AVERAGE DISCHARGE.--61 calendar years, 917 ft³/s (25.97 m³/s), 664,400 acre-ft/yr (819 m³/yr). 20 calendar years (1954-73), 773 ft³/s (21.89 m³/s), 560,000 acre-ft/yr (690 m³/yr).

EXTREMES.--Current year: Maximum discharge, 8,290 ft³/s (235 m³/s) June 11 (gage height, 7.53 ft or 2.295 m); minimum, daily 190 ft³/s (5.38 m³/s) Dec. 7.

Period of record: Maximum discharge, about 25,000 ft³/s (708 m³/s) June 29, 1927 (gage height, 8.5 ft or 2.59 m, site and datum then in use), from rating curve extended above 10,000 ft³/s (283 m³/s); minimum, 1.0 ft³/s (0.028 m³/s) Aug. 11, 1972.

Maximum flood occurred Oct. 6, 1911, when a stage of about 16.5 ft (5.03 m) was reached (present site and datum). Flood of Sept. 6, 1909, reached a stage of 11.1 ft (3.38 m), 1904-5 site and datum (discharge, about 19,000 ft³/s or 538 m³/s).

REMARKS.--Records fair. Diversions for irrigation of about 30,000 acres (121 km²) above station. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1243: 1931. WSP 1313: 1913.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 424 | 424 | 568 | 1,170 | 3,300 | 4,130 | 5,900 | 882 | 801 | 312 | 325 | 278 |
| 2 | 440 | 400 | 592 | 1,070 | 2,770 | 4,190 | 5,490 | 910 | 672 | 324 | 325 | 278 |
| 3 | 448 | 393 | 664 | 1,070 | 2,400 | 3,710 | 5,010 | 980 | 600 | 300 | 318 | 260 |
| 4 | 456 | 400 | 729 | 940 | 2,730 | 3,650 | 4,460 | 950 | 520 | 294 | 284 | 254 |
| 5 | 456 | 432 | 672 | 920 | 2,960 | 3,280 | 4,190 | 1,020 | 496 | 282 | 266 | 242 |
| 6 | 440 | 424 | 608 | 1,060 | 3,120 | 3,060 | 3,830 | 960 | 416 | 282 | 272 | 200 |
| 7 | 432 | 464 | 592 | 1,370 | 2,660 | 3,300 | 3,400 | 950 | 386 | 276 | 266 | 190 |
| 8 | 424 | 456 | 640 | 1,100 | 2,490 | 4,260 | 3,090 | 910 | 393 | 260 | 278 | 195 |
| 9 | 432 | 424 | 688 | 1,010 | 2,730 | 5,240 | 3,000 | 828 | 379 | 260 | 272 | 220 |
| 10 | 456 | 408 | 640 | 1,090 | 3,280 | 6,680 | 3,080 | 747 | 544 | 306 | 272 | 278 |
| 11 | 464 | 408 | 648 | 1,290 | 4,570 | 7,850 | 3,110 | 688 | 920 | 372 | 266 | 272 |
| 12 | 416 | 424 | 616 | 1,450 | 5,490 | 7,760 | 3,170 | 624 | 1,040 | 330 | 260 | 278 |
| 13 | 416 | 424 | 712 | 1,570 | 5,590 | 7,350 | 3,020 | 544 | 910 | 324 | 260 | 304 |
| 14 | 432 | 408 | 688 | 1,670 | 5,240 | 7,320 | 2,660 | 496 | 845 | 306 | 254 | 311 |
| 15 | 424 | 393 | 664 | 1,790 | 5,450 | 7,290 | 2,490 | 424 | 756 | 288 | 220 | 297 |
| 16 | 448 | 393 | 672 | 1,490 | 5,570 | 5,380 | 2,380 | 480 | 688 | 288 | 215 | 272 |
| 17 | 448 | 400 | 738 | 1,450 | 5,690 | 3,830 | 2,180 | 488 | 656 | 288 | 215 | 278 |
| 18 | 440 | 400 | 846 | 1,590 | 5,980 | 3,770 | 2,020 | 440 | 592 | 276 | 215 | 290 |
| 19 | 432 | 393 | 873 | 1,550 | 6,810 | 3,830 | 2,240 | 440 | 496 | 265 | 215 | 311 |
| 20 | 440 | 393 | 1,000 | 1,330 | 7,540 | 3,790 | 2,430 | 456 | 448 | 265 | 230 | 311 |
| 21 | 432 | 386 | 1,480 | 1,250 | 7,620 | 3,890 | 2,220 | 528 | 432 | 260 | 236 | 248 |
| 22 | 416 | 408 | 1,120 | 1,250 | 6,660 | 4,090 | 1,910 | 600 | 393 | 270 | 225 | 260 |
| 23 | 393 | 416 | 930 | 1,400 | 5,450 | 4,320 | 1,620 | 624 | 358 | 250 | 242 | 297 |
| 24 | 400 | 416 | 855 | 1,720 | 4,860 | 4,640 | 1,460 | 632 | 351 | 245 | 230 | 311 |
| 25 | 424 | 424 | 900 | 1,900 | 4,810 | 4,810 | 1,310 | 624 | 358 | 265 | 248 | 278 |
| 26 | 448 | 448 | 1,000 | 2,100 | 5,010 | 5,080 | 1,170 | 576 | 432 | 294 | 272 | 260 |
| 27 | 456 | 472 | 1,130 | 2,400 | 4,860 | 5,780 | 1,040 | 720 | 464 | 300 | 260 | 215 |
| 28 | 432 | 496 | 1,060 | 2,870 | 3,770 | 6,550 | 1,050 | 584 | 432 | 337 | 254 | 220 |
| 29 | 408 | ------ | 1,070 | 3,130 | 3,210 | 6,580 | 1,040 | 488 | 440 | 300 | 254 | 332 |
| 30 | 416 | ------ | 1,010 | 3,420 | 3,170 | 6,150 | 930 | 520 | 358 | 318 | 266 | 353 |
| 31 | 440 | ------ | 1,210 | ------ | 3,670 | ------ | 900 | 738 | ------ | 324 | ------ | 290 |
| TOTAL | 13,433 | 11,727 | 25,615 | 47,420 | 139,460 | 151,560 | 81,800 | 20,851 | 16,576 | 9,061 | 7,715 | 8,383 |
| MEAN | 433 | 419 | 826 | 1,581 | 4,499 | 5,052 | 2,639 | 673 | 553 | 292 | 257 | 270 |
| MAX | 464 | 496 | 1,480 | 3,420 | 7,620 | 7,850 | 5,900 | 1,020 | 1,040 | 372 | 325 | 353 |
| MIN | 393 | 386 | 568 | 920 | 2,400 | 3,060 | 900 | 424 | 351 | 245 | 215 | 190 |
| AC-FT | 26,640 | 23,260 | 50,810 | 94,060 | 276,600 | 300,600 | 162,300 | 41,360 | 32,880 | 17,970 | 15,300 | 16,630 |

CAL YR 1973 TOTAL 533,601 MEAN 1,462 MAX 7,850 MIN 190 AC-FT 1,058,000
WTR YR 1973 TOTAL 592,740 MEAN 1,624 MAX 8,880 MIN 138 AC-FT 1,176,000

PEAK DISCHARGE (BASE, 4,000 CFS).-- MAY 21 (0500) 7,760 CFS (7.37 FT); JUNE 11 (2345) 8,290 CFS (7.53 FT).

## 09365000 SAN JUAN RIVER AT FARMINGTON, N. MEX.

LOCATION.--Lat 36°43'22", long 108°13'30", in SE¼ sec.17, T.29 N., R.13 W., San Juan County, on left bank 360 ft (110 m) downstream from highway bridge, 4,000 ft (1,200 m) downstream from Animas River, 1 mi (1.6 km) west of Farmington, and at mile 251.4 (404.5 km).

DRAINAGE AREA.--7,240 mi² (18,750 km²), approximately.

PERIOD OF RECORD.--June to December 1904, January 1905 to September 1906 (gage heights and discharge measurements only) September 1912 to current year. Monthly discharge only for some periods, published in WSP 1313. Discharge records for January to December 1905, published in WSP 175 are unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 5,230.37 ft (1,594.217 m) above mean sea level. See WSP 1313 or 1733 for history of changes prior to Nov. 19, 1933.

AVERAGE DISCHARGE.--61 calendar years (1913-73), 2,426 ft³/s (68.70 m³/s), 1,758,000 acre-ft/yr (2.17 km³/yr), unadjusted; 20 calendar years (1954-73), 1,855 ft³/s (52.53 m³/s), 1,344,000 acre-ft/yr (1.66 km³/yr).

EXTREMES.--Current year: Maximum discharge, 11,300 ft³/s (320 m³/s) May 21 (gage height, 6.57 ft or 2.002 m); minimum, 580 ft³/s (16.4 m³/s) Oct. 24.
Period of record: Maximum discharge, about 68,000 ft³/s (1,930 m³/s) June 29, 1927 (gage height, 10.2 ft or 3.109 m, site and datum then in use), from rating curve extended above 37,000 ft³/s (1,050 m³/s); minimum, 14 ft³/s (0.40 m³/s) Aug. 22, 1939. Maximum flood occurred Oct. 6, 1911. Flood of Sept. 6, 1909, reached a stage of about 12.3 ft (3.75 m), site and datum in use May to September 1906.

REMARKS.--Records good. Since June 1962 flow is partly controlled by operation of Navajo Reservoir 50 mi (80 km) upstream. (See station 09355100). Diversions above station for irrigation of about 86,000 acres (348 km²), 4,000 of which is irrigated by Farmers Mutual ditch which diverts from Animas River and bypasses this station; ditch flow not included in record. At times this ditch may be supplied partly or entirely by diversion from San Juan River below this station. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1119: Drainage area. WSP 1243: 1938. WSP 1313: 1905, 1914. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1,600 | 1,920 | 2,290 | 1,690 | 3,520 | 6,360 | 10,600 | 4,350 | 3,920 | 2,240 | 2,180 | 2,190 |
| 2 | 1,640 | 1,850 | 2,010 | 1,550 | 2,990 | 6,310 | 10,200 | 4,290 | 3,860 | 2,170 | 2,260 | 2,190 |
| 3 | 1,690 | 1,850 | 2,280 | 1,520 | 3,120 | 5,390 | 9,750 | 4,230 | 3,800 | 2,160 | 2,240 | 2,120 |
| 4 | 1,570 | 1,900 | 1,970 | 1,350 | 3,910 | 4,850 | 9,170 | 3,920 | 3,740 | 2,150 | 2,130 | 1,250 |
| 5 | 1,630 | 1,870 | 1,730 | 1,310 | 4,290 | 4,450 | 8,750 | 3,910 | 3,670 | 2,150 | 2,020 | 1,870 |
| 6 | 1,650 | 2,010 | 1,660 | 1,380 | 4,520 | 4,270 | 8,380 | 3,870 | 3,620 | 2,100 | 2,020 | 2,140 |
| 7 | 1,550 | 2,020 | 1,530 | 1,800 | 4,100 | 4,480 | 7,840 | 3,880 | 3,500 | 2,020 | 2,020 | 2,090 |
| 8 | 1,520 | 2,070 | 1,600 | 1,540 | 3,900 | 6,020 | 7,340 | 3,850 | 3,320 | 2,000 | 2,050 | 2,170 |
| 9 | 1,520 | 1,890 | 1,740 | 1,330 | 4,120 | 7,310 | 7,040 | 3,820 | 3,270 | 1,990 | 2,050 | 2,170 |
| 10 | 1,600 | 1,970 | 1,710 | 1,390 | 4,760 | 8,810 | 7,000 | 3,740 | 3,690 | 2,050 | 2,070 | 2,190 |
| 11 | 1,660 | 1,990 | 1,510 | 1,740 | 6,070 | 9,460 | 6,460 | 3,740 | 4,160 | 2,110 | 2,070 | 2,200 |
| 12 | 1,590 | 1,940 | 1,400 | 2,030 | 7,120 | 9,090 | 6,230 | 3,720 | 3,720 | 2,110 | 2,050 | 2,190 |
| 13 | 1,490 | 1,990 | 1,440 | 2,290 | 7,330 | 8,870 | 6,100 | 3,680 | 3,620 | 2,100 | 2,070 | 2,220 |
| 14 | 1,490 | 2,070 | 1,570 | 2,430 | 6,770 | 9,820 | 4,150 | 3,600 | 3,570 | 2,110 | 2,050 | 2,270 |
| 15 | 1,390 | 2,040 | 1,370 | 2,520 | 6,710 | 9,690 | 5,120 | 3,480 | 3,070 | 2,140 | 2,110 | 2,240 |
| 16 | 1,370 | 2,020 | 1,290 | 2,100 | 7,340 | 7,900 | 5,600 | 3,610 | 2,940 | 2,170 | 2,050 | 2,210 |
| 17 | 1,460 | 2,310 | 1,340 | 1,860 | 7,660 | 6,090 | 5,330 | 3,580 | 2,880 | 2,210 | 2,050 | 2,220 |
| 18 | 1,470 | 2,410 | 1,500 | 1,990 | 8,090 | 6,210 | 5,410 | 3,510 | 2,540 | 2,300 | 2,070 | 2,210 |
| 19 | 1,390 | 2,480 | 1,530 | 1,970 | 9,130 | 6,640 | 5,660 | 3,510 | 2,400 | 2,300 | 2,070 | 2,200 |
| 20 | 1,440 | 2,430 | 1,660 | 1,800 | 10,600 | 6,690 | 5,730 | 3,540 | 2,350 | 2,180 | 2,070 | 2,190 |
| 21 | 1,370 | 2,480 | 2,660 | 1,650 | 10,900 | 7,090 | 5,540 | 3,560 | 2,240 | 2,130 | 2,070 | 2,170 |
| 22 | 1,350 | 2,510 | 2,200 | 1,580 | 9,890 | 7,580 | 5,370 | 3,730 | 2,220 | 2,130 | 2,070 | 2,160 |
| 23 | 1,720 | 2,570 | 1,460 | 1,700 | 8,140 | 7,750 | 5,150 | 3,560 | 2,190 | 2,050 | 2,080 | 2,170 |
| 24 | 1,720 | 2,580 | 1,430 | 1,920 | 7,050 | 8,280 | 4,970 | 3,550 | 2,170 | 720 | 2,080 | 2,180 |
| 25 | 1,710 | 2,590 | 1,500 | 2,110 | 7,040 | 8,420 | 4,890 | 3,620 | 2,190 | 1,820 | 2,100 | 2,150 |
| 26 | 1,820 | 2,740 | 1,530 | 2,320 | 7,100 | 8,630 | 4,740 | 3,750 | 2,220 | 2,110 | 2,130 | 2,130 |
| 27 | 1,910 | 2,980 | 1,730 | 2,540 | 6,880 | 9,500 | 4,650 | 3,840 | 2,220 | 2,080 | 2,110 | 2,100 |
| 28 | 1,860 | 3,490 | 1,680 | 3,050 | 5,850 | 10,500 | 4,520 | 3,770 | 2,230 | 2,080 | 2,110 | 2,090 |
| 29 | 1,820 | ------ | 1,630 | 3,330 | 5,260 | 10,700 | 4,490 | 3,730 | 2,230 | 2,080 | 2,140 | 2,150 |
| 30 | 1,830 | ------ | 1,680 | 3,580 | 5,310 | 10,500 | 4,430 | 3,910 | 2,240 | 1,970 | 2,160 | 2,190 |
| 31 | 1,940 | ------ | 1,870 | ------ | 5,880 | ------ | 4,400 | 3,960 | ------ | 1,960 | ------ | 2,190 |
| TOTAL | 49,770 | 62,970 | 52,500 | 59,370 | 195,350 | 227,660 | 195,010 | 116,810 | 89,790 | 63,890 | 62,750 | 66,210 |
| MEAN | 1,605 | 2,249 | 1,694 | 1,979 | 6,302 | 7,589 | 6,291 | 3,768 | 2,993 | 2,061 | 2,092 | 2,136 |
| MAX | 1,940 | 3,490 | 2,660 | 3,580 | 10,900 | 10,700 | 10,600 | 4,350 | 4,160 | 2,300 | 2,260 | 2,270 |
| MIN | 1,350 | 1,850 | 1,290 | 1,310 | 2,990 | 4,270 | 4,150 | 3,480 | 2,170 | 720 | 2,020 | 1,250 |
| AC-FT | 98,720 | 124,900 | 104,100 | 117,800 | 387,500 | 451,600 | 386,800 | 231,700 | 178,100 | 126,700 | 124,500 | 131,300 |

CAL YR 1973 TOTAL 1,242,080 MEAN 3,403 MAX 10,900 MIN 720 AC-FT 2,464,000
WTR YR 1973 TOTAL 1,213,932 MEAN 3,326 MAX 10,900 MIN 421 AC-FT 2,408,000

PEAK DISCHARGE (BASE, 5,000 CFS)

| DATE | TIME | G.H. | DISCHARGE | DATE | TIME | G.H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-21 | 0045 | 6.57 | 11,300 | 9-11 | 0045 | 4.68 | 5,850 |
| 6-29 | 0100 | 6.59 | 11,200 | | | | |

## 09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

LOCATION.--Lat 36°59'51", long 108°11'17", in NW¼SE¼ sec.10, T.32 N., R.13 W., La Plata County, Colorado, on right bank at Colorado-New Mexico State line, 0.2 mi (0.3 km) downstream from Ponds Arroyo, and 4.8 mi (7.7 km) north of La Plata, N. Mex.

DRAINAGE AREA.--331 $mi^2$ (857 $km^2$).

PERIOD OF RECORD.--January 1920 to current year. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder. Datum of gage is 5,975.15 ft (1,821.226 m) above mean sea level. See WSP 1713 or 1733 for history of changes prior to Mar. 17, 1934.

AVERAGE DISCHARGE.--53 years, 33.9 $ft^3/s$ (0.960 $m^3/s$), 24,560 acre-ft/yr (30.3 $hm^3/yr$).

EXTREMES.--Current year: Maximum discharge, 1,520 $ft^3/s$ (43.0 $m^3/s$) Oct. 20 (gage height, 5.73 ft or 1.747 m); minimum daily, 0.40 $ft^3/s$ (0.011 $m^3/s$) Oct. 1.
Period of record: Maximum discharge, 4,750 $ft^3/s$ (135 $m^3/s$) Aug. 24, 1927 (gage height, 11.36 ft or 3.463 m, present datum), from rating curve extended above 750 $ft^3/s$ (21 $m^3/s$) on basis of slope-area measurement of peak flow; no flow at times in many years.

REMARKS.--Records good except those for winter period, which are fair. Diversions above station for irrigation of about 15,000 acres (60.7 $km^2$), mostly above station. Water-quality records for the current year are published in Part 2 of this report.

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

REVISIONS (WATER YEARS).--WSP 1313: 1934(M), 1936(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .40 | 64 | 30 | 23 | 21 | 36 | 70 | 509 | 288 | 131 | 12 | 19 |
| 2 | .80 | 53 | 30 | 24 | 19 | 39 | 75 | 405 | 270 | 111 | 13 | 15 |
| 3 | 1.2 | 52 | 30 | 24 | 25 | 43 | 82 | 382 | 220 | 94 | 12 | 13 |
| 4 | 15 | 47 | 30 | 28 | 30 | 40 | 78 | 422 | 285 | 74 | 12 | 12 |
| 5 | 8.7 | 44 | 34 | 24 | 34 | 41 | 78 | 470 | 192 | 61 | 14 | 8.5 |
| 6 | 2.5 | 42 | 30 | 20 | 32 | 40 | 88 | 443 | 169 | 66 | 14 | 7.0 |
| 7 | 8.1 | 39 | 36 | 19 | 34 | 42 | 117 | 370 | 210 | 90 | 14 | 5.8 |
| 8 | 42 | 39 | 32 | 19 | 32 | 44 | 104 | 370 | 315 | 82 | 15 | 5.8 |
| 9 | 11 | 38 | 29 | 21 | 28 | 45 | 101 | 446 | 415 | 63 | 13 | 6.2 |
| 10 | 3.4 | 36 | 20 | 23 | 26 | 47 | 114 | 544 | 512 | 74 | 10 | 12 |
| 11 | 12 | 34 | 33 | 16 | 26 | 47 | 150 | 638 | 530 | 69 | 9.5 | 20 |
| 12 | 19 | 38 | 25 | 18 | 27 | 48 | 236 | 680 | 437 | 62 | 8.5 | 15 |
| 13 | 26 | 35 | 28 | 20 | 25 | 48 | 325 | 562 | 368 | 63 | 11 | 11 |
| 14 | 26 | 34 | 25 | 23 | 24 | 43 | 388 | 467 | 479 | 64 | 10 | 9.5 |
| 15 | 28 | 36 | 18 | 26 | 25 | 39 | 446 | 388 | 355 | 50 | 14 | 8.5 |
| 16 | 66 | 32 | 18 | 25 | 25 | 41 | 305 | 378 | 228 | 50 | 14 | 7.0 |
| 17 | 88 | 36 | 30 | 24 | 28 | 44 | 332 | 382 | 188 | 51 | 13 | 5.8 |
| 18 | 131 | 35 | 34 | 23 | 26 | 49 | 419 | 390 | 198 | 49 | 13 | 5.8 |
| 19 | 644 | 31 | 25 | 22 | 26 | 47 | 282 | 512 | 200 | 51 | 12 | 5.8 |
| 20 | 1,000 | 33 | 22 | 20 | 25 | 50 | 250 | 582 | 176 | 40 | 11 | 6.2 |
| 21 | 276 | 32 | 22 | 19 | 28 | 66 | 242 | 558 | 175 | 32 | 13 | 6.6 |
| 22 | 150 | 31 | 22 | 17 | 26 | 66 | 228 | 410 | 184 | 26 | 16 | 6.2 |
| 23 | 117 | 34 | 24 | 19 | 25 | 62 | 300 | 320 | 176 | 22 | 16 | 6.6 |
| 24 | 103 | 34 | 26 | 20 | 25 | 61 | 378 | 288 | 180 | 23 | 15 | 7.0 |
| 25 | 185 | 31 | 22 | 20 | 29 | 58 | 390 | 320 | 188 | 21 | 15 | 9.0 |
| 26 | 114 | 33 | 19 | 22 | 30 | 60 | 458 | 395 | 206 | 21 | 13 | 12 |
| 27 | 96 | 34 | 26 | 21 | 35 | 72 | 506 | 305 | 222 | 19 | 8.5 | 11 |
| 28 | 96 | 30 | 26 | 18 | 36 | 70 | 590 | 212 | 242 | 19 | 8.0 | 10 |
| 29 | 86 | 31 | 25 | 21 | ------- | 72 | 604 | 176 | 208 | 16 | 8.0 | 7.5 |
| 30 | 73 | 30 | 17 | 24 | ------- | 70 | 635 | 208 | 159 | 18 | 11 | 6.6 |
| 31 | 69 | ------- | 19 | 27 | ------- | 67 | ------- | 260 | ------- | 13 | 19 | ------- |
| TOTAL | 3,897.90 | 1,118 | 805 | 670 | 772 | 1,597 | 8,369 | 12,792 | 7,973 | 1,625 | 387.5 | 281.4 |
| MEAN | 113 | 37.3 | 26.0 | 21.6 | 27.6 | 51.5 | 279 | 413 | 266 | 52.4 | 12.5 | 9.38 |
| MAX | 1,000 | 64 | 36 | 28 | 36 | 72 | 635 | 680 | 530 | 131 | 19 | 20 |
| MIN | .40 | 30 | 17 | 16 | 19 | 36 | 70 | 176 | 159 | 13 | 8.0 | 5.8 |
| AC-FT | 6,940 | 2,220 | 1,600 | 1,350 | 1,530 | 3,170 | 16,600 | 25,370 | 15,810 | 3,220 | 769 | 558 |

CAL YR 1972 TOTAL 9,189.24 MEAN 25.1 MAX 1,000 MIN 0 AC-FT 18,230
WTR YR 1973 TOTAL 39,887.80 MEAN 109 MAX 1,000 MIN .40 AC-FT 79,120

## 09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

LOCATION.--Lat 36°59'51", long 108°11'17", in NW¼SE¼ sec.10, T.32 N., R.13 W., La Plata County, Colorado, on right bank at Colorado-New Mexico State line, 0.2 mi (0.3 km) downstream from Ponds Arroyo, 4.8 mi (7.7 km) north of La Plata, and at mile 21.0 (33.8 km).

DRAINAGE AREA.--331 mi² (857 km²).

PERIOD OF RECORD.--January 1920 to current year. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder. Datum of gage is 5,975.15 ft (1,821.226 m) above mean sea level. See WSP 1713 or 1733 for history of changes prior to Mar. 17, 1934.

AVERAGE DISCHARGE.--54 calendar years, 35.1 ft³/s (0.994 m³/s), 25,430 acre-ft/yr (31.4 hm³/yr); 20 calendar years (1954-73) 29.6 ft³/s (0.838 m³/s), 21,450 acre-ft/yr (26.4 hm³/yr).

EXTREMES.--Current year: Maximum daily discharge, 680 ft³/s (19.3 m³/s) May 12; minimum daily, 2.9 ft³/s (0.082 m³/s) Nov. 1-4,7. Period of record: Maximum discharge, 4,750 ft³/s (135 m³/s) Aug. 24, 1927 (gage height, 11.36 ft or 3.463 m, present datum), from rating curve extended above 750 ft³/s (21 m³/s) on basis of slope-area measurement of peak flow; no flow at times in many years.

REMARKS.--Records good except those for winter periods, which are fair. Diversions above station for irrigation of about 15,000 acres (60.7 km²), mostly above station. Water-quality records for the current year are published in Part 2 of this report.

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

REVISIONS (WATER YEARS).--WSP 1313: 1934(M), 1936(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23 | 21 | 36 | 70 | 509 | 288 | 131 | 12 | 19 | 7.5 | 2.9 | 10 |
| 2 | 24 | 19 | 39 | 73 | 405 | 270 | 111 | 13 | 15 | 7.0 | 2.9 | 10 |
| 3 | 24 | 25 | 43 | 82 | 382 | 220 | 94 | 12 | 13 | 5.8 | 2.9 | 10 |
| 4 | 28 | 30 | 40 | 78 | 422 | 285 | 74 | 12 | 12 | 5.8 | 2.9 | 10 |
| 5 | 24 | 34 | 41 | 78 | 470 | 192 | 61 | 14 | 8.5 | 5.8 | 3.2 | 11 |
| 6 | 20 | 32 | 40 | 88 | 443 | 169 | 66 | 14 | 7.0 | 5.8 | 5.2 | 12 |
| 7 | 19 | 34 | 42 | 117 | 370 | 210 | 90 | 14 | 5.8 | 5.8 | 2.9 | 17 |
| 8 | 19 | 32 | 44 | 104 | 370 | 315 | 82 | 15 | 5.8 | 5.8 | 3.2 | 19 |
| 9 | 21 | 28 | 45 | 101 | 446 | 413 | 63 | 13 | 6.2 | 5.8 | 3.5 | 15 |
| 10 | 23 | 26 | 47 | 114 | 544 | 512 | 74 | 10 | 12 | 6.6 | 5.8 | 13 |
| 11 | 16 | 26 | 47 | 150 | 638 | 530 | 69 | 9.5 | 20 | 6.6 | 5.8 | 15 |
| 12 | 18 | 27 | 48 | 236 | 680 | 437 | 62 | 8.5 | 15 | 6.2 | 6.2 | 11 |
| 13 | 20 | 25 | 48 | 325 | 562 | 368 | 63 | 11 | 11 | 5.8 | 6.6 | 9.5 |
| 14 | 23 | 24 | 43 | 388 | 467 | 479 | 64 | 10 | 9.5 | 5.4 | 6.6 | 9.5 |
| 15 | 26 | 25 | 39 | 446 | 388 | 355 | 50 | 14 | 8.5 | 5.1 | 6.6 | 10 |
| 16 | 25 | 25 | 41 | 305 | 378 | 228 | 50 | 14 | 7.0 | 4.8 | 6.2 | 11 |
| 17 | 24 | 28 | 44 | 352 | 382 | 188 | 51 | 13 | 5.8 | 4.1 | 6.2 | 12 |
| 18 | 23 | 26 | 49 | 419 | 390 | 198 | 49 | 13 | 5.8 | 3.5 | 6.6 | 11 |
| 19 | 22 | 26 | 47 | 282 | 512 | 200 | 51 | 12 | 5.8 | 3.2 | 7.5 | 12 |
| 20 | 20 | 25 | 50 | 250 | 582 | 176 | 40 | 11 | 6.2 | 3.5 | 8.0 | 12 |
| 21 | 19 | 28 | 66 | 242 | 558 | 175 | 32 | 13 | 6.6 | 3.2 | 8.0 | 15 |
| 22 | 17 | 26 | 66 | 228 | 410 | 184 | 26 | 16 | 6.2 | 3.2 | 8.0 | 19 |
| 23 | 19 | 25 | 62 | 300 | 320 | 176 | 22 | 16 | 6.6 | 3.2 | 9.5 | 15 |
| 24 | 20 | 25 | 61 | 378 | 288 | 180 | 23 | 15 | 7.0 | 3.2 | 10 | 16 |
| 25 | 20 | 29 | 58 | 390 | 320 | 188 | 21 | 15 | 9.0 | 3.8 | 10 | 15 |
| 26 | 22 | 30 | 60 | 458 | 395 | 206 | 21 | 13 | 12 | 4.4 | 10 | 12 |
| 27 | 21 | 35 | 72 | 506 | 305 | 222 | 19 | 8.5 | 11 | 3.2 | 12 | 12 |
| 28 | 18 | 36 | 70 | 590 | 212 | 242 | 19 | 8.0 | 10 | 3.2 | 13 | 13 |
| 29 | 21 | ------ | 72 | 604 | 176 | 208 | 16 | 8.0 | 7.5 | 3.2 | 18 | 14 |
| 30 | 24 | ------ | 70 | 635 | 208 | 159 | 18 | 11 | 6.6 | 3.2 | 13 | 13 |
| 31 | 27 | ------ | 67 | ------ | 260 | ------ | 13 | 19 | ------ | 3.2 | ------ | 10 |
| TOTAL | 670 | 772 | 1,597 | 8,369 | 12,792 | 7,973 | 1,625 | 387.5 | 281.4 | 146.9 | 211.2 | 394.0 |
| MEAN | 21.6 | 27.6 | 51.5 | 279 | 413 | 266 | 52.4 | 12.5 | 9.38 | 4.74 | 7.04 | 12.7 |
| MAX | 28 | 36 | 72 | 635 | 680 | 530 | 131 | 19 | 20 | 7.5 | 18 | 19 |
| MIN | 16 | 19 | 36 | 70 | 176 | 159 | 13 | 8.0 | 5.8 | 3.2 | 2.9 | 9.5 |
| AC-FT | 1,330 | 1,530 | 3,170 | 16,600 | 25,370 | 15,810 | 3,220 | 769 | 558 | 291 | 419 | 781 |

CAL YR 1973 TOTAL 55,219.00 MEAN 96.5 MAX 680 MIN 2.9 AC-FT 69,860
WTR YR 1973 TOTAL 39,887.80 MEAN 109 MAX 1,000 MIN .40 AC-FT 79,120

## 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, on right bank 1,300 ft (400 m) upstream from bridge on U.S. Highway 550, 1,800 ft (550 m) upstream from mouth, and 2.5 mi (4.0 km) northwest of Farmington.

DRAINAGE AREA.--583 mi² (1,510 km²).

PERIOD OF RECORD.--March 1938 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,215 ft (1,589.5 m) from river-profile map.

AVERAGE DISCHARGE.--35 calendar years, 24.9 ft³/s (0.705 m³/s) 18,040 acre-ft/yr (22.2 hm³/yr); 20 calendar years (1954-73), 19.7 ft³/s (0.558 m³/s), 14,270 acre-ft/yr (17.6 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 712 ft³/s (20.2 m³/s) May 11 (gage height, 4.25 ft or 1.295 m), from rating curve extended above 450 ft³/s (12.7 m³/s) on basis of slope-area measurement at gage height 5.93 ft (1.807 m); no flow at times.
Period of record: Maximum gage height, 6.03 ft (1.838 m) Sept. 10, 1939 (discharge not determined); no flow for long period in some years.
Major floods occurred Sept. 5 or 6, 1909, and Oct. 5 or 6, 1911.

REMARKS.--Records fair except those for February, May, July, August, September, and December, which are poor. Diversions for irrigation of about 24,000 acres (97.1 km²) above station.

REVISIONS (WATER YEARS).--WSP 1243: 1944-45. WSP 1313: 1943-44(M), 1946-50(M). WSP 1733: 1951(M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 40 | 30 | 50 | 98 | 450 | 190 | 80 | 4.5 | 1.3 | 3.3 | .80 | 18 |
| 2 | 34 | 34 | 55 | 110 | 360 | 194 | 60 | 5.0 | .80 | 4.1 | 2.0 | 25 |
| 3 | 33 | 42 | 60 | 120 | 340 | 147 | 44 | 4.5 | .60 | 1.4 | 2.9 | 19 |
| 4 | 35 | 52 | 55 | 115 | 360 | 210 | 30 | 4.5 | .40 | 1.6 | 2.5 | 16 |
| 5 | 28 | 48 | 56 | 110 | 420 | 144 | 20 | 5.0 | .30 | 1.4 | 2.7 | 13 |
| 6 | 25 | 48 | 56 | 105 | 380 | 88 | 16 | 5.0 | .20 | 1.4 | 3.7 | 13 |
| 7 | 20 | 70 | 56 | 147 | 330 | 92 | 14 | 5.0 | .10 | 1.4 | 4.5 | 14 |
| 8 | 18 | 62 | 66 | 144 | 340 | 198 | 11 | 5.5 | .05 | 1.6 | 4.5 | 14 |
| 9 | 20 | 50 | 98 | 138 | 390 | 332 | 9.5 | 5.0 | .05 | 11 | 4.8 | 14 |
| 10 | 25 | 43 | 88 | 144 | 480 | 464 | 6.9 | 4.8 | 39 | 2.5 | 4.5 | 14 |
| 11 | 30 | 38 | 80 | 182 | 570 | 482 | 6.6 | 3.5 | 7.2 | 2.0 | 4.5 | 14 |
| 12 | 27 | 40 | 68 | 270 | 640 | 392 | 6.6 | 3.3 | 2.7 | 2.0 | 4.5 | 14 |
| 13 | 27 | 36 | 82 | 374 | 520 | 300 | 7.9 | 3.1 | 1.6 | 2.0 | 5.1 | 15 |
| 14 | 24 | 36 | 64 | 440 | 434 | 386 | 6.0 | 3.1 | 1.3 | 2.0 | 5.4 | 16 |
| 15 | 25 | 37 | 58 | 494 | 344 | 416 | 6.9 | 2.5 | 1.2 | 2.7 | 4.5 | 15 |
| 16 | 26 | 37 | 56 | 350 | 315 | 280 | 6.0 | 3.1 | 1.0 | 4.1 | 4.1 | 14 |
| 17 | 33 | 32 | 64 | 390 | 310 | 238 | 6.0 | 3.1 | .90 | 3.9 | 4.5 | 14 |
| 18 | 32 | 34 | 64 | 480 | 300 | 202 | 85 | 3.1 | .90 | 3.1 | 4.5 | 15 |
| 19 | 32 | 33 | 56 | 350 | 422 | 170 | 50 | 3.5 | .70 | 2.4 | 5.4 | 15 |
| 20 | 33 | 33 | 54 | 280 | 500 | 144 | 35 | 6.3 | .60 | 2.2 | 6.6 | 15 |
| 21 | 31 | 33 | 72 | 260 | 536 | 129 | 25 | 2.2 | .60 | 2.2 | 6.3 | 15 |
| 22 | 25 | 33 | 85 | 280 | 416 | 120 | 15 | .90 | .20 | 2.9 | 6.9 | 14 |
| 23 | 25 | 33 | 75 | 310 | 295 | 115 | 10 | .50 | .10 | 2.5 | 10 | 14 |
| 24 | 28 | 33 | 68 | 362 | 246 | 112 | 8.0 | .70 | .10 | 1.3 | 13 | 16 |
| 25 | 28 | 40 | 66 | 362 | 230 | 118 | 6.0 | 14 | 1.6 | .80 | 16 | 13 |
| 26 | 35 | 40 | 66 | 422 | 280 | 132 | 6.0 | 4.1 | 2.7 | .50 | 16 | 14 |
| 27 | 42 | 40 | 85 | 458 | 266 | 132 | 5.0 | 1.4 | 2.4 | .30 | 16 | 13 |
| 28 | 35 | 45 | 95 | 482 | 182 | 150 | 4.5 | .80 | 1.6 | .10 | 18 | 14 |
| 29 | 31 | ------ | 112 | 512 | 120 | 135 | 4.5 | .50 | 1.3 | .05 | 17 | 15 |
| 30 | 27 | ------ | 110 | 584 | 126 | 88 | 6.0 | 2.4 | 2.0 | .05 | 16 | 16 |
| 31 | 38 | ------ | 110 | ------ | 147 | ------ | 5.0 | 2.4 | ------ | .30 | ------ | 14 |
| TOTAL | 912 | 1,132 | 2,230 | 8,873 | 11,049 | 6,300 | 602.4 | 113.30 | 73.50 | 67.10 | 217.20 | 465 |
| MEAN | 29.4 | 40.4 | 71.9 | 296 | 356 | 210 | 19.4 | 3.65 | 2.45 | 2.16 | 7.24 | 15.0 |
| MAX | 42 | 70 | 112 | 584 | 640 | 482 | 85 | 14 | 39 | 11 | 18 | 25 |
| MIN | 18 | 30 | 50 | 98 | 120 | 88 | 4.5 | .50 | .05 | .05 | .80 | 13 |
| AC-FT | 1,810 | 2,250 | 4,420 | 17,600 | 21,920 | 12,500 | 1,190 | 225 | 146 | 133 | 431 | 922 |

CAL YR 1973 TOTAL 32,034.50 MEAN 87.8 MAX 640 MIN .05 AC-FT 63,540
WTR YR 1973 TOTAL 37,371.48 MEAN 102 MAX 900 MIN .02 AC-FT 74,130

## 09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.

LOCATION.--Lat 36°47'32", long 108°43'54", in NW¼ sec.27, T.30 N., R.18 W., San Juan County, on left bank 3 mi (5 km) west of Shiprock, 6 mi(10 km) downstream from Chaco River, and at mile 215.0 (345.9 km).

DRAINAGE AREA.--12,900 mi² (33,410 km²), approximately.

PERIOD OF RECORD.--January to October 1911, February 1927 to current year. Monthly or yearly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder. Datum of gage is 4,848.68 ft (1,477.878 m) above mean sea level from river-profile survey. Prior to Apr. 6, 1922, nonrecording gage and Apr. 7, 1922, to Oct. 25, 1933, water-stage recorder, at site 3 mi (4.8 km) upstream at different datum. Oct. 26, 1933, to Sept. 30, 1936, water-stage recorder at present site at datum 3.31 ft (1.01 m) higher and Oct. 1, 1936, to Sept. 30, 1952, at datum 1.77 ft (0.54 m) higher. Supplementary water-stage recorders at nearby sites, same datum, used at times.

AVERAGE DISCHARGE.--47 calendar years (1926-73), 2,235 ft³/s (63.30 m³/s), 1,619,000 acre-ft/yr (2.00 km³/yr), unadjusted; 20 calendar years (1954-73), 1,859 ft³/s (52.65 m³/s), 1,347,000 acre-ft/yr (1.66 km³/yr).

EXTREMES.--Current year: Maximum discharge, 12,600 ft³/s (357 m³/s) July 1 (gage height, 6.92 ft or 2.109 m); minimum, 788 ft³/s (22.3 m³/s) Oct. 25.
1927-73: Maximum discharge, about 80,000 ft³/s (2,270 m³/s) Aug. 11, 1929 (gage height, 5.7 ft or 1.74 m, site and datum then in use); minimum daily, 8 ft³/s (0.23 m³/s) Aug. 25, 26, 1939.
Maximum flood occurred Oct. 6, 1911, and reached a stage of 22 ft (6.7 m), site and datum then in use.

REMARKS.--Records fair except those for November and December, which are poor. Since 1962 flow partly regulated by Navajo Reservoir (see sta 09355100). Diversions for irrigation of about 118,000 acres (478 km²) above station. Ungaged canals bypass station on both right and left bank, though some of bypass flow is returned to river below gage. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1243: 1931, 1934-38, 1951. WSP 1313: 1911, 1933.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1,450 | 1,970 | 5,510 | 2,130 | 4,710 | 5,950 | 11,900 | 4,170 | 4,270 | 2,080 | 2,020 | 2,260 |
| 2 | 1,490 | 1,960 | 2,440 | 1,990 | 3,450 | 6,360 | 11,400 | 3,750 | 4,040 | 2,010 | 2,030 | 2,230 |
| 3 | 1,490 | 1,880 | 2,520 | 1,870 | 2,970 | 5,350 | 10,900 | 4,110 | 3,850 | 2,060 | 2,040 | 2,200 |
| 4 | 1,490 | 1,890 | 2,430 | 1,740 | 4,200 | 4,580 | 9,830 | 4,060 | 3,650 | 2,140 | 2,150 | 1,550 |
| 5 | 1,490 | 1,930 | 1,730 | 1,660 | 5,050 | 4,180 | 9,220 | 4,120 | 3,370 | 2,230 | 2,170 | 1,330 |
| 6 | 1,470 | 1,990 | 1,510 | 1,720 | 5,470 | 3,720 | 9,080 | 4,050 | 3,330 | 2,140 | 2,190 | 2,010 |
| 7 | 1,550 | 2,130 | 1,330 | 2,060 | 4,710 | 3,820 | 8,590 | 4,030 | 2,940 | 2,070 | 2,170 | 2,000 |
| 8 | 1,520 | 2,390 | 1,300 | 2,110 | 4,220 | 4,930 | 7,930 | 4,060 | 2,710 | 1,940 | 2,170 | 2,070 |
| 9 | 1,490 | 2,180 | 1,410 | 1,850 | 4,380 | 6,340 | 7,550 | 4,100 | 2,540 | 1,850 | 2,190 | 2,050 |
| 10 | 1,500 | 1,990 | 1,740 | 1,750 | 5,250 | 8,950 | 7,100 | 3,950 | 2,770 | 1,910 | 2,190 | 2,070 |
| 11 | 1,510 | 2,020 | 1,700 | 2,030 | 6,190 | 10,800 | 6,700 | 3,820 | 4,630 | 2,020 | 2,190 | 2,080 |
| 12 | 1,510 | 2,050 | 1,730 | 2,510 | 7,250 | 10,700 | 6,020 | 3,770 | 3,880 | 2,000 | 2,180 | 2,050 |
| 13 | 1,490 | 2,200 | 1,520 | 3,010 | 8,130 | 9,150 | 5,860 | 3,640 | 3,680 | 2,020 | 2,150 | 2,050 |
| 14 | 1,510 | 2,210 | 1,680 | 3,300 | 7,270 | 9,580 | 4,470 | 3,490 | 3,640 | 2,020 | 2,170 | 2,130 |
| 15 | 1,460 | 2,120 | 1,480 | 3,630 | 6,730 | 10,800 | 5,000 | 3,070 | 3,050 | 2,010 | 2,190 | 2,120 |
| 16 | 1,480 | 2,030 | 1,430 | 3,260 | 6,880 | 9,000 | 5,650 | 3,220 | 2,610 | 2,070 | 2,100 | 2,080 |
| 17 | 1,540 | 2,390 | 1,380 | 2,510 | 7,430 | 6,780 | 5,500 | 3,240 | 2,500 | 2,060 | 2,110 | 2,060 |
| 18 | 1,550 | 2,770 | 1,400 | 2,660 | 7,910 | 6,260 | 5,300 | 3,170 | 2,220 | 2,100 | 2,100 | 2,070 |
| 19 | 1,410 | 2,860 | 1,520 | 2,780 | 8,870 | 6,780 | 5,650 | 3,170 | 2,000 | 2,050 | 2,150 | 2,080 |
| 20 | 1,340 | 2,750 | 1,620 | 2,430 | 11,100 | 6,860 | 5,470 | 3,120 | 1,950 | 2,100 | 2,150 | 2,060 |
| 21 | 1,310 | 2,720 | 2,170 | 2,130 | 11,700 | 7,210 | 5,290 | 3,150 | 1,920 | 2,010 | 2,110 | 2,050 |
| 22 | 1,280 | 2,730 | 2,720 | 2,050 | 10,900 | 7,470 | 5,030 | 3,670 | 1,890 | 2,000 | 2,160 | 2,070 |
| 23 | 1,560 | 2,870 | 1,700 | 2,040 | 7,990 | 7,480 | 4,660 | 3,460 | 1,890 | 2,000 | 2,170 | 2,090 |
| 24 | 1,910 | 2,880 | 1,490 | 2,170 | 6,560 | 7,590 | 4,340 | 3,370 | 1,910 | 1,470 | 2,160 | 2,090 |
| 25 | 1,980 | 2,860 | 1,560 | 2,460 | 6,560 | 7,760 | 4,170 | 3,390 | 1,950 | 1,150 | 2,180 | 2,080 |
| 26 | 1,980 | 3,000 | 1,670 | 2,910 | 6,990 | 7,710 | 4,100 | 3,550 | 2,090 | 1,920 | 2,220 | 2,050 |
| 27 | 1,980 | 3,450 | 1,870 | 3,300 | 7,270 | 8,580 | 4,250 | 3,880 | 2,170 | 2,000 | 2,230 | 2,050 |
| 28 | 2,040 | 4,190 | 1,880 | 3,720 | 6,180 | 10,400 | 4,050 | 3,950 | 2,130 | 1,960 | 2,140 | 2,060 |
| 29 | 1,970 | ------ | 1,890 | 4,200 | 5,260 | 11,700 | 3,910 | 3,760 | 2,140 | 1,980 | 2,180 | 2,120 |
| 30 | 1,860 | ------ | 2,040 | 4,440 | 5,030 | 11,400 | 4,300 | 3,820 | 2,110 | 1,980 | 2,250 | 2,230 |
| 31 | 1,920 | ------ | 2,260 | ------ | 5,300 | ------ | 4,000 | 4,490 | ------ | 1,740 | ------ | 2,140 |
| TOTAL | 49,530 | 68,410 | 56,630 | 76,420 | 201,910 | 228,190 | 197,220 | 114,580 | 83,830 | 61,090 | 64,610 | 63,580 |
| MEAN | 1,598 | 2,443 | 1,827 | 2,547 | 6,513 | 7,606 | 6,362 | 3,696 | 2,794 | 1,971 | 2,154 | 2,051 |
| MAX | 2,040 | 4,190 | 3,510 | 4,440 | 11,700 | 11,700 | 11,900 | 4,490 | 4,630 | 2,230 | 2,250 | 2,260 |
| MIN | 1,280 | 1,880 | 1,300 | 1,660 | 2,970 | 3,720 | 3,910 | 3,070 | 1,890 | 1,150 | 2,020 | 1,330 |
| AC-FT | 98,240 | 135,700 | 112,300 | 151,600 | 400,500 | 452,600 | 391,200 | 227,300 | 166,300 | 121,200 | 128,200 | 126,100 |

CAL YR 1973 TOTAL 1,266,000 MEAN 3,468 MAX 11,900 MIN 1,150 AC-FT 2,511,000
WTR YR 1973 TOTAL 1,250,322 MEAN 3,426 MAX 11,900 MIN 354 AC-FT 2,480,000

PEAK DISCHARGE (BASE, 6,000 CFS)

| DATE | TIME | G.H. | DISCHARGE | DATE | TIME | G.H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-21 | 0830 | 6.81 | 12,300 | 7-01 | 0830 | 6.92 | 12,600 |
| 6-15 | 1330 | 6.97 | 12,200 | 9-11 | 0430 | 6.34 | 6,380 |

## 09379500 SAN JUAN RIVER NEAR BLUFF, UTAH

LOCATION.--Lat 37°08'49", long 109°51'51", in SW¼NE¼NW¼ sec. 7, T.42 S., R.19 E., San Juan County, on left bank 1,600 ft (490 m) downstream from Gypsum Creek, 1,800 ft (550 m) upstream from highway bridge, 20 mi (32 km) southwest of Bluff, and at mile 113.5 (182.6 km).

DRAINAGE AREA.--23,000 mi² (60,000 km²), approximately.

PERIOD OF RECORD.--October 1914 to current year. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder. Datum of gage is 4,048 ft (1,234 m) from levels of Topographic Division, USGS. Prior to Mar. 16, 1927, chain gages at sites about 1,700 ft (520 m) downstream at different datums.

AVERAGE DISCHARGE.--59 calendar years, 2,605 ft³/s (73.77 m³/s), 1,887,000 acre-ft/yr (2.33 km³/yr), unadjusted; 20 calendar years (1954-73), 2,012 ft³/s (56.98 m³/s), 1,458,000 acre-ft/yr (1.80 km³/yr).

EXTREMES.--Current year: Maximum discharge, 12,100 ft³/s (343 m³/s) May 22 (gage height, 11.82 ft or 3.603 m); minimum daily, 1,310 ft³/s (37.1 m²/s) Oct. 26.
1914-17, 1927-73: Maximum discharge, 70,000 ft³/s (1,980 m³/s) Sept. 10, 1927 (gage height, 32.0 ft or 9.75 m), from rating curve extended above 31,000 ft³/s (878 m³/s) and slope-area measurement at gage-height 26.62 ft (8.114 m); no flow July 3-13, 1934, Aug. 24-27, 29, 1939.
Flood of Oct. 6, 1911, which is greatest known at Shiprock, N. Mex., probably exceeded that of Sept. 10, 1927 at this station but stage was not accurately determined.

REMARKS.--Records good. Diversions for irrigation of approximately 200,000 acres (809 km²) above station. No diversion between station and mouth of river. Flow regulated by Navajo Reservoir since June 28, 1962 (see station 09355100). Water quality records for the current year are published in part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1213: 1940. WSP 1313: 1917, 1929. WSP 1343: 1945.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1,700 | 2,140 | 5,020 | 3,710 | 6,660 | 6,100 | 10,200 | 4,150 | 4,180 | 2,230 | 1,980 | 2,290 |
| 2 | 1,700 | 2,200 | 3,840 | 3,530 | 6,510 | 6,540 | 10,400 | 4,020 | 4,050 | 2,220 | 2,220 | 2,320 |
| 3 | 1,700 | 2,120 | 4,150 | 3,780 | 5,220 | 6,650 | 10,000 | 3,960 | 3,970 | 2,150 | 2,200 | 2,350 |
| 4 | 1,700 | 2,070 | 3,410 | 3,720 | 4,830 | 6,780 | 9,550 | 3,920 | 3,910 | 2,160 | 2,220 | 2,350 |
| 5 | 1,700 | 2,040 | 2,990 | 4,020 | 5,910 | 6,060 | 9,110 | 3,550 | 3,840 | 2,220 | 2,320 | 2,030 |
| 6 | 1,700 | 2,150 | 2,400 | 4,420 | 7,010 | 4,880 | 8,800 | 3,510 | 3,820 | 2,250 | 2,240 | 1,490 |
| 7 | 1,600 | 2,480 | 2,080 | 4,230 | 7,190 | 4,340 | 8,380 | 3,510 | 3,770 | 2,190 | 2,260 | 2,230 |
| 8 | 1,600 | 4,840 | 2,040 | 4,110 | 6,150 | 4,510 | 7,840 | 3,480 | 3,610 | 2,090 | 2,280 | 2,130 |
| 9 | 1,600 | 3,580 | 2,070 | 3,150 | 5,620 | 5,690 | 7,450 | 3,440 | 3,460 | 2,180 | 2,280 | 2,240 |
| 10 | 1,550 | 2,760 | 2,430 | 3,170 | 6,080 | 7,400 | 7,150 | 3,450 | 3,560 | 2,130 | 2,290 | 2,260 |
| 11 | 1,640 | 2,690 | 2,680 | 3,870 | 7,200 | 9,010 | 6,990 | 3,380 | 5,020 | 2,180 | 2,270 | 2,290 |
| 12 | 1,640 | 3,750 | 2,400 | 4,730 | 8,650 | 10,200 | 6,330 | 3,350 | 4,980 | 2,320 | 2,260 | 2,300 |
| 13 | 1,660 | 4,310 | 2,390 | 5,680 | 9,570 | 10,400 | 5,900 | 3,370 | 4,090 | 2,260 | 2,270 | 2,270 |
| 14 | 1,570 | 3,750 | 2,240 | 6,600 | 9,430 | 9,980 | 5,630 | 3,320 | 4,020 | 2,240 | 2,240 | 2,300 |
| 15 | 1,600 | 3,300 | 2,330 | 6,160 | 9,130 | 10,600 | 5,620 | 3,290 | 3,930 | 2,220 | 2,250 | 2,350 |
| 16 | 1,580 | 3,200 | 2,080 | 5,800 | 9,070 | 10,800 | 5,480 | 3,180 | 3,390 | 2,210 | 2,260 | 2,380 |
| 17 | 1,640 | 3,220 | 1,950 | 4,700 | 8,900 | 10,800 | 5,640 | 3,350 | 3,140 | 2,240 | 2,240 | 2,340 |
| 18 | 1,710 | 3,450 | 2,010 | 4,290 | 8,960 | 7,110 | 5,450 | 3,580 | 3,070 | 2,230 | 2,210 | 2,330 |
| 19 | 1,840 | 3,580 | 2,250 | 4,720 | 9,260 | 7,010 | 6,160 | 3,360 | 2,810 | 2,240 | 2,250 | 2,340 |
| 20 | 1,680 | 3,390 | 2,510 | 4,510 | 10,400 | 7,100 | 6,010 | 3,370 | 2,570 | 2,200 | 2,300 | 2,320 |
| 21 | 1,590 | 3,120 | 2,760 | 3,550 | 11,600 | 6,980 | 5,810 | 3,390 | 2,450 | 2,230 | 2,270 | 2,370 |
| 22 | 1,560 | 3,420 | 4,200 | 3,190 | 11,700 | 7,030 | 5,560 | 3,670 | 2,360 | 2,110 | 2,250 | 2,390 |
| 23 | 1,590 | 3,550 | 3,500 | 3,020 | 10,600 | 7,160 | 5,370 | 4,090 | 2,330 | 2,110 | 2,310 | 2,380 |
| 24 | 1,840 | 3,740 | 2,460 | 3,430 | 8,860 | 7,400 | 5,050 | 3,690 | 2,250 | 2,120 | 2,260 | 2,370 |
| 25 | 2,180 | 3,620 | 2,250 | 3,920 | 7,930 | 7,760 | 4,770 | 3,560 | 2,200 | 1,920 | 2,270 | 2,360 |
| 26 | 2,200 | 3,620 | 2,460 | 4,160 | 8,090 | 7,860 | 4,600 | 3,600 | 2,210 | 1,310 | 2,300 | 2,340 |
| 27 | 2,210 | 3,670 | 3,340 | 4,500 | 8,310 | 8,180 | 4,490 | 3,830 | 2,310 | 2,160 | 2,350 | 2,360 |
| 28 | 2,200 | 4,130 | 4,270 | 4,870 | 7,830 | 9,000 | 4,370 | 3,960 | 2,310 | 2,200 | 2,330 | 2,360 |
| 29 | 2,240 | ------ | 4,030 | 5,650 | 6,540 | 9,980 | 4,280 | 3,840 | 2,280 | 2,120 | 2,230 | 2,370 |
| 30 | 2,180 | ------ | 3,530 | 6,160 | 5,880 | 10,400 | 4,240 | 3,760 | 2,300 | 2,160 | 2,260 | 2,370 |
| 31 | 2,100 | ------ | 3,360 | ------ | 5,750 | ------ | 4,180 | 3,890 | ------ | 2,200 | ------ | 2,360 |
| TOTAL | 55,000 | 89,890 | 89,430 | 131,350 | 244,840 | 233,710 | 200,810 | 111,820 | 98,190 | 66,800 | 67,670 | 70,940 |
| MEAN | 1,774 | 3,210 | 2,885 | 4,378 | 7,898 | 7,790 | 6,478 | 3,607 | 3,273 | 2,155 | 2,256 | 2,288 |
| MAX | 2,240 | 4,840 | 5,020 | 6,600 | 11,700 | 10,800 | 10,400 | 4,150 | 5,020 | 2,320 | 2,350 | 2,390 |
| MIN | 1,550 | 2,040 | 1,950 | 3,020 | 4,830 | 4,340 | 4,180 | 3,180 | 2,200 | 1,310 | 1,980 | 1,490 |
| AC-FT | 109,100 | 178,300 | 177,400 | 260,500 | 485,600 | 463,600 | 398,300 | 221,800 | 194,800 | 132,500 | 134,200 | 140,700 |

CAL YR 1973 TOTAL 1,460,450 MEAN 4,001 MAX 11,700 MIN 1,310 AC-FT 2,897,000
WTR YR 1973 TOTAL 1,524,802 MEAN 4,178 MAX 26,700 MIN 428 AC-FT 3,024,000

PEAK DISCHARGE ( BASE, 8,000 CFS )

| DATE | TIME | G.H. | DISCHARGE | DATE | TIME | G.H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 5-22 | 0100 | 11.82 | 12,100 | 7-02 | 0830 | 10.86 | 10,700 |
| 6-16 | 1000 | 11.46 | 11,300 | | | | |

## 09386900 RIO NUTRIA NEAR RAMAH, N. MEX.

LOCATION.--Lat 35°16'57", long 108°33'10", in NW¼SW¼ sec.8, T.12 N., R.16 W., McKinley County, on Zuni Indian Reservation, at mouth of Nutria Canyon, 0.9 mi (1.4 km) upstream from Nutria Diversion Dam, 1.3 mi (2.1 km) northeast of Upper Nutria, and 10.4 mi (16.7 km) northwest of Ramah.

DRAINAGE AREA.--71.4 mi² (185 km²).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,000 ft (2,133 m) from topographic map.

EXTREMES.--Current year: Maximum discharge, 782 ft³/s (22.1 m³/s) Apr. 14 (gage height, 4.58 ft or 1.396 m); minimum discharge, .01 ft³/s (0.0002 m³/s) at times.
Period of record: Maximum discharge, 782 ft³/s (22.1 m³/s) Apr. 14, 1973 (gage height 4.58 ft or 1.396 m), from rating curve extended above 10 ft³/s (0.28 m³/s) on basis of slope-area measurement of peak flow; no flow Oct. 1-20, 1969.

REMARKS.--Records good except those for May through December, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.0 | .62 | 17 | 26 | 104 | 3.9 | .11 | .05 | .09 | .08 | .07 | .26 |
| 2 | 1.1 | .56 | 26 | 21 | 69 | 4.4 | .12 | .07 | .09 | .09 | .07 | .31 |
| 3 | .79 | .55 | 26 | 17 | 51 | 4.5 | .14 | .08 | .09 | .08 | .12 | .32 |
| 4 | .60 | .68 | 18 | 18 | 46 | 3.6 | .10 | .08 | .09 | .08 | .12 | .30 |
| 5 | .50 | 1.0 | 13 | 21 | 81 | 2.6 | .10 | .09 | .11 | .08 | .11 | .28 |
| 6 | .39 | 1.8 | 11 | 40 | 147 | 2.0 | .11 | .10 | .11 | .08 | .11 | .25 |
| 7 | .38 | 2.8 | 12 | 52 | 106 | 1.7 | .14 | .11 | .14 | .03 | .13 | .18 |
| 8 | .27 | 3.7 | 11 | 40 | 81 | 1.5 | .12 | .13 | .18 | .02 | .17 | .16 |
| 9 | .26 | 3.1 | 12 | 52 | 47 | 1.4 | .12 | .15 | .17 | .02 | .21 | .13 |
| 10 | .32 | 2.6 | 16 | 79 | 35 | 1.4 | .14 | .16 | .56 | .02 | .22 | .12 |
| 11 | .27 | 2.4 | 15 | 133 | 27 | 1.2 | .16 | .20 | .32 | .02 | .26 | .13 |
| 12 | .33 | 2.0 | 18 | 204 | 22 | 1.1 | .18 | .23 | .09 | .02 | .27 | .13 |
| 13 | .32 | 2.6 | 19 | 324 | 62 | 1.3 | .20 | .25 | .06 | .01 | .37 | .16 |
| 14 | .45 | 2.5 | 16 | 460 | 34 | 1.9 | .92 | .25 | .05 | .01 | .38 | .16 |
| 15 | .98 | 2.3 | 14 | 378 | 22 | 1.2 | .16 | .25 | .08 | .01 | .38 | .15 |
| 16 | 1.7 | 2.4 | 15 | 299 | 17 | .92 | .30 | .59 | .08 | .01 | .41 | .15 |
| 17 | 2.6 | 3.1 | 19 | 361 | 13 | .86 | .44 | 6.3 | .05 | .01 | .49 | .17 |
| 18 | 2.6 | 2.1 | 22 | 367 | 11 | .76 | .38 | .17 | .07 | .01 | .50 | .15 |
| 19 | 2.1 | 2.0 | 29 | 243 | 9.7 | .67 | .46 | .51 | .09 | .01 | .52 | .15 |
| 20 | 1.7 | 1.6 | 49 | 191 | 8.5 | .53 | .24 | .07 | .07 | .01 | .54 | .15 |
| 21 | 1.3 | 1.5 | 45 | 154 | 8.1 | .49 | .12 | .05 | .09 | .01 | .54 | .15 |
| 22 | 1.2 | 1.8 | 30 | 181 | 8.8 | .48 | .08 | .05 | .08 | .01 | .61 | .16 |
| 23 | .90 | 2.2 | 25 | 303 | 7.1 | .49 | .06 | .05 | .09 | .02 | .57 | .15 |
| 24 | .81 | 2.8 | 22 | 358 | 5.9 | .48 | .05 | .07 | .09 | .02 | .47 | .14 |
| 25 | .81 | 5.4 | 21 | 386 | 5.1 | .38 | .05 | .08 | .06 | .02 | .41 | .12 |
| 26 | .86 | 7.3 | 27 | 313 | 4.5 | .32 | .07 | .09 | .06 | .02 | .42 | .12 |
| 27 | .64 | 11 | 33 | 224 | 3.9 | .27 | .08 | .10 | .06 | .02 | .37 | .11 |
| 28 | .49 | 16 | 27 | 163 | 3.3 | .23 | .08 | .12 | .05 | .02 | .28 | .09 |
| 29 | .50 | ------ | 23 | 113 | 2.9 | .18 | .05 | .90 | .05 | .03 | .26 | .10 |
| 30 | .65 | ------ | 21 | 92 | 2.7 | .12 | .05 | .31 | .05 | .04 | .25 | .13 |
| 31 | .77 | ------ | 22 | ------ | 2.4 | ------ | .05 | .10 | ------ | .05 | ------ | .12 |
| TOTAL | 28.59 | 88.41 | 674 | 5,609 | 1,047.9 | 39.98 | 5.38 | 11.76 | 3.27 | .96 | 9.63 | 5.20 |
| MEAN | .92 | 3.16 | 21.7 | 187 | 33.8 | 1.33 | .17 | .38 | .11 | .031 | .32 | .17 |
| MAX | 2.6 | 16 | 49 | 460 | 147 | 4.5 | .92 | 6.3 | .56 | .09 | .61 | .32 |
| MIN | .26 | .55 | 11 | 17 | 2.4 | .12 | .05 | .05 | .05 | .01 | .07 | .09 |
| AC-FT | 57 | 175 | 1,340 | 11,130 | 2,080 | 79 | 11 | 23 | 6.5 | 1.9 | 19 | 10 |

CAL YR 1973 TOTAL 7,524.08 MEAN 20.6 MAX 460 MIN .01 AC-FT 14,920
WTR YR 1973 TOTAL 7,692.18 MEAN 21.1 MAX 460 MIN .02 AC-FT 15,260

## 09386950 ZUNI RIVER ABOVE ZUNI RESERVOIR, N. MEX.

LOCATION.--Lat 35°06'03", long 108°45'00", in NE¼ sec.17, T.10 N., R.18 W., McKinley County, on Zuni Indian Reservation, on right bank, 50 ft (15 m) upstream from concrete ford on State Highway 36, 0.8 mi (1.3 km) upstream from flow line of Zuni Reservoir, 2.3 mi (3.7 km) northeast of Black Rock, and 5.9 mi (9.5 km) northeast of Zuni Pueblo.

DRAINAGE AREA.--810 mi² (2,100 km²), approximately.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,450 ft (1,970 m) from topographic map.

EXTREMES.--Current year: Maximum discharge, 2,300 ft³/s (65.1 m³/s) July 7 (gage height, 5.71 ft or 1.740 m), from rating curve extended as explained below; no flow for many days.
Period of record: Maximum discharge, 2,300 ft³/s (65.1 m³/s) July 7, 1973 (gage height, 5.71 ft or 1.740 m), from rating curve extended above 670 ft³/s (19.0 m³/s) on basis of slope-area measurements at gage heights 3.94 ft (1.201 m), 4.05 ft (1.234 m), and 5.16 ft (1.573 m); no flow for many days.

REMARKS.--Records fair except those for winter months, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .80 | .76 | 135 | 78 | 146 | 1.7 | 0 | 8.6 | 9.8 | | 0 | .15 |
| 2 | .80 | 1.1 | 106 | 75 | 140 | 1.7 | 0 | 10 | 9.9 | | 0 | .12 |
| 3 | .80 | 1.2 | 404 | 75 | 129 | 1.1 | 0 | 10 | 11 | | 0 | .12 |
| 4 | .80 | 1.4 | 589 | 74 | 101 | .58 | 0 | 12 | 10 | | 0 | .10 |
| 5 | .80 | 1.4 | 307 | 70 | 82 | .45 | 1.1 | 12 | 11 | | 0 | .10 |
| 6 | .90 | 1.4 | 127 | 69 | 89 | .30 | 2.6 | 12 | 10 | | 0 | .10 |
| 7 | .90 | 57 | 92 | 68 | 147 | .25 | 107 | 13 | 9.2 | | 0 | .25 |
| 8 | .90 | 53 | 78 | 72 | 201 | .21 | 60 | 15 | 8.7 | | 0 | .25 |
| 9 | .90 | 11 | 85 | 76 | 167 | .15 | 30 | 15 | 8.6 | | 0 | .20 |
| 10 | 1.0 | 9.6 | 73 | 81 | 114 | .06 | 10 | 15 | 23 | | 0 | .20 |
| 11 | 1.0 | 12 | 65 | 101 | 80 | 0 | 8.3 | 14 | 13 | | 0 | .20 |
| 12 | 1.0 | 6.3 | 66 | 197 | 60 | 0 | 9.1 | 14 | 4.6 | | 0 | .10 |
| 13 | 1.0 | 4.8 | 99 | 420 | 94 | 0 | 8.6 | 14 | 1.5 | | 0 | .30 |
| 14 | 1.1 | 3.0 | 110 | 599 | 72 | 0 | 8.3 | 12 | 1.3 | | 0 | .50 |
| 15 | 1.1 | 2.4 | 107 | 788 | 76 | 0 | 9.1 | 11 | 1.2 | | 0 | .50 |
| 16 | 1.1 | 3.0 | 91 | 640 | 48 | 0 | 8.6 | 10 | 1.2 | | 0 | .50 |
| 17 | 1.2 | 4.8 | 78 | 413 | 55 | 0 | 7.9 | 10 | 1.0 | | 0 | .60 |
| 18 | 1.3 | 3.5 | 74 | 360 | 44 | 0 | 8.0 | 10 | .91 | | 0 | .70 |
| 19 | 1.4 | 4.2 | 102 | 430 | 34 | 0 | 7.6 | 10 | .83 | | 0 | .50 |
| 20 | 1.5 | 2.9 | 158 | 420 | 27 | 0 | 7.0 | 12 | .83 | | 0 | .50 |
| 21 | 1.2 | 2.2 | 236 | 430 | 24 | 0 | 8.3 | 12 | .70 | | 0 | .50 |
| 22 | 1.1 | .76 | 227 | 430 | 18 | 0 | 8.6 | 12 | .50 | | 0 | .50 |
| 23 | 1.0 | 2.0 | 175 | 450 | 15 | 0 | 8.2 | 10 | .29 | | 0 | .50 |
| 24 | .91 | 3.2 | 130 | 440 | 11 | 0 | 9.1 | 12 | .19 | | 2.5 | .50 |
| 25 | .83 | 12 | 97 | 458 | 9.8 | 0 | 7.6 | 12 | .15 | | 2.0 | 1.0 |
| 26 | .91 | 80 | 84 | 523 | 7.7 | 0 | 8.6 | 12 | .13 | | 1.5 | 1.5 |
| 27 | .70 | 60 | 82 | 504 | 4.9 | 0 | 7.9 | 13 | .07 | | 1.0 | 1.5 |
| 28 | .70 | 59 | 82 | 420 | 3.5 | 0 | 10 | 13 | .02 | | 1.5 | 1.5 |
| 29 | .70 | ------ | 87 | 292 | 2.1 | 0 | 9.1 | 13 | .01 | | .10 | 1.3 |
| 30 | .70 | ------ | 85 | 185 | 1.9 | 0 | 9.1 | 10 | 0 | | .15 | 1.5 |
| 31 | .83 | ------ | 81 | ------ | 1.6 | ------ | 9.1 | 9.7 | ------ | | ------ | 1.5 |
| TOTAL | 29.88 | 363.92 | 4,312 | 9,238 | 2,025.5 | 6.50 | 388.8 | 368.3 | 139.63 | 0 | 8.75 | 17.79 |
| MEAN | .96 | 13.0 | 139 | 308 | 65.3 | .22 | 12.5 | 11.9 | 4.65 | 0 | .29 | .57 |
| MAX | 1.5 | 60 | 589 | 788 | 201 | 1.7 | 107 | 15 | 23 | 0 | 2.5 | 1.5 |
| MIN | .70 | .76 | 65 | 68 | 1.6 | 0 | 0 | 8.6 | 0 | 0 | 0 | .10 |
| AC-FT | 59 | 722 | 8,550 | 18,320 | 4,020 | 13 | 771 | 731 | 277 | 0 | 17 | 35 |

CAL YR 1973 TOTAL 16,499.07 MEAN 46.3 MAX 788 MIN 0 AC-FT 33,520
WTR YR 1973 TOTAL 17,135.78 MEAN 46.9 MAX 788 MIN 0 AC-FT 33,990

PEAK DISCHARGE (BASE, 100 CFS)

| DATE | TIME | G.H. | DISCHARGE | DATE | TIME | G.H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 2-07 | 2330 | 3.91 | 205 | 5-13 | 1700 | 4.62 | 607 |
| 3-03 | 2230 | 5.08 | 1,280 | 7-07 | 1900 | 5.71 | 2,300 |
| 4-15 | 0200 | 5.24 | 1,800 | 9-10 | 2100 | 3.90 | 136 |

## 09430500 GILA RIVER NEAR GILA, N. MEX.

LOCATION.--Lat 33°03'40", long 108°32'12", in NE¼NW¼ sec.30, T.14 S., R.16 W., Grant County, on left bank at Hooker damsite, 1.6 mi (2.6 km) upstream from Mogollon Creek, 7 mi (11 km) northeast of Gila, and at mile 572.5 (921.2 km).

DRAINAGE AREA.--1,864 mi² (4,828 km²).

PERIOD OF RECORD.--April to December 1914, December 1927 to current year. Monthly discharge only December 1927 to September 1930, published in WSP 1313.

GAGE.--Water-stage recorder. Datum of gage is 4,655.8 ft (1,419.09 m) above mean sea level from river-profile survey. Prior to Dec. 31, 1928, at site 5 mi (8.0 km) upstream at different datum. Dec. 31, 1928, to Jan. 7, 1942, at site 200 ft (61 m) upstream at same datum.

AVERAGE DISCHARGE.--46 calendar years (1927-73), 134 ft³/s (3.795 m³/s), 97,080 acre-ft/yr (120 hm³/yr); 20 calendar years (1954-73), 141 ft³/s (3.993 m³/s), 102,200 acre-ft/yr (126 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,190 ft³/s (62.0 m³/s) May 14 (gage height, 5.20 ft or 1.585 m), from rating curve extended above 1,800 ft³/s (51.0 m³/s) on basis of slope-area measurement at gage height 9.46 ft (2.883 m); minimum, 31 ft³/s (0.88 m³/s) Sept. 27, Oct. 1-3.

Period of record: Maximum discharge, 25,400 ft³/s (719 m³/s) Sept. 29, 1941 (gage height, 17.2 ft or 5.24 m, from floodmark), from rating curve extended above 3,900 ft³/s (110 m³/s) on basis of velocity-area studies; minimum, 14 ft³/s (0.40 m³/s) July 15, 1971.

Other major floods occurred in November 1905, December 1906, and January 1916.

REMARKS.--Records good, except those for January and December, which are poor. Diversions for irrigation of about 500 acres (202 hm²) above station.

REVISIONS (WATER YEARS).--WSP 1283: Drainage area. WSP 1313: 1944 (M), 1949 (M).

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 405 | 157 | 1,580 | 834 | 854 | 334 | 73 | 142 | 54 | 51 | 46 | 65 |
| 2 | 360 | 142 | 1,550 | 848 | 729 | 334 | 75 | 150 | 52 | 31 | 47 | 63 |
| 3 | 318 | 133 | 1,310 | 827 | 656 | 326 | 73 | 157 | 49 | 31 | 47 | 63 |
| 4 | 282 | 133 | 1,180 | 743 | 652 | 286 | 73 | 142 | 47 | 34 | 47 | 61 |
| 5 | 258 | 151 | 1,060 | 680 | 668 | 266 | 71 | 117 | 46 | 34 | 47 | 60 |
| 6 | 250 | 157 | 946 | 620 | 841 | 238 | 75 | 104 | 43 | 37 | 47 | 58 |
| 7 | 220 | 218 | 841 | 650 | 841 | 226 | 81 | 90 | 41 | 38 | 47 | 58 |
| 8 | 200 | 425 | 771 | 771 | 746 | 210 | 81 | 81 | 40 | 38 | 47 | 58 |
| 9 | 181 | 465 | 736 | 800 | 652 | 202 | 79 | 75 | 40 | 37 | 47 | 60 |
| 10 | 178 | 395 | 729 | 850 | 620 | 194 | 83 | 71 | 46 | 36 | 47 | 62 |
| 11 | 170 | 350 | 656 | 953 | 668 | 187 | 79 | 67 | 49 | 36 | 47 | 62 |
| 12 | 170 | 405 | 656 | 1,090 | 715 | 178 | 75 | 65 | 44 | 36 | 47 | 62 |
| 13 | 160 | 425 | 701 | 1,200 | 806 | 175 | 77 | 63 | 41 | 36 | 47 | 58 |
| 14 | 150 | 580 | 694 | 1,340 | 1,450 | 169 | 83 | 61 | 41 | 36 | 49 | 58 |
| 15 | 150 | 365 | 668 | 1,390 | 1,590 | 166 | 122 | 59 | 40 | 36 | 49 | 54 |
| 16 | 140 | 375 | 668 | 1,210 | 1,240 | 148 | 136 | 59 | 38 | 38 | 47 | 52 |
| 17 | 145 | 400 | 662 | 1,050 | 1,050 | 136 | 262 | 61 | 38 | 41 | 46 | 52 |
| 18 | 150 | 430 | 1,110 | 992 | 869 | 125 | 342 | 61 | 38 | 41 | 47 | 52 |
| 19 | 160 | 440 | 1,240 | 960 | 785 | 120 | 274 | 61 | 38 | 43 | 51 | 52 |
| 20 | 150 | 460 | 1,240 | 841 | 715 | 112 | 202 | 59 | 38 | 43 | 54 | 54 |
| 21 | 145 | 608 | 1,330 | 800 | 632 | 107 | 154 | 65 | 38 | 41 | 59 | 54 |
| 22 | 145 | 855 | 1,340 | 780 | 614 | 104 | 125 | 69 | 37 | 41 | 61 | 54 |
| 23 | 150 | 855 | 1,150 | 720 | 560 | 97 | 109 | 67 | 37 | 41 | 65 | 54 |
| 24 | 150 | 984 | 976 | 720 | 512 | 92 | 97 | 61 | 36 | 43 | 67 | 56 |
| 25 | 148 | 960 | 890 | 800 | 460 | 88 | 88 | 58 | 36 | 43 | 67 | 56 |
| 26 | 148 | 1,010 | 820 | 834 | 430 | 83 | 83 | 56 | 34 | 43 | 67 | 54 |
| 27 | 150 | 1,100 | 876 | 911 | 425 | 83 | 179 | 54 | 31 | 43 | 65 | 54 |
| 28 | 152 | 1,250 | 841 | 953 | 415 | 79 | 109 | 54 | 33 | 44 | 67 | 54 |
| 29 | 155 | ------ | 820 | 976 | 380 | 77 | 99 | 59 | 33 | 44 | 67 | 54 |
| 30 | 154 | ------ | 785 | 960 | 346 | 77 | 92 | 59 | 35 | 44 | 67 | 56 |
| 31 | 155 | ------ | 750 | ------ | 330 | ------ | 95 | 59 | ------ | 46 | ------ | 56 |
| TOTAL | 5,847 | 14,028 | 29,356 | 27,104 | 22,181 | 5,019 | 3,640 | 2,586 | 1,211 | 1,206 | 1,605 | 1,762 |
| MEAN | 189 | 501 | 947 | 903 | 716 | 167 | 117 | 77.0 | 40.4 | 38.9 | 53.5 | 56.8 |
| MAX | 405 | 1,250 | 1,380 | 1,390 | 1,590 | 334 | 342 | 157 | 54 | 46 | 67 | 65 |
| MIN | 140 | 133 | 656 | 620 | 330 | 77 | 71 | 54 | 31 | 31 | 46 | 52 |
| AC-FT | 11,600 | 27,820 | 58,250 | 53,760 | 44,000 | 9,960 | 7,220 | 4,730 | 2,400 | 2,390 | 3,180 | 3,490 |

CAL YR 1973 TOTAL 115,344 MEAN 316 MAX 1,590 MIN 31 AC-FT 228,800
WTR YR 1973 TOTAL 157,371 MEAN 431 MAX 9,030 MIN 31 AC-FT 312,100

PEAK DISCHARGE (BASE, 600 CFS)

| DATE | TIME | G.H. | DISCHARGE | DATE | TIME | G.H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 3-01 | 1100 | 4.38 | 1,490 | 5-14 | 1400 | 5.20 | 2,190 |
| 4-15 | 1400 | 4.40 | 1,430 | | | | |

## 09430600 MOGOLLON 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, 12 mi (19 km) upstream from mouth, 14.2 mi (23 km) north of Cliff.

DRAINAGE AREA.--69 mi² (179 km²).

PERIOD OF RECORD.--March 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,440 ft (1,658 m) from topographic map.

AVERAGE DISCHARGE.--6 calendar years, 21.7 ft³/s (0.615 m³/s), 15,720 acre-ft/yr (19.4 hm³/yr).

EXTREMES.--Maximum discharge during year, 388 ft³/s (11.0 m³/s) Apr. 14 (gage height, 4.05 ft or 1.234 m); no flow at times. Period of record: Maximum discharge, 10,800 ft³/s (306 m³/s) Aug. 12, 1967 (gage height, 13.7 ft or 4.18 m, from floodmarks), from rating curve extended above 220 ft³/s (6.23 m³/s) on basis of slope-area measurement of peak flow; no flow at times.

REMARKS.--Records good except those for January, which are poor. Water quality records for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 100 | 18 | 226 | 122 | 149 | 57 | 5.5 | 29 | 1.6 | 0 | .81 | 1.5 |
| 2 | 80 | 19 | 219 | 123 | 121 | 53 | 5.4 | 21 | 1.2 | 0 | .82 | 1.6 |
| 3 | 60 | 21 | 210 | 107 | 145 | 27 | 6.6 | 21 | 1.2 | 0 | .90 | 1.6 |
| 4 | 55 | 22 | 182 | 95 | 173 | 23 | 7.2 | 19 | 1.1 | 0 | .94 | 1.5 |
| 5 | 50 | 29 | 153 | 85 | 280 | 20 | 7.4 | 19 | 1.6 | 0 | .91 | 1.4 |
| 6 | 45 | 46 | 119 | 83 | 256 | 19 | 7.1 | 8.2 | .89 | 0 | .97 | 1.3 |
| 7 | 40 | 77 | 99 | 101 | 161 | 19 | 16 | 6.9 | .84 | 0 | .91 | 1.2 |
| 8 | 36 | 88 | 77 | 130 | 149 | 17 | 9.6 | 6.0 | .65 | 0 | .82 | 1.2 |
| 9 | 34 | 78 | 48 | 130 | 182 | 16 | 8.0 | 5.4 | .38 | 0 | .82 | 1.0 |
| 10 | 32 | 66 | 74 | 147 | 210 | 14 | 9.8 | 5.3 | .47 | 0 | .76 | 1.0 |
| 11 | 32 | 58 | 89 | 197 | 211 | 13 | 8.9 | 5.3 | .64 | 0 | .76 | .98 |
| 12 | 34 | 59 | 67 | 241 | 192 | 12 | 8.7 | 4.9 | .57 | .11 | .70 | 1.1 |
| 13 | 34 | 53 | 78 | 304 | 174 | 13 | 8.9 | 4.5 | .25 | .27 | .71 | 1.0 |
| 14 | 34 | 52 | 74 | 388 | 219 | 13 | 16 | 4.1 | .12 | .34 | .88 | 1.1 |
| 15 | 35 | 62 | 75 | 307 | 179 | 9.9 | 22 | 4.1 | 0 | .37 | .95 | .90 |
| 16 | 35 | 82 | 95 | 217 | 141 | 9.1 | 17 | 4.8 | 0 | .37 | 1.0 | .94 |
| 17 | 36 | 69 | 145 | 172 | 125 | 8.5 | 15 | 4.8 | 0 | .38 | 1.2 | .95 |
| 18 | 34 | 77 | 167 | 140 | 117 | 7.6 | 76 | 3.9 | 0 | .37 | 1.1 | .90 |
| 19 | 31 | 99 | 193 | 157 | 113 | 7.1 | 29 | 3.7 | 0 | .40 | 1.2 | .77 |
| 20 | 30 | 110 | 192 | 117 | 108 | 6.5 | 20 | 3.9 | 0 | .42 | 1.5 | .57 |
| 21 | 27 | 158 | 202 | 89 | 104 | 6.2 | 16 | 7.7 | 0 | .43 | 1.5 | .62 |
| 22 | 26 | 167 | 175 | 75 | 87 | 6.1 | 12 | 5.6 | 0 | .49 | 1.5 | 1.0 |
| 23 | 25 | 144 | 143 | 101 | 72 | 6.0 | 10 | 5.4 | 0 | .52 | 1.5 | .84 |
| 24 | 25 | 153 | 117 | 169 | 61 | 6.0 | 8.2 | 5.9 | 0 | .52 | 1.4 | .75 |
| 25 | 21 | 182 | 111 | 222 | 61 | 6.2 | 6.5 | 2.5 | 0 | .55 | 1.3 | 1.0 |
| 26 | 20 | 208 | 107 | 282 | 55 | 5.8 | 5.3 | 3.0 | 0 | .57 | 1.3 | .67 |
| 27 | 20 | 230 | 114 | 315 | 56 | 5.8 | 5.8 | 2.7 | 0 | .53 | 1.5 | .75 |
| 28 | 19 | 227 | 110 | 321 | 46 | 5.7 | 6.1 | 2.3 | 0 | .55 | 1.4 | .96 |
| 29 | 19 | ------ | 104 | 304 | 37 | 5.5 | 5.4 | 2.4 | 0 | .65 | 1.5 | .93 |
| 30 | 17 | ------ | 99 | 212 | 35 | 5.4 | 8.2 | 2.2 | 0 | .72 | 1.5 | 1.0 |
| 31 | 19 | ------ | 103 | ------ | 39 | ------ | 15 | 2.1 | ------ | .73 | ------ | .97 |
| TOTAL | 1,101 | 2,638 | 5,985 | 5,464 | 4,016 | 383.4 | 459.6 | 201.2 | 10.89 | 9.25 | 33.06 | 32.04 |
| MEAN | 35.5 | 94.1 | 129 | 182 | 130 | 12.8 | 14.8 | 6.49 | .36 | .30 | 1.10 | 1.03 |
| MAX | 100 | 230 | 220 | 349 | 256 | 37 | 76 | 21 | 1.6 | .73 | 1.5 | 1.6 |
| MIN | 17 | 18 | 67 | 75 | 35 | 5.4 | 5.3 | 2.1 | 0 | 0 | .70 | .57 |
| AC-FT | 2,180 | 5,230 | 7,900 | 10,840 | 7,970 | 760 | 912 | 399 | 22 | 18 | 66 | 64 |

CAL YR 1973 TOTAL 18,329.60 MEAN 50.2 MAX 349 MIN 0 AC-FT 36,360
WTR YR 1973 TOTAL 29,116.49 MEAN 79.8 MAX 2,540 MIN 0 AC-FT 57,750

PEAK DISCHARGE (BASE, 100 CFS)

| DATE | TIME | G.H. | DISCHARGE | DATE | TIME | G.H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 2-28 | 0015 | 3.56 | 242 | 7-07 | 1600 | 3.50 | 242 |
| 4-14 | 0430 | 4.05 | 388 | 7-17 | 2045 | 3.69 | 320 |

## 09431500 GILA RIVER NEAR REDROCK, N. MEX.

LOCATION.--Lat 32°43'37", long 108°40'30", in W½ sec.23, T.18 S., R.18 W., Grant County, on left bank 0.2 mi (0.3 km) downstream from Copper Canyon, 0.2 mi (0.3 km) upstream from lower end of box canyon, 4.7 mi (7.6 km) northeast of Redrock, 14 mi (23 km) downstream from Mangas Creek, and at mile 539.2 (867.6 km).

DRAINAGE AREA.--2,829 mi² (7,327 km²).

PERIOD OF RECORD.--September 1904 to February 1905 (gage heights only). May 1905 to December 1906, January to December 1907 and July to October 1908 (gage heights only). November 1908 to December 1910, January 1911 to January 1912 and May to June 1912 (gage heights only). August 1912 to September 1955, October 1962 to current year. Monthly or annual discharge only for some periods, published in WSP 1313. Published as "near Cliff" 1904-07, and as "near Redrock" 1908-55.

GAGE.--Water-stage recorder. Altitude of gage is 4,090 ft (1,247 m) plane table survey. Prior to Dec. 31, 1907, nonrecording gage at site 13.5 mi (21.7 km) upstream at different datum. May 14, 1908, to July 16, 1909, nonrecording gage at site 0.2 mi (0.3 km) downstream at different datum.

AVERAGE DISCHARGE.--56 calendar years (1905-06, 1908-10, 1912-54, 1962-73), 199 ft³/s (5.636 m³/s), 144,200 acre-ft/yr (178 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 5,200 ft³/s (147 m³/s) Feb. 23 (gage height, 11.21 ft or 3.417 m); minimum, about 20 ft³/s (0.57 m³/s) Sept. 18, 19.
Period of record: Maximum discharge, 40,000 ft³/s (1,130 m³/s) Sept. 29, 1941 (gage height, 31 ft or 9.45 m , from floodmark), computed on basis of known peak flow for station below Blue Creek; minimum, 2.2 ft³/s (0.062 m³/s) Aug. 5, 1947.

REMARKS.--Records fair. Diversions for irrigation of about 5,000 acres (20.2 km²) above station.

REVISIONS (WATER YEARS).--WSP 1213: 1906, 1911-15, 1931, 1936-37, 1939, 1941, 1944, 1945(P), 1946(M), 1947. WSP 1283: Drainage area. WSP 1926: 1955.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 818 | 207 | 1,760 | 1,050 | 1,110 | 368 | 80 | 147 | 38 | 24 | 52 | 68 |
| 2 | 746 | 210 | 1,680 | 1,060 | 1,000 | 356 | 82 | 149 | 30 | 23 | 52 | 65 |
| 3 | 644 | 197 | 1,620 | 1,060 | 940 | 336 | 77 | 380 | 30 | 23 | 57 | 68 |
| 4 | 530 | 176 | 1,450 | 988 | 928 | 312 | 62 | 190 | 30 | 24 | 53 | 64 |
| 5 | 476 | 179 | 1,280 | 904 | 1,000 | 284 | 64 | 170 | 28 | 24 | 56 | 62 |
| 6 | 436 | 197 | 1,120 | 850 | 1,170 | 260 | 69 | 136 | 31 | 24 | 58 | 62 |
| 7 | 400 | 257 | 988 | 820 | 1,230 | 236 | 62 | 120 | 27 | 24 | 42 | 64 |
| 8 | 340 | 425 | 988 | 904 | 1,050 | 216 | 85 | 106 | 26 | 28 | 42 | 61 |
| 9 | 310 | 653 | 988 | 1,060 | 952 | 204 | 72 | 92 | 27 | 25 | 42 | 65 |
| 10 | 298 | 559 | 994 | 1,030 | 958 | 196 | 62 | 90 | 26 | 24 | 42 | 68 |
| 11 | 287 | 484 | 954 | 1,080 | 1,020 | 190 | 62 | 85 | 24 | 24 | 43 | 68 |
| 12 | 272 | 498 | 952 | 1,270 | 1,100 | 186 | 72 | 79 | 23 | 24 | 50 | 70 |
| 13 | 257 | 587 | 1,020 | 1,460 | 1,100 | 162 | 74 | 68 | 23 | 24 | 51 | 63 |
| 14 | 255 | 548 | 1,130 | 1,660 | 1,710 | 168 | 91 | 62 | 24 | 24 | 59 | 59 |
| 15 | 247 | 536 | 1,070 | 1,690 | 2,230 | 155 | 139 | 56 | 22 | 25 | 55 | 59 |
| 16 | 247 | 536 | 1,070 | 1,530 | 1,640 | 150 | 280 | 51 | 21 | 26 | 60 | 60 |
| 17 | 256 | 548 | 1,420 | 1,290 | 1,400 | 140 | 376 | 46 | 21 | 33 | 62 | 61 |
| 18 | 265 | 602 | 1,690 | 1,220 | 1,240 | 130 | 435 | 42 | 21 | 34 | 64 | 63 |
| 19 | 275 | 692 | 1,840 | 1,230 | 1,130 | 120 | 380 | 42 | 21 | 28 | 63 | 63 |
| 20 | 259 | 698 | 1,800 | 1,150 | 1,030 | 115 | 288 | 39 | 21 | 30 | 66 | 65 |
| 21 | 251 | 1,210 | 1,890 | 1,050 | 952 | 110 | 212 | 41 | 22 | 34 | 70 | 61 |
| 22 | 249 | 2,250 | 1,940 | 952 | 862 | 105 | 186 | 40 | 21 | 28 | 72 | 63 |
| 23 | 247 | 2,140 | 1,680 | 880 | 796 | 102 | 152 | 39 | 22 | 30 | 72 | 61 |
| 24 | 229 | 2,430 | 1,500 | 946 | 742 | 96 | 132 | 38 | 22 | 28 | 69 | 62 |
| 25 | 218 | 1,630 | 1,350 | 1,070 | 680 | 96 | 117 | 41 | 22 | 29 | 66 | 62 |
| 26 | 217 | 1,510 | 1,250 | 1,170 | 580 | 96 | 96 | 35 | 22 | 30 | 66 | 63 |
| 27 | 212 | 1,590 | 1,230 | 1,280 | 540 | 99 | 132 | 33 | 22 | 30 | 70 | 68 |
| 28 | 200 | 1,620 | 1,260 | 1,340 | 500 | 80 | 152 | 33 | 22 | 33 | 74 | 72 |
| 29 | 200 | ------ | 1,210 | 1,370 | 470 | 82 | 135 | 40 | 22 | 32 | 74 | 68 |
| 30 | 197 | ------ | 1,160 | 1,300 | 420 | 80 | 120 | 40 | 22 | 33 | 73 | 68 |
| 31 | 195 | ------ | 1,060 | ------ | 390 | ------ | 154 | 40 | ------ | 33 | ------ | 70 |
| TOTAL | 10,033 | 23,149 | 41,344 | 34,664 | 30,870 | 5,230 | 4,500 | 2,570 | 733 | 855 | 1,652 | 1,996 |
| MEAN | 324 | 827 | 1,334 | 1,155 | 996 | 174 | 145 | 82.9 | 24.4 | 27.6 | 55.1 | 64.4 |
| MAX | 818 | 2,430 | 1,940 | 1,690 | 2,230 | 368 | 435 | 380 | 38 | 34 | 74 | 72 |
| MIN | 195 | 176 | 952 | 820 | 390 | 80 | 62 | 33 | 21 | 23 | 32 | 59 |
| AC-FT | 19,900 | 45,920 | 82,010 | 68,760 | 61,230 | 10,370 | 8,930 | 5,100 | 1,450 | 1,700 | 3,280 | 3,960 |

CAL YR 1973 TOTAL 157,596 MEAN 432 MAX 2,430 MIN 21 AC-FT 312,600
WTR YR 1973 TOTAL 229,633 MEAN 629 MAX 19,500 MIN 21 AC-FT 455,500

PEAK DISCHARGE (BASE, 3,000 CFS).--FEB. 23 (2345) 5,200 CFS (11.21 FT).

## 09432000 GILA RIVER BELOW BLUE CREEK, NEAR VIRDEN, N. MEX.

LOCATION.--Lat 32°38'53", long 108°50'43", in SE¼SW¼ sec.18, T.19 S., R.19 W., Grant County, on left bank at head of canyon, 1.4 mi (2.3 km) downstream from Blue Creek, 10 mi (16 km) east of Virden, 16 mi (26 km) upstream from New Mexico-Arizona State line, and at mile 523.6 (842.5 km).

DRAINAGE AREA.--3,203 mi² (8,296 km²), excluding Animas River basin.

PERIOD OF RECORD.--May to November 1914, March to September 1915, July 1927 to current year. July 1927 to May 1931 monthly discharge only, published in WSP 1313, computed as sum of flow at Virden Bridge, 9 mi (14 km) downstream, and in Sunset Canal. Published as Gila River near Duncan, Ariz., 1914-15 and as Gila River at Fuller's Ranch, near Duncan, Ariz., 1931-38.

GAGE.--Water-stage recorder. Altitude of gage is 3,875 ft (1,181 m) from river-profile map. May 11, 1914, to Sept. 30, 1915, at site 6 mi (9 km) downstream, 1,000 ft (300m) upstream from intake of Sunset Canal. June 1 to July 7, 1931, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--46 calendar years (1928-73), 177 ft³/s (5.013 m³/s), 128,200 acre-ft/yr (158 hm³/yr); 20 calendar years (1954-73), 192 ft³/s (5.437 m³/s), 139,100 acre-ft/yr (172 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,900 ft³/s (110 m³/s) Feb. 23 or 24 (gage height, 11.1 ft or 3.383 m); minimum, 14 ft³/s (0.40 m³/s) Oct. 1.
Period of record: Maximum discharge, 41,700 ft³/s (1,180 m³/s) Sept. 29, 1941 (gage height, 25.78 ft or 7.858 m); minimum, 1 ft³/s (0.028 m³/s) July 14, 1934.

REMARKS.--Records fair except those for February, which are poor. Station is above all Duncan Valley diversions. Diversions for irrigation of about 6,200 acres (25.1 km²) above station.

REVISIONS (WATER YEARS).--WSP 1283: Drainage area. WSP 1313: 1929, 1931-32(M).

### DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 722 | 207 | 1,970 | 1,080 | 1,120 | 394 | 68 | 195 | 40 | 16 | 29 | 67 |
| 2 | 622 | 220 | 2,000 | 1,120 | 950 | 376 | 67 | 183 | 34 | 17 | 29 | 64 |
| 3 | 535 | 211 | 1,960 | 1,140 | 870 | 356 | 70 | 379 | 30 | 17 | 30 | 67 |
| 4 | 460 | 185 | 1,890 | 1,060 | 822 | 328 | 66 | 204 | 30 | 17 | 30 | 67 |
| 5 | 409 | 185 | 1,700 | 975 | 822 | 300 | 60 | 177 | 28 | 18 | 26 | 65 |
| 6 | 364 | 195 | 1,550 | 894 | 930 | 283 | 64 | 154 | 30 | 17 | 27 | 64 |
| 7 | 340 | 211 | 1,380 | 850 | 1,080 | 261 | 61 | 139 | 28 | 18 | 30 | 64 |
| 8 | 312 | 300 | 1,300 | 874 | 930 | 236 | 67 | 122 | 26 | 18 | 32 | 65 |
| 9 | 286 | 700 | 1,230 | 1,020 | 838 | 222 | 71 | 105 | 26 | 21 | 33 | 65 |
| 10 | 270 | 600 | 1,230 | 985 | 814 | 213 | 66 | 96 | 28 | 19 | 33 | 68 |
| 11 | 256 | 500 | 1,190 | 1,030 | 830 | 205 | 63 | 94 | 26 | 19 | 34 | 68 |
| 12 | 245 | 500 | 1,180 | 1,200 | 874 | 200 | 65 | 84 | 24 | 20 | 36 | 70 |
| 13 | 229 | 600 | 1,220 | 1,400 | 910 | 186 | 73 | 72 | 22 | 21 | 39 | 68 |
| 14 | 225 | 500 | 1,280 | 1,640 | 1,170 | 181 | 147 | 65 | 23 | 21 | 41 | 63 |
| 15 | 222 | 510 | 1,310 | 1,780 | 2,110 | 166 | 198 | 60 | 21 | 21 | 43 | 60 |
| 16 | 218 | 500 | 1,340 | 1,680 | 1,670 | 158 | 218 | 56 | 20 | 22 | 44 | 60 |
| 17 | 222 | 550 | 1,550 | 1,440 | 1,420 | 144 | 391 | 50 | 20 | 24 | 50 | 57 |
| 18 | 232 | 600 | 1,660 | 1,280 | 1,210 | 135 | 358 | 46 | 18 | 28 | 51 | 58 |
| 19 | 245 | 700 | 1,770 | 1,270 | 1,060 | 128 | 346 | 48 | 19 | 28 | 52 | 58 |
| 20 | 234 | 800 | 1,730 | 1,140 | 922 | 118 | 292 | 49 | 19 | 24 | 53 | 60 |
| 21 | 231 | 1,800 | 1,710 | 990 | 874 | 113 | 250 | 46 | 19 | 27 | 58 | 59 |
| 22 | 231 | 2,800 | 1,810 | 890 | 818 | 103 | 218 | 46 | 19 | 27 | 60 | 59 |
| 23 | 236 | 3,000 | 1,640 | 798 | 766 | 97 | 192 | 43 | 17 | 26 | 62 | 59 |
| 24 | 229 | 3,000 | 1,420 | 790 | 714 | 93 | 167 | 40 | 19 | 26 | 61 | 59 |
| 25 | 214 | 2,000 | 1,310 | 870 | 642 | 91 | 155 | 41 | 17 | 24 | 61 | 59 |
| 26 | 213 | 1,500 | 1,220 | 965 | 570 | 88 | 125 | 39 | 17 | 25 | 56 | 57 |
| 27 | 213 | 1,800 | 1,180 | 1,120 | 538 | 85 | 128 | 34 | 17 | 24 | 62 | 60 |
| 28 | 205 | 2,000 | 1,220 | 1,240 | 508 | 82 | 170 | 35 | 17 | 26 | 64 | 62 |
| 29 | 204 | ------ | 1,170 | 1,320 | 478 | 74 | 141 | 38 | 16 | 28 | 66 | 64 |
| 30 | 200 | ------ | 1,170 | 1,300 | 445 | 70 | 146 | 42 | 16 | 28 | 67 | 64 |
| 31 | 200 | ------ | 1,100 | ------ | 418 | ------ | 152 | 41 | ------ | 29 | ------ | 65 |
| TOTAL | 9,024 | 26,674 | 45,390 | 34,141 | 28,123 | 5,486 | 4,655 | 2,823 | 686 | 696 | 1,359 | 1,945 |
| MEAN | 291 | 953 | 1,464 | 1,138 | 907 | 183 | 150 | 91.1 | 22.9 | 22.5 | 45.3 | 62.7 |
| MAX | 722 | 3,000 | 2,000 | 1,780 | 2,110 | 394 | 391 | 379 | 40 | 29 | 67 | 70 |
| MIN | 200 | 185 | 1,100 | 790 | 418 | 70 | 60 | 34 | 16 | 16 | 26 | 57 |
| AC-FT | 17,900 | 52,910 | 90,030 | 67,720 | 55,780 | 10,880 | 9,230 | 5,600 | 1,360 | 1,380 | 2,700 | 3,860 |

CAL YR 1973 TOTAL 161,002 MEAN 441 MAX 3,000 MIN 16 AC-FT 319,300
WTR YR 1973 TOTAL 233,782 MEAN 640 MAX 14,500 MIN 16 AC-FT 463,700

### PEAK DISCHARGE (BASE, 1,900 CFS)

| DATE | TIME | G.H. | DISCHARGE | DATE | TIME | G.H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| (A) | UNKNOWN | (B)11.1 | 3,900 | 5-15 | 0200 | 9.50 | 2,310 |
| 3-22 | 0600 | 8.98 | 1,900 | | | | |

(A) OCCURRED BETWEEN 1800 FEB. 23 AND 0600 FEB. 24
(B) FROM RECORDED RANGE-IN-STAGE.

## 09442680 SAN FRANCISCO RIVER NEAR RESERVE, N. MEX.

LOCATION.--Lat 33°44'12", long 108°46'14", in NE¼NW¼SE¼ sec.35, T.6 S., R.19 W., Catron County, on left bank 1,300 ft (400 m) downstream from Rainbow Bridge Canyon, 1.7 mi (2.7 km) northwest of Reserve, and at mile 563.1 (906.0 km).

DRAINAGE AREA.--350 mi² (907 km²), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 5,820 ft (1,774 m) from topographic map. Prior to Dec. 15, 1972 at site 1,800 ft (549 m) upstream at datum 21.3 ft (6.49 m) higher.

AVERAGE DISCHARGE.--14 calendar years, 26.6 ft³/s (0.753 m³/s) 19,270 acre-ft/yr (23.8 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,010 ft³/s (56.9 m³/s) Apr. 13 (gage height, 5.58 ft or 1.701 m); minimum, 3.4 ft³/s (0.096 m³/s) Dec. 26.
Period of record: Maximum discharge, 11,900 ft³/s (337 m³/s) Oct. 20, 1972 (gage height, 7.47 ft or 2.277 m in gage well, 8.05 ft or 2.454 m, from outside floodmarks, site and datum then in use), from rating curve extended above 9,000 ft³/s (255 m³/s) on basis of velocity-area study; minimum, 1.0 ft³/s (0.028 m³/s) Mar. 16, 1959.
Maximum stage known, about 15 ft (4.6 m), as determined in 1962 from old floodmarks. Major floods of Nov. 26, 1905 and Dec. 3, 1906, exceeded 20,000 ft³/s (566 m³/s) at Alma (downstream). See WSP 1313.

REMARKS.--Records good. Possible minor regulation by Luna Lake, 27 mi (43 km) upstream. Diversions for irrigation of about 500 acres (202 hm²) above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 31 | 16 | 233 | 219 | 279 | 46 | 11 | 14 | 11 | 7.0 | 8.7 | 9.3 |
| 2 | 24 | 13 | 226 | 232 | 231 | 43 | 11 | 16 | 11 | 7.4 | 8.7 | 9.5 |
| 3 | 24 | 15 | 257 | 202 | 204 | 39 | 11 | 15 | 11 | 7.4 | 8.5 | 9.1 |
| 4 | 22 | 15 | 277 | 177 | 196 | 37 | 15 | 15 | 11 | 7.0 | 8.7 | 8.0 |
| 5 | 25 | 19 | 230 | 119 | 245 | 33 | 9.4 | 14 | 11 | 7.4 | 8.7 | 8.4 |
| 6 | 22 | 22 | 180 | 102 | 408 | 31 | 11 | 14 | 11 | 7.4 | 8.7 | 7.5 |
| 7 | 22 | 40 | 140 | 198 | 301 | 29 | 29 | 13 | 11 | 7.4 | 8.7 | 8.0 |
| 8 | 18 | 39 | 110 | 342 | 238 | 24 | 18 | 8.9 | 10 | 7.4 | 8.7 | 8.9 |
| 9 | 21 | 33 | 93 | 286 | 215 | 23 | 15 | 11 | 10 | 7.8 | 8.7 | 8.3 |
| 10 | 21 | 28 | 110 | 397 | 194 | 21 | 13 | 11 | 11 | 7.8 | 8.7 | 7.4 |
| 11 | 17 | 27 | 100 | 481 | 186 | 20 | 10 | 11 | 11 | 7.8 | 8.7 | 8.3 |
| 12 | 17 | 29 | 110 | 628 | 174 | 18 | 11 | 11 | 10 | 8.3 | 8.7 | 9.2 |
| 13 | 18 | 24 | 130 | 978 | 170 | 19 | 18 | 11 | 10 | 8.3 | 7.8 | 9.2 |
| 14 | 19 | 26 | 110 | 1,050 | 217 | 27 | 17 | 11 | 9.6 | 7.8 | 8.1 | 9.2 |
| 15 | 21 | 24 | 99 | 799 | 234 | 28 | 17 | 12 | 9.6 | 7.8 | 7.7 | 8.3 |
| 16 | 21 | 27 | 106 | 552 | 207 | 23 | 20 | 40 | 9.6 | 7.8 | 7.5 | 7.4 |
| 17 | 22 | 27 | 143 | 478 | 170 | 20 | 47 | 22 | 9.3 | 7.8 | 8.2 | 8.3 |
| 18 | 19 | 24 | 230 | 525 | 145 | 16 | 40 | 16 | 8.7 | 7.8 | 8.0 | 8.3 |
| 19 | 20 | 25 | 226 | 408 | 127 | 17 | 35 | 13 | 8.7 | 7.8 | 8.3 | 7.4 |
| 20 | 18 | 30 | 252 | 337 | 119 | 16 | 27 | 14 | 8.7 | 7.8 | 8.6 | 6.3 |
| 21 | 16 | 34 | 358 | 277 | 111 | 15 | 21 | 14 | 8.7 | 8.3 | 7.8 | 6.7 |
| 22 | 18 | 35 | 242 | 289 | 99 | 15 | 18 | 13 | 8.7 | 7.8 | 7.9 | 7.4 |
| 23 | 15 | 30 | 231 | 344 | 90 | 15 | 17 | 11 | 8.7 | 7.8 | 9.2 | 9.2 |
| 24 | 15 | 28 | 176 | 335 | 82 | 13 | 16 | 11 | 7.8 | 8.3 | 8.5 | 7.8 |
| 25 | 15 | 32 | 166 | 363 | 72 | 13 | 16 | 11 | 7.4 | 8.3 | 8.1 | 7.0 |
| 26 | 16 | 45 | 175 | 403 | 66 | 10 | 15 | 10 | 6.7 | 8.3 | 9.6 | 7.4 |
| 27 | 16 | 79 | 268 | 380 | 59 | 11 | 15 | 9.8 | 6.7 | 8.3 | 7.8 | 7.4 |
| 28 | 14 | 150 | 239 | 372 | 51 | 12 | 14 | 9.6 | 6.7 | 8.3 | 7.6 | 10 |
| 29 | 14 | ------ | 213 | 343 | 49 | 11 | 14 | 11 | 7.0 | 8.7 | 9.0 | 9.7 |
| 30 | 15 | ------ | 172 | 313 | 47 | 11 | 17 | 19 | 7.0 | 8.7 | 9.0 | 10 |
| 31 | 17 | ------ | 195 | ------ | 46 | ------ | 16 | 15 | ------ | 8.3 | ------ | 7.4 |
| TOTAL | 591 | 936 | 5,797 | 11,929 | 5,030 | 656 | 562.4 | 427.3 | 278.6 | 244.1 | 252.5 | 256.3 |
| MEAN | 19.1 | 33.4 | 187 | 398 | 162 | 21.9 | 18.1 | 13.8 | 9.29 | 7.87 | 8.42 | 8.27 |
| MAX | 31 | 150 | 358 | 1,050 | 408 | 46 | 47 | 40 | 11 | 8.7 | 9.6 | 10 |
| MIN | 14 | 13 | 93 | 102 | 46 | 10 | 9.4 | 8.9 | 6.7 | 7.0 | 7.5 | 6.3 |
| AC-FT | 1,170 | 1,860 | 11,500 | 23,660 | 9,980 | 1,300 | 1,120 | 848 | 553 | 484 | 501 | 508 |

CAL YR 1973 TOTAL 26,960.2 MEAN 73.9 MAX 1,050 MIN 6.3 AC-FT 53,480
WTR YR 1973 TOTAL 36,979.1 MEAN 101 MAX 5,000 MIN 4.6 AC-FT 73,350

PEAK DISCHARGE (BASE, 450 CFS).--APR. 13 (2230) 2,010 CFS (5.58 FT); AUG. 16 (1800) 474 CFS (3.57 FT).

## 09442692 TULAROSA RIVER ABOVE ARAGON, N. MEX.

LOCATION.--Lat 33°53'29", long 108°30'54", in NW¼ sec.9, T.5 S., R.16 W., Catron County, on right bank 0.4 mi (0.6 km) upstream from first diversion, 1.4 mi (2.3 km) northeast of Aragon, and 8 mi (13 km) upstream from Apache Creek.

DRAINAGE AREA.--94 mi² (244 km²).

PERIOD OF RECORD.--July 1966 to current year. 1955 to 1965 at site 0.6 mi (1.0 km) upstream (drainage area, 89 mi² or 230.5 km²), annual maximum only.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,750 ft (2,057 m) from topographic map.

AVERAGE DISCHARGE.--7 calendar years, 3.57 ft³/s (0.101 m³/s), 2,590 acre-ft/yr (3.19 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 119 ft³/s (3.37 m³/s) Apr. 13 (gage height, 2.49 ft or 0.759 m); minimum, 2.3 ft³/s (0.065 m³/s) July 11.
Period of record: Maximum discharge, 392 ft³/s (11.1 m³/s) Sept. 1, 1971 (gage height, 3.13 ft or 0.954 m), from rating curve extended above 10 ft³/s (0.28 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.1 ft³/s (0.031 m³/s) July 22, 1969.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.0 | 2.6 | 25 | 18 | 5.4 | 3.1 | 2.8 | 3.0 | 2.9 | 2.8 | 2.8 | 2.7 |
| 2 | 2.9 | 2.6 | 25 | 10 | 3.9 | 3.1 | 3.0 | 3.1 | 2.9 | 2.8 | 2.8 | 2.8 |
| 3 | 2.9 | 2.6 | 16 | 9.5 | 3.2 | 3.1 | 3.0 | 3.0 | 2.9 | 2.8 | 2.8 | 2.8 |
| 4 | 2.9 | 2.7 | 9.1 | 9.6 | 2.9 | 3.1 | 2.9 | 3.1 | 2.9 | 2.9 | 2.8 | 2.8 |
| 5 | 3.0 | 2.7 | 6.9 | 6.7 | 3.2 | 3.1 | 2.9 | 3.0 | 2.8 | 2.9 | 2.8 | 2.8 |
| 6 | 3.0 | 5.2 | 5.2 | 6.3 | 5.4 | 3.0 | 3.0 | 3.0 | 2.8 | 2.8 | 2.8 | 2.7 |
| 7 | 3.0 | 8.7 | 5.0 | 7.5 | 4.9 | 3.0 | 3.0 | 3.0 | 2.8 | 2.9 | 2.8 | 2.8 |
| 8 | 3.0 | 3.8 | 4.8 | 6.2 | 3.6 | 3.0 | 2.9 | 3.0 | 2.8 | 2.8 | 2.7 | 2.8 |
| 9 | 3.0 | 2.7 | 5.6 | 4.8 | 3.2 | 3.0 | 2.9 | 3.0 | 2.8 | 2.9 | 2.7 | 2.8 |
| 10 | 2.8 | 2.6 | 8.3 | 4.9 | 3.2 | 3.0 | 2.9 | 3.0 | 2.9 | 2.9 | 2.7 | 2.8 |
| 11 | 3.2 | 2.4 | 5.3 | 5.7 | 3.3 | 3.0 | 2.9 | 3.0 | 2.9 | 2.9 | 2.7 | 2.8 |
| 12 | 3.1 | 2.4 | 6.3 | 7.8 | 3.2 | 3.0 | 3.0 | 2.9 | 2.9 | 2.9 | 2.7 | 2.8 |
| 13 | 3.1 | 2.4 | 8.9 | 66 | 3.4 | 3.2 | 3.0 | 2.9 | 2.8 | 2.9 | 2.7 | 2.8 |
| 14 | 3.0 | 2.4 | 7.0 | 65 | 3.3 | 3.1 | 3.4 | 2.9 | 2.8 | 2.9 | 2.7 | 2.8 |
| 15 | 3.0 | 2.4 | 5.8 | 50 | 3.3 | 3.0 | 3.1 | 2.9 | 2.8 | 2.9 | 2.7 | 2.8 |
| 16 | 3.4 | 2.5 | 10 | 27 | 6.8 | 3.0 | 3.1 | 2.9 | 2.9 | 2.9 | 2.7 | 2.8 |
| 17 | 3.6 | 2.5 | 13 | 28 | 3.6 | 3.0 | 3.0 | 2.9 | 2.9 | 2.9 | 2.7 | 2.8 |
| 18 | 3.0 | 2.5 | 12 | 45 | 3.3 | 3.0 | 3.0 | 2.9 | 2.8 | 2.8 | 2.7 | 2.8 |
| 19 | 2.9 | 2.4 | 11 | 15 | 3.3 | 2.9 | 3.0 | 2.9 | 2.8 | 2.8 | 2.8 | 2.8 |
| 20 | 2.9 | 2.4 | 15 | 8.3 | 3.3 | 2.9 | 3.0 | 2.9 | 2.8 | 2.8 | 2.7 | 2.8 |
| 21 | 2.8 | 2.5 | 16 | 5.4 | 3.2 | 2.9 | 2.9 | 3.0 | 2.8 | 2.8 | 2.7 | 2.8 |
| 22 | 2.8 | 2.5 | 10 | 12 | 3.2 | 2.9 | 2.9 | 3.0 | 2.9 | 2.8 | 2.7 | 2.9 |
| 23 | 2.7 | 2.5 | 11 | 33 | 3.2 | 2.9 | 2.9 | 4.2 | 2.9 | 2.8 | 2.8 | 2.9 |
| 24 | 2.7 | 2.5 | 8.7 | 51 | 3.2 | 2.9 | 3.0 | 2.9 | 2.9 | 2.8 | 2.7 | 2.8 |
| 25 | 2.9 | 3.8 | 16 | 57 | 3.2 | 2.9 | 3.0 | 2.9 | 2.9 | 2.8 | 2.7 | 2.9 |
| 26 | 2.8 | 7.5 | 14 | 58 | 3.1 | 2.9 | 3.0 | 2.9 | 2.9 | 2.8 | 2.7 | 2.9 |
| 27 | 2.7 | 19 | 15 | 44 | 3.1 | 2.9 | 3.0 | 2.8 | 2.9 | 2.8 | 2.7 | 2.9 |
| 28 | 2.7 | 28 | 11 | 34 | 3.1 | 2.8 | 3.0 | 2.9 | 2.8 | 2.8 | 2.7 | 2.9 |
| 29 | 2.6 | ------ | 9.3 | 21 | 3.1 | 2.8 | 3.0 | 3.5 | 2.8 | 2.8 | 2.7 | 2.9 |
| 30 | 2.7 | ------ | 10 | 8.6 | 3.1 | 2.8 | 3.0 | 3.0 | 2.8 | 2.8 | 2.7 | 2.8 |
| 31 | 2.7 | ------ | 23 | ------ | 3.1 | ------ | 3.0 | 2.9 | ------ | 2.8 | ------ | 2.8 |
| TOTAL | 90.8 | 128.8 | 349.2 | 725.3 | 110.3 | 89.3 | 92.5 | 93.3 | 85.5 | 88.0 | 81.9 | 87.3 |
| MEAN | 2.93 | 4.60 | 11.3 | 24.2 | 3.56 | 2.98 | 2.98 | 3.01 | 2.85 | 2.84 | 2.73 | 2.82 |
| MAX | 3.6 | 28 | 25 | 66 | 6.8 | 3.2 | 3.4 | 4.2 | 2.9 | 2.9 | 2.8 | 2.9 |
| MIN | 2.6 | 2.4 | 4.8 | 4.8 | 2.9 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.7 | 2.7 |
| AC-FT | 180 | 255 | 693 | 1,440 | 219 | 177 | 183 | 185 | 170 | 175 | 162 | 173 |

CAL YR 1973 TOTAL 2,022.2 MEAN 5.54 MAX 66 MIN 2.4 AC-FT 4,010
WTR YR 1973 TOTAL 2,093.4 MEAN 5.74 MAX 66 MIN 2.4 AC-FT 4,150

PEAK DISCHARGE (BASE, 20 CFS)

| DATE | TIME | G.H. | DISCHARGE | DATE | TIME | G.H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 2-06 | 2130 | 1.63 | 22 | 8-23 | 1530 | 1.78 | 38 |
| 4-13 | 1900 | 2.49 | 119 | | | | |

## 09443000 SAN FRANCISCO RIVER NEAR ALMA, N. MEX.

LOCATION.--Lat 33°22'05", long 108°54'35", in SW¼SE¼ sec.4, T.11 S., R.20 W., Catron County, on right bank 1.2 mi (1.9 km) downstream from Alma, 4 mi (6 km) northwest of Glenwood, and 6 mi (10 km) upstream from Whitewater Creek.

DRAINAGE AREA.--1,546 mi² (4,004 km²).

PERIOD OF RECORD.--September 1904 to January 1914, fragmentary (see WSP 1313), January 1964 to current year. Prior to October 1911, published as "at Alma".

GAGE.--Water-stage recorder. Datum of gage is 4,844 ft (1,476.5 m) above mean sea level. Prior to Aug. 11, 1912, nonrecording gages at various sites, within 500 ft (150 m) of each other, 0.8 mi (1.3 km) upstream, at different datums. Aug. 11, 1912, to Feb. 2, 1914, nonrecording gage at approximately present site and datum. Prior to Nov. 1, 1972, at datum 3.00 ft (0.91 m) higher.

AVERAGE DISCHARGE.--9 calendar years, (1964-73), 80.9 ft³/s (2.29 m³/s), 58,610 acre-ft/yr (72.3 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,360 ft³/s (66.8 m³/s) Apr. 14 (gage height, 5.15 ft or 1.570 m); no flow at times.
Period of record: Maximum discharge 30,600 ft³/s (867 m³/s) Oct. 20, 1972 (gage height, 18.16 ft or 5.535 m, present datum, from floodmarks in well), from rating curve extended above 3,500 ft³/s (99.1 m³/s) on basis of slope-area measurement of peak flow; no flow many days.
Major floods probably occurred Jan. 19 and Oct. 14, 1916, when discharges of 90,000 ft³/s (2,550 m³/s) or greater were computed at Clifton, Ariz.

REMARKS.--Records fair. Diversions for irrigation of about 1,500 acres (607 hm²) above station.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 110 | 35 | 582 | 806 | 614 | 107 | 10 | 50 | .65 | 1.6 | .65 | 11 |
| 2 | 85 | 27 | 605 | 725 | 520 | 105 | 5.2 | 52 | .65 | 1.6 | .65 | 13 |
| 3 | 79 | 21 | 672 | 665 | 450 | 102 | 7.6 | 39 | .65 | 1.6 | .65 | 13 |
| 4 | 73 | 22 | 590 | 620 | 475 | 86 | 6.8 | 37 | .65 | 1.6 | 1.1 | 13 |
| 5 | 69 | 22 | 478 | 522 | 540 | 68 | 7.6 | 36 | .65 | 1.6 | 1.6 | 12 |
| 6 | 63 | 23 | 407 | 462 | 914 | 62 | 72 | 31 | .65 | .65 | 2.0 | 9.6 |
| 7 | 59 | 49 | 353 | 568 | 672 | 54 | 22 | 28 | .65 | .65 | 2.5 | 9.6 |
| 8 | 52 | 109 | 353 | 761 | 490 | 44 | 28 | 25 | .65 | .65 | 3.0 | 10 |
| 9 | 49 | 122 | 371 | 743 | 440 | 39 | 36 | 22 | .65 | 1.1 | 1.6 | 11 |
| 10 | 52 | 101 | 431 | 815 | 465 | 37 | 27 | 16 | 20 | 1.6 | 10 | 11 |
| 11 | 48 | 91 | 395 | 959 | 490 | 33 | 23 | 11 | 35 | 1.1 | 13 | 10 |
| 12 | 35 | 95 | 377 | 1,070 | 500 | 30 | 23 | 4.7 | 25 | .65 | 11 | 11 |
| 13 | 33 | 101 | 478 | 1,360 | 495 | 34 | 20 | 2.0 | 18 | 1.1 | 12 | 12 |
| 14 | 35 | 95 | 462 | 1,840 | 762 | 45 | 23 | 1.6 | 12 | 6.7 | 13 | 12 |
| 15 | 43 | 98 | 389 | 1,600 | 824 | 41 | 26 | 1.1 | 8.0 | 3.6 | 12 | 11 |
| 16 | 50 | 110 | 470 | 1,210 | 702 | 37 | 30 | 2.5 | 8.0 | .65 | 13 | 10 |
| 17 | 65 | 146 | 628 | 860 | 525 | 34 | 38 | 41 | 7.2 | .65 | 14 | 10 |
| 18 | 77 | 199 | 797 | 905 | 435 | 32 | 86 | 33 | 5.8 | .65 | 13 | 11 |
| 19 | 73 | 203 | 743 | 797 | 375 | 31 | 63 | 23 | 5.2 | .65 | 12 | 12 |
| 20 | 77 | 191 | 734 | 650 | 345 | 30 | 48 | 16 | 4.7 | .65 | 11 | 11 |
| 21 | 75 | 580 | 923 | 566 | 330 | 27 | 39 | 11 | 4.1 | .20 | 10 | 9.6 |
| 22 | 65 | 635 | 842 | 530 | 298 | 24 | 33 | 1.1 | 4.1 | .65 | 8.8 | 8.0 |
| 23 | 67 | 621 | 698 | 620 | 274 | 25 | 25 | 17 | 5.2 | .65 | 8.0 | 9.6 |
| 24 | 50 | 341 | 605 | 688 | 233 | 24 | 20 | 14 | 4.7 | .65 | 11 | 12 |
| 25 | 44 | 275 | 582 | 748 | 214 | 24 | 16 | 9.6 | 4.7 | .65 | 12 | 8.8 |
| 26 | 48 | 280 | 605 | 851 | 194 | 17 | 15 | 0 | 3.0 | .65 | 13 | 7.2 |
| 27 | 40 | 359 | 743 | 923 | 169 | 17 | 15 | 0 | 3.0 | .65 | 11 | 7.6 |
| 28 | 36 | 443 | 734 | 977 | 155 | 14 | 20 | 0 | 3.0 | .65 | 10 | 8.8 |
| 29 | 33 | ------ | 689 | 1,000 | 120 | 12 | 18 | .20 | 2.0 | .65 | 11 | 14 |
| 30 | 33 | ------ | 650 | 815 | 115 | 11 | 76 | .20 | 2.0 | .65 | 12 | 16 |
| 31 | 35 | ------ | 725 | ------ | 107 | ------ | 80 | .20 | ------ | .65 | ------ | 14 |
| TOTAL | 1,753 | 5,394 | 18,111 | 25,656 | 13,240 | 1,246 | 959.2 | 525.20 | 190.55 | 35.75 | 254.55 | 338.8 |
| MEAN | 56.5 | 193 | 584 | 855 | 427 | 41.5 | 30.9 | 16.9 | 6.35 | 1.15 | 8.49 | 10.9 |
| MAX | 110 | 635 | 923 | 1,840 | 914 | 107 | 86 | 52 | 35 | 6.7 | 14 | 16 |
| MIN | 33 | 21 | 353 | 462 | 107 | 11 | 5.2 | 0 | .65 | .20 | .65 | 7.2 |
| AC-FT | 3,480 | 10,700 | 35,920 | 50,890 | 26,260 | 2,470 | 1,900 | 1,040 | 378 | 71 | 505 | 672 |

CAL YR 1973 TOTAL 67,704.05 MEAN 185 MAX 1,840 MIN 0 AC-FT 134,300
WTR YR 1973 TOTAL 101,753.95 MEAN 279 MAX 15,500 MIN 0 AC-FT 201,800

PEAK DISCHARGE (BASE, 1,000 CFS)

| DATE | TIME | G.H. | DISCHARGE | DATE | TIME | G.H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 2-23 | 1700 | 4.06 | 1,200 | 7-06 | 1900 | 4.64 | 1,900 |
| 4-14 | 0900 | 5.15 | 2,360 | | | | |

## 09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, N. MEX.

LOCATION.--Lat 33°14'48", long 108°52'47", in NE¼NW¼ sec.23, T.12 S., R.20 W., Catron County, on left bank 0.2 mi (0.3 km) upstream from hot springs, 5 mi (8 km) south of Glenwood, 6 mi (10 km) downstream from Whitewater Creek, and at mile 511.5 (823.0 km).

DRAINAGE AREA.--1,653 mi² (4,281 km²).

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder. Datum of gage is 4,552.06 ft (1,387.468 m) above mean sea level; prior to Feb. 15, 1934, at site 4.5 mi (7.2 km) upstream at datum 98.82 ft (30.120 m) higher.

AVERAGE DISCHARGE.--46 years, 71.4 ft³/s (2.022 m³/s), 51,730 acre-ft/yr (63.8 hm³/yr); 20 calendar years (1954-73), 80.0 ft³/s (2.266 m³/s), 57,960 acre-ft/yr (71.5 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 2,350 ft³/s (66.6 m³/s) Apr. 14 (gage height, 6.45 ft or 1.966 m); minimum, 14 ft³/s (0.40 m³/s) Oct. 10.

Period of record: Maximum discharge, 34,100 ft³/s (966 m³/s) Oct. 20, 1972 (gage height, 16.61 ft or 5.063 m), from rating curve extended above 22,000 ft³/s (623 m³/s); minimum, 1.5 ft³/s (0.042 m³/s) Aug. 6, 1961.

Major floods probably occurred Jan. 19 and Oct. 14, 1916 when discharges of 90,000 ft³/s (2,550 m³/s) or greater were computed for station at Clifton, Ariz. On Nov. 26, 1905, a peak of 25,000 ft³/s (708 m³/s) was measured (by float-area method) at station at Alma (about 12 mi (19 km) upstream, drainage area, 1,560 mi² or 4,040 km²); a similar measurement of 21,000 ft³/s (595 m³/s) was made at the Alma station for peak of Dec. 3, 1906.

REMARKS.--Records good. Diversions for irrigation of about 2,000 acres (809 hm²) above station. Water quality records for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1213: 1931, 1934, 1936-37, 1940-42, 1943-44(M), 1945-47. WSP 1283: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 100 | 76 | 628 | 840 | 924 | 188 | 46 | 66 | 24 | 19 | 22 | 33 |
| 2 | 88 | 75 | 660 | 816 | 756 | 185 | 41 | 72 | 22 | 18 | 22 | 33 |
| 3 | 83 | 67 | 714 | 756 | 670 | 168 | 43 | 55 | 20 | 18 | 22 | 32 |
| 4 | 82 | 71 | 642 | 682 | 650 | 157 | 41 | 52 | 20 | 18 | 22 | 30 |
| 5 | 80 | 72 | 563 | 626 | 726 | 146 | 41 | 52 | 20 | 18 | 22 | 30 |
| 6 | 74 | 75 | 479 | 598 | 1,070 | 134 | 78 | 52 | 20 | 16 | 22 | 30 |
| 7 | 74 | 84 | 425 | 642 | 900 | 122 | 85 | 49 | 20 | 16 | 23 | 30 |
| 8 | 81 | 116 | 413 | 804 | 686 | 112 | 53 | 46 | 20 | 15 | 23 | 30 |
| 9 | 88 | 158 | 416 | 762 | 634 | 104 | 60 | 42 | 19 | 16 | 23 | 30 |
| 10 | 94 | 126 | 440 | 767 | 646 | 98 | 56 | 41 | 33 | 15 | 23 | 30 |
| 11 | 91 | 124 | 431 | 1,040 | 662 | 97 | 53 | 41 | 59 | 17 | 24 | 29 |
| 12 | 85 | 130 | 441 | 1,220 | 658 | 85 | 49 | 39 | 36 | 17 | 26 | 29 |
| 13 | 80 | 127 | 515 | 1,530 | 670 | 94 | 49 | 33 | 28 | 17 | 26 | 28 |
| 14 | 80 | 117 | 526 | 1,920 | 960 | 108 | 69 | 30 | 24 | 18 | 27 | 28 |
| 15 | 78 | 113 | 472 | 1,980 | 1,090 | 99 | 62 | 31 | 24 | 18 | 28 | 27 |
| 16 | 82 | 111 | 534 | 1,460 | 960 | 88 | 62 | 30 | 23 | 18 | 28 | 27 |
| 17 | 86 | 129 | 616 | 1,140 | 750 | 81 | 70 | 39 | 23 | 18 | 30 | 26 |
| 18 | 90 | 150 | 758 | 1,250 | 626 | 73 | 98 | 56 | 24 | 18 | 30 | 27 |
| 19 | 90 | 144 | 796 | 1,120 | 558 | 66 | 91 | 48 | 23 | 18 | 31 | 27 |
| 20 | 94 | 135 | 782 | 930 | 510 | 62 | 84 | 43 | 21 | 18 | 32 | 26 |
| 21 | 90 | 463 | 1,020 | 805 | 470 | 58 | 72 | 43 | 22 | 18 | 32 | 27 |
| 22 | 84 | 630 | 971 | 739 | 420 | 56 | 62 | 36 | 23 | 18 | 32 | 27 |
| 23 | 82 | 598 | 813 | 826 | 378 | 58 | 53 | 39 | 23 | 19 | 33 | 28 |
| 24 | 77 | 466 | 734 | 925 | 339 | 56 | 46 | 40 | 23 | 20 | 33 | 28 |
| 25 | 74 | 378 | 685 | 1,010 | 309 | 58 | 39 | 36 | 25 | 20 | 33 | 28 |
| 26 | 74 | 375 | 668 | 1,190 | 280 | 53 | 35 | 31 | 22 | 20 | 34 | 28 |
| 27 | 74 | 427 | 775 | 1,300 | 255 | 51 | 35 | 28 | 22 | 21 | 34 | 27 |
| 28 | 74 | 520 | 824 | 1,310 | 232 | 51 | 42 | 28 | 22 | 21 | 34 | 28 |
| 29 | 72 | ------ | 791 | 1,330 | 204 | 48 | 43 | 26 | 21 | 21 | 33 | 29 |
| 30 | 72 | ------ | 744 | 1,140 | 192 | 46 | 92 | 25 | 20 | 22 | 34 | 30 |
| 31 | 78 | ------ | 798 | ------ | 190 | ------ | 108 | 22 | ------ | 22 | ------ | 31 |
| TOTAL | 2,551 | 6,037 | 20,074 | 31,458 | 18,375 | 2,802 | 1,858 | 1,271 | 724 | 568 | 838 | 893 |
| MEAN | 82.3 | 216 | 648 | 1,049 | 593 | 93.4 | 59.9 | 41.0 | 24.1 | 18.3 | 27.9 | 28.8 |
| MAX | 100 | 630 | 1,020 | 1,980 | 1,090 | 188 | 108 | 72 | 59 | 22 | 34 | 33 |
| MIN | 72 | 67 | 413 | 598 | 190 | 46 | 35 | 22 | 19 | 15 | 22 | 26 |
| AC-FT | 5,060 | 11,970 | 39,820 | 62,400 | 36,450 | 5,560 | 3,690 | 2,520 | 1,440 | 1,130 | 1,660 | 1,770 |

CAL YR 1973 TOTAL 87,449 MEAN 240 MAX 1,980 MIN 15 AC-FT 173,500
WTR YR 1973 TOTAL 124,436 MEAN 341 MAX 17,500 MIN 19 AC-FT 246,800

PEAK DISCHARGE (BASE, 800 CFS)

| DATE | TIME | G.H. | DISCHARGE | DATE | TIME | G.H. | DISCHARGE |
|---|---|---|---|---|---|---|---|
| 2-23 | 2100 | 4.93 | 1,070 | 5-06 | 1245 | 4.92 | 1,250 |
| 3-21 | 1430 | 5.08 | 1,300 | 5-14 | 1930 | 5.23 | 1,450 |
| 4-14 | 1145 | 6.45 | 2,350 | | | | |

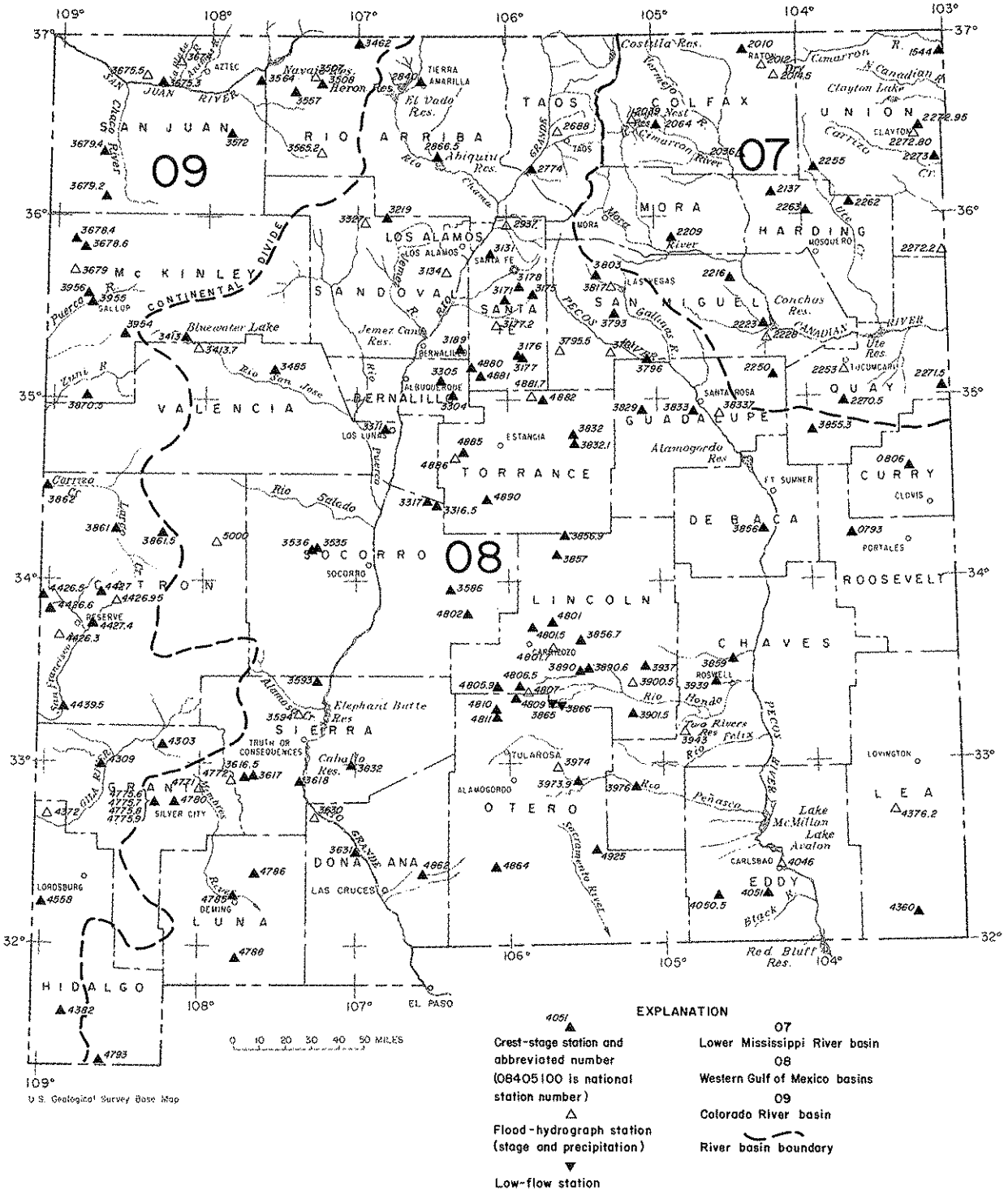


Figure 2.—Map of New Mexico showing location of partial-record stations.

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

## Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during calendar year 1973

| Station No. | Station name | Location | Drainage area (sq mi) | Period of record | Measurements | |
|---|---|---|---|---|---|---|
| | | | | | Date | Discharge (cfs) |
| | | Rio Grande basin | | | | |
| 08386500 | Rio Ruidoso near Ruidoso, N. Mex. | Lat 33°20'11", long 105°43'31", in NW¼SW¼SW¼ sec.19, T.11 S., R.13 E., Lincoln County at Mescalero Apache Indian Reservation boundary, 3.0 miles west of Ruidoso. | 17.2 | 1953-73 | 3- 8-73<br>9-18-73<br>12-11-73 | 18<br>2.7<br>2.7 |
| 08386600 | Carrizo Creek at Ruidoso, N. Mex. | Lat 33°19'27", long 105°39'13", in SW¼NW¼SW¼ sec.26, T.11 S., R.13 E., Lincoln County, at mouth, at Ruidoso. | 24.2 | 1953-73 | 3- 8-73<br>9-18-73<br>12-11-73 | 12<br>2.5<br>2.4 |

## Crest-stage partial-record stations

The following table contains maximum discharge for the current calendar year for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. An S under the station number indicates that a complete hydrograph of flow events and precipitation data are recorded. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each year is given. Information on some lower floods may have been obtained, and discharge measurements made for purposes of establishing the stage-discharge relation, but these are not published herein. The year given in the period of record column represents the first year of a period extending through the current year unless otherwise noted. For some stations, publication of discharge is delayed pending definition of stage-discharge relationship. Published maximums for years prior to 1971 are for water years.

Annual maximum discharge at crest-stage partial-record stations

| Station No. | Station name | Location | Drainage area (sq mi) | Period of record | Annual maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge (cfs) |
| | | **Arkansas River Basin** | | | | | |
| 07154400 | Carrizozo Creek near Kenton, Okla. | Lat 36°52'55", long 103°01'05", Union County, under bridge on New Mexico State Highway 18, 4 miles southwest of Kenton. | 111 | 1953- | 8- 3-73 | 8.46 | 4,700 |
| 07201000 | Raton Creek at Raton, N. Mex. | Lat 36°54', long 104°26', Colfax County, 60 ft above bridge on State Highway 72 at Raton. | 14.4 | 1953- | 9-27-73 | 1.41 | 102 |
| 07201200 S | Chicorica Creek tributary near Raton, N. Mex. | Lat 36°54'40", long 104°19'56", Colfax County, upstream from culvert on U.S. Highway 64-87, 7.7 miles southeast of Raton. | 4.82 | 1971- | 7-22-73 | 6.33 | 196 |
| 07201450 S | Una del Gato Creek tributary near Raton, N. Mex. | Lat 36°47'00", long 104°15'42", Colfax County, about 1,500 feet upstream from bridge on U.S. Highway 64-87, 12.8 miles southeast of Raton. | a18 | 1971- | 7- 2-73 | 9.79 | 5,030 |
| 07203600 S | Rio del Plano tributary near Taylor Springs, N. Mex. | Lat 36°26'59", long 104°22'34", Colfax County, 1.7 miles south of Sauble Ranch, 11.0 miles northeast of Taylor Springs. | 6.71 | 1971- | 1973 | (b) | (+) |
| 07203900 S | Graney Creek near Eagle Nest, N. Mex. | Lat 36°34'37", long 105°18'38", Colfax County, 3.0 miles northwest of Eagle Nest. | 1.83 | 1971- | 5-10-73 | 2.51 | (+) |
| 07206400 | Clear Creek near Ute Park, N. Mex. | Lat 36°31'35", long 105°10'30", Colfax County, Maxwell Grant, 0.25 mile upstream from mouth, and 4 miles southwest of Ute Park. | 7.44 | 1962-67‡ 1968- | 5- -73 | 2.36 | c 30 |
| 07213700 | Canadian River tributary near Mills, N. Mex. | Lat 36°10'00", long 104°15'47", Harding County, on downstream end of left bridge abutment on State Highway 39, 6 miles north of Mills. | a4.2 | 1954- | 1973 | (b) | (+) |
| 07220900 | Dog Creek near Shoemaker, N. Mex. | Lat 35°49'32", long 104°53'28", Mora County, 0.5 mile above Valmora-Shoemaker road, and 1.8 miles northwest of Shoemaker. | 18.4 | 1954- | 9-10-73 | 8.70 | 1,090 |
| 07221600 | Lagartija Creek tributary near Sanchez, N. Mex. | Lat 35°38', long 104°25', San Miguel County, at bridge on State Highway 65, 0.9 mile northeast of Sanchez. | a1 | 1961- | 1973 | (b) | (+) |
| 07222300 | Trementina Creek at Trementina, N. Mex. | Lat 35°28', long 104°25', San Miguel County, at bridge on State Highway 65, at Trementina. | a65 | 1959- | 8-30-73 | 3.63 | 408 |
| 07222800 S | Garita Creek tributary near Variadero, N. Mex. | Lat 35°20'10", long 104°21'50", San Miguel County, 1.2 miles upstream from mouth, 6.3 miles southeast of Variadero. | a12 | 1971- | 7-25-73 | 10.08 | 1,170 |
| 07225000 | Pajarito Creek at Newkirk, N. Mex. | Lat 35°04'20", long 104°14'50", Guadalupe County, downstream side of bridge on U.S. Highway 66, 1 mile east of Newkirk. | 55.0 | 1954- | 6-13-73 | 2.18 | 360 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (sq mi) | Period of record | Annual maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge (cfs) |
| | | **Arkansas River basin--Continued** | | | | | |
| 07225300 S | Bluewater Creek near Tucumcari, N. Mex. | Lat 35°08'31", long 103°47'32", Quay County, in Tucumcari Metropolitan Park, 1,600 feet north of the park's southern boundary, and 4.8 miles southwest of Tucumcari. | 15.2 | 1971- | 7-21-73 | d12.2 | (+) |
| 07225500 | Ute Creek near Gladstone, N. Mex. | Lat 36°18', long 103°56', Union County, on bridge on State Highway 58, 3 miles east of Gladstone. | 256 | 1953- | 1973 | (b) | (+) |
| 07226200 | Bueyeros Creek at Bueyeros, N. Mex. | Lat 35°58'10", long 103°41'05", in E½ sec.7, T.20 N., R.31 E., Harding County, on right upstream wingwall of culvert on State Road 102 at Bueyeros. | a34 | 1957- | 1973 | (b) | (+) |
| 07226300 | Carrizo Creek near Roy, N. Mex. | Lat 36°02'58", long 103°57'48", Harding County, 800 ft below State Highway 120, and 15 miles northeast of Roy. | a68 | 1954- | 1973 | (b) | < 50 |
| 07227050 | Plaza Larga Creek tributary near Ragland, N. Mex. | Lat 34°50', long 103°45', Quay County, at culvert on State Highway 18, 1.2 miles northwest of Ragland. | .36 | 1952- | 7-24-73 | 5.38 | 56 |
| 07227150 | Arroyo del Puerto near Endee, N. Mex. | Lat 35°03', long 103°05', Quay County, at bridge on State Highway 93, 5.4 miles south of Endee. | a25 | 1961- | 1973 | (b) | (+) |
| 07227220 S | Cramer Creek near Nara Visa, N. Mex. | Lat 35°45'50", long 103°07'30", Union County, upstream from culvert on State Highway 18, 11.3 miles north of Nara Visa. | 15.1 | 1971- | 7- -73 | 3.07 | (+) |
| 07227280 S | Sand Draw No. 2 tributary near Clayton, N. Mex. | Lat 36°23'33", long 103°22'51", Union County, 0.85 mile north of U.S. Highway 56 and 11.5 miles southwest of Clayton. | 1.81 | 1968- | 1973 | - | 0 |
| 07227295 | Sand Draw tributary near Clayton, N. Mex. | Lat 36°23'20", long 103°19'05", Union County, above culvert on State Highway 58, 8 miles southwest of Clayton. | 1.25 | 1952- | 1973 | (b) | < 5 |
| 07227300 | Sand Draw near Clayton, N. Mex. | Lat 36°20'30", long 103°11'30", Union County, on downstream side of bridge on State Highway 18, 7.5 miles south of Clayton. | a42 | 1953- | 8- 3-73 | 1.38 | (+) |
| | | **Brazos River basin** | | | | | |
| 08079300 | Blackwater Draw tributary near Floyd, N. Mex. | Lat 34°13, long 103°45', Roosevelt County, 0.5 mile below section road and 10 miles west of Floyd. | a10 | 1963- | 7 -26-73 | .54 | (+) |
| 08080600 | Running Water Draw near Clovis, N. Mex. | Lat 34°31'55", long 103°12''05", Curry County, 0.25 mile upstream from Highway 18 and 8 miles north of Clovis. | 109 | 1953-56 1957-64‡ 1965- | 7-20-73 | .93 | < 100 |
| | | **Rio Grande basin** | | | | | |
| 08268800 S | Rio Grande tributary near Arroyo Hondo, N. Mex. | Lat 36°28'29", long 105°43'05", Taos County, upstream from culvert on State Road 111, 0.8 mile east of Rio Grande Gorge Bridge and 4.6 miles southwest of Arroyo Hondo. | 1.16 | 1968- | 1973 | - | 0 |
| 08277400 | Rio Grande tributary at Rinconada, N. Mex. | Lat 36°12'55", long 105°53'25", Rio Arriba County, at culvert on U.S. Highway 64, 0.6 mile west of Rinconada. | .02 | 1952- | 1973 | - | 0 |
| 08284000 | Rito de Tierra Amarilla at Tierra Amarilla, N. Mex. | Lat 36°41'55", long 106°33'25", Rio Arriba County, 400 ft below culvert on U.S. Highway 84, at Tierra Amarilla. | 49.7 | 1957- | 5- -73 | 7.61 | 740 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (sq mi) | Period of record | Annual maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge (cfs) |
| | | Rio Grande basin--Continued | | | | | |
| 08286650 | Canjilon Creek above Abiquiu Reservoir, N. Mex. | Lat 36°18'55", long 106°29'05", Rio Arriba County, in Piedra Lumbre Grant, 300 ft upstream from bridge on U.S. Highway 84, 0.2 mile northwest of entrance to Ghost Ranch and about 12 miles northwest of Abiquiu. | 144 | 1965- | 6- 7-73 | 5.75 | c1,500 |
| 08293700 S | Arroyo Seco tributary near Pojoaque, N. Mex. | Lat 35°56'33", long 106°01'12", Santa Fe County, upstream from culvert on U.S. Highway 64-84-285, 3.5 miles north of Pojoaque. | .72 | 1971- | 9-10-73 | 5.59 | 19 |
| 08313100 | Canada Ancha tributary near Santa Fe, N. Mex. | Lat 35°44'05", long 106°07'00", Santa Fe County, in Caja del Rio Grant, 9 miles northwest of Santa Fe. | 1.23 | 1940-48‡ 1952- | 1973 | - | 0 |
| 08313400 S | Bland Canyon near Cochiti Pueblo, N. Mex. | Lat 35°42'11", long 106°24'56", Sandoval County, 200 ft south of Forest Service Road, 0.3 mile inside Santa Fe National Forest, 7.5 miles north of Cochiti. | 7.57 | 1962- | 9-11-73 | 2.45 | 78 |
| 08317100 | Arroyo Yupa tributary near Cerrillos, N. Mex. | Lat 35°31'58", long 106°08'45", Santa Fe County, 300 ft above culvert on U.S. Highway 85, 1.4 miles southwest of Turquoise Trading Post, and 6.5 miles north of Cerrillos. | .47 | 1957- | 1973 | (b) | <15 |
| 08317500 | Galisteo Creek at Canoncito, N. Mex. | Lat 35°33'02", long 105°49'20", Santa Fe County, above railroad bridge, 0.2 mile above Apache Canyon at Canoncito. | 11.3 | 1955-56 1959- | 7-17-73 | 2.81 | 680 |
| 08317600 | San Cristobal Arroyo near Galisteo, N. Mex. | Lat 35°22'55", long 105°51'05", Santa Fe County, at bridge on U.S. Highway 285, 5.5 miles east of Galisteo. | 116 | 1955- | 9-11-73 | 5.61 | 1,040 |
| 08317700 | Tarhole Canyon near Galisteo, N. Mex. | Lat 35°21'55", long 105°50'40", Santa Fe County, at culvert on U.S. Highway 285, 6 miles southeast of Galisteo. | 2.15 | 1952- | 7-17-73 | 15.79 | 425 |
| 08317720 S | Canada de la Cueva near Galisteo, N. Mex. | Lat 35°26'13", long 106°00'45", Santa Fe County, 6.4 miles east of Cerrillos and 4.8 miles northwest of Galisteo. | 1.79 | 1970- | 9-11-73 | 2.69 | 92 |
| 08317800 | Canada de las Minas tributary near Santa Fe, N. Mex. | Lat 35°36'27", long 105°54'42", Santa Fe County, at culvert on U.S. Highway 84, 85 and 285, 1.3 miles northeast of Seton Village, and 5.7 miles south of Santa Fe. | 0.56 | 1952- | 1973 | .48 | <10 |
| 08318900 | San Pedro Creek near Golden, N. Mex. | Lat 36°13'45", long 106°18'00", Sandoval County, 1 mile below bridge on State Highway 10 and 5.5 miles southwest of Golden. | 45.2 | 1953- | 6-12-73 | .20 | 195 |
| 08321900 | Rio de las Vacas near Senorita, N. Mex. | Lat 35°59'35", long 106°47'45", Sandoval County, at bridge on side road, 0.1 mile south of State Highway 126 and 6.5 miles east of Senorita. | 26.8 | 1957- | 5- -73 | 4.56 | 430 |
| 08330400 | Juan Toro Canyon near Miera, N. Mex. | Lat 35°00'57", long 106°20'14", Bernalillo County, 150 ft east of State Highway 10, 1 mile southeast of Cedro, and 4.5 miles northwest of Miera. | 1.57 | 1959- | 1973 | (b) | (+) |
| 08330500 | Tijeras Arroyo at Albuquerque, N. Mex. | Lat 35°03'40", long 106°28'40", Bernalillo County, 300 ft south of U.S. Highway 66 and 0.4 mile southeast of city limits of Albuquerque. | 75.3 | 1943-48 ‡ 1958- | 1973 | (b) | < 250 |
| 08331100 | Belen Highline Canal tributary near Los Lunas, N. Mex. | Lat 34°49'20", long 106°49'10", Valencia County, above culvert on State Highway 6, 5.0 miles west of Los Lunas. | .16 | 1952-53 1955- | 1973 | (e) | - |
| 08331650 | Canada Montoso near Scholle, N. Mex. | Lat 34°24', long 106°29', Socorro County, 130 ft upstream from dip on abandoned highway, 500 ft upstream from bridge on U.S. Highway 60, 3.6 miles southwest of Scholle. | a35 | 1961- | 8-30-73 | 1.38 | c45 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (sq mi) | Period of record | Annual maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge (cfs) |
| | | Rio Grande basin--Continued | | | | | |
| 08331700 | Abo Arroyo tributary near Scholle, N. Mex. | Lat 34°24'10", long 106°30'35", Socorro County, at culvert on U.S. Highway 60, 2.5 miles southeast of junction of U.S. Gighway 60, and State Highway 6, southwest of Scholle. | .23 | 1954- | 7-19-73 | 14.03 | 55 |
| 08332700 S | San Pablo Creek near Cuba, N. Mex. | Lat 35°56'55", long 106°56'44", Sandoval County, upstream from bridge on old section of State Highway 44 and 5.6 miles south of Cuba. | 12.8 | 1970- | 8- 2-73 | 4.64 | (+) |
| 08341300 | Bluewater Creek above Bluewater Dam, near Bluewater, N. Mex. | Lat 35°15'35:, long 108°07'05", Valencia County, 2.3 miles south of Bluewater Dam, and 8 miles west of Bluewater. | a75 | 1953- | 4-17-73 | 4.73 | 610 |
| 08341370 S | Pine Canyon near Thoreau, N. Mex. | Lat 35°18'34", long 108°10'14" McKinley County, about 1 mile southwest of the north end of Bluewater Lake and about 7 miles southeast of Thoreau. | 6.09 | 1969- | 4- -73 | 3.21 | 148 |
| 08348500 | Encinal Creek near Casa Blanca, N. Mex. | Lat 35°08'35", long 107°27'55", Valencia County, 1.8 miles north of village of Encinal and 6.8 miles north of Casa Blanca. | 6.19 | 1937-39‡ 1959- | 3- -73 | 3.82 | 240 |
| 08353500 | La Jencia Creek near Magdalena, N. Mex. | Lat 34°09'45", long 107°12'35", Socorro County, 3.5 miles northwest of Magdalena. | 195 | 1957- | 5-14-73 | .99 | 160 |
| 08353600 | La Jencia Creek tributary near Nagdalena, N. Mex. | Lat 34°08', long 107°13', Socorro County, at Santa Fe Railraod bridge, 2.7 miles northeast of Nagdalena. | 5.67 | 1957- | 1973 | (b) | (+) |
| 08358600 | Chupadera Wash tributary at Bingham, N. Mex. | Lat 33°54', long 106°20', Socorro County, 75 ft upstream from culvert on U.S. Highway 380, 0.1 mile west of Bingham. | 1.29 | 1961- | 1973 | 1.36 | <100 |
| 08359300 | San Jose Arroyo near Monticello, N. Mex. | Lat 33°28'05", long 107°14'30", Sierra County, at head of box canyon just below major tributary, 800 ft below culvert on U.S. Highway 85, 13 miles northeast of Monticello. | 26.9 | 1959- | 1973 | (b) | (+) |
| 08359400 S | Lumber Canyon tributary near Monticello, N. Mex. | Lat 33°24', long 107°16', Sierra County, at culvert on U.S. Highway 85, 0.2 mile north of road to Red Rock Ranger station, and 10.5 miles east of Monticello. | .90 | 1952- | 8-30-73 | 1.14 | 78 |
| 08361650 | Percha Creek near Kingston, N. Mex. | Lat 32°55'05", long 107°38'55", Sierra County, at bridge on State Highway 180, 3.3 miles east of Kingston. | 21.5 | 1953- | 7-17-73 | 3.89 | 450 |
| 08361700 | Percha Creek near Hillsboro, N. Mex. | Lat 32°54'55", long 107°36'05", Sierra County, 150 ft south of State Highway 180, and 2 miles west of Hillsboro. | 35.4 | 1957- | 1973 | (b) | <100 |
| 08361800 | Percha Creek at Caballo Dam near Arrey, N. Mex. | Lat 32°54', long 107°19', Sierra County, at bridge on U.S. Highway 85, 0.5 mile above mouth and Caballo Reservoir, and 3.5 miles north of Arrey. | 119 | 1953- | 5-14-73 | .26 | 60 |
| 08363000 S | Rio Grande tributary near Salem, N. Mex. | Lat 32°43'01", long 107°12'03", Dona Ana County, upstream from culvert on Interstate Highway 25, 1.0 miles northeast of Salem. | .18 | 1971- | 8-29-73 | 8.70 | 500 |
| 08363100 | Rio Grande tributary near Radium Springs, N. Mex. | Lat 32°30'05", long 106°57'05", Dona Ana County, above culvert on U.S. Highway 85, 120 ft above mouth, and 1.4 miles west of Radium Springs. | .40 | 1955- | 1973 | (e) | - |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (sq mi) | Period of record | Annual maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge (cfs) |
| | | Rio Grande basin--Continued | | | | | |
| 08363200 | Aleman Draw at Aleman, N. Mex. | Lat 33°00'00", long 107°00'20", Sierra County, on Santa Fe Railroad bridge, 140 ft above dip on Engle-Rincon road, and 0.25 mile west of Aleman. | 25.5 | 1959- | 5-13-73 | 2.66 | 187 |
| 08379100 S | Pecos River tributary near Sena, N. Mex. | Lat 35°18'37", long 105°23'37", San Miguel County, upstream from culvert on State Highway 3, 0.8 mile north of Sena. | 1.24 | 1971- | 7-18-73 | 6.25 | (+) |
| 08379300 | Tecolote Creek at Tecolote, N. Mex. | Lat 35°27'20", long 105°16'55", San Miguel County, on bridge on U.S. Highway 85 at Tecolote. | 122 | 1954- | 1973 | (b) | <100 |
| 08379550 S | Canon Blanco near Leyba, N. Mex. | Lat 35°13'14", long 105°40'12", San Miguel County, 0.2 mile south of White Lakes-Leyba road and 5.0 miles west of Leyba. | 11.2 | 1971- | 9- 9-73 | 4.36 | 143 |
| 08379600 | Pecos River tributary near Dilia, N. Mex. | Lat 35°12'50", long 105°04'50", Guadalupe County, above culvert on U.S. Highway 84, and 1.7 miles northwest of Dilia. | .16 | 1952- | 7-17-73 | .83 | 10 |
| 08380300 | Sandoval Canyon at Gallinas, N. Mex. | Lat 35°41'19", long 105°21'17", San Miguel County, about 500 ft upstream from culvert on State Highway 65, at north edge of Gallinas. | 7.6 | 1957 1961- | 5- -73 | 1.85 | 141 |
| 08381700 S | Canon Piedra Lumbre near Las Vegas, N. Mex. | Lat 35°34'14", long 105°17'50", San Miguel County, upstream from bridge on State Road 283, 4.3 miles west-southwest of Las Vegas. | 8.06 | 1971- | 7-25-73 | 2.40 | 5 |
| 08382900 | Pecos River tributary near Pintada, N. Mex. | Lat 34°58'06", long 105°05'38", Guadalupe County, in Anton Chico Grant, 1,500 ft south of U.S. Highway 66, 6.8 miles north of Pintada. | .16 | 1961- | 1973 | (b) | <30 |
| 08383200 | Pintada Arroyo tributary near Clines Corners, N. Mex. | Lat 34°50'40", long 105°35'05", Torrance County, above culvert on U.S. Highway 285, 12.2 miles south of Clines Corners. | 29.2 | 1952- | 1973 | - | 0 |
| 08383210 | Pintada Arroyo tributary near Encino, N. Mex. | Lat 34°48'40", long 105°34'00", Torrance County, above culvert on U.S. Highway 285, 0.1 mile south of ranch road, and 12.5 miles northwest of Encino. | a1 | 1959- | 1973 | - | 0 |
| 08383300 | Pintada Arroyo near Santa Rosa, N. Mex. | Lat 34°53'20", long 104°43'50", Guadalupe County, 300 ft above bridge on U.S. Highway 54, and 4.5 miles southwest of Santa Rosa. | 896 | 1959- | 9-10-73 | 3.53 | (+) |
| 08383370 S | Pecos River tributary near Puerto de Luna, N. Mex. | Lat 34°52'35", long 104°38'16", Guadalupe County, 25 ft upstream from culvert on State Highway 91, 3.1 miles north of Puerto de Luna. | .37 | 1961- | 8-30-73 | 5.90 | 38 |
| 08385530 | Alamosa Creek tributary near Jordan, N. Mex. | Lat 34°48', long 103°58', Quay County, 500 ft upstream from dip on State Highway 156, 6.9 miles west of Jordan. | a10 | 1962- | 9-24-73 | 2.95 | 100 |
| 08385600 | Yeso Creek near Fort Sumner, N. Mex. | Lat 34°16', long 104°17', De Baca County, at abandoned bridge 1 mile below State Highway 20, and 14.5 miles south of Fort Sumner. | 242 | 1937 1952- | 7-26-73 | 3.45 | 1,900 |
| 08385670 | Aragon Creek tributary near Encinoso, N. Mex. | Lat 33°41', long 105°34', Lincoln County, 0.3 mile upstream from wooden bridge on dirt road, 1.2 miles north of State Highway 48, 4.3 miles west of Encinoso. | 6.07 | 1961- | 1973 | (b) | <10 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (sq mi) | Period of record | Annual maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge (cfs) |
| | | Rio Grande basin--Continued | | | | | |
| 08385690 | Bonita Canyon tributary near Corona, N. Mex. | Lat 34°14', long 105°37', Lincoln County, above culvert on U.S. Highway 54, and 1.8 miles southwest of Corona. | a.6 | 1959- | 1973 | - | 0 |
| 08385700 | Cloud Canyon near Gallinas, N. Mex. | Lat 34°08', long 105°40', Lincoln County, above culvert on U.S. Highway 54, and 2.0 miles southwest of Gallinas. | a10 | 1957- | 1973 | - | 0 |
| 08385900 | Salt Creek tributary near Roswell, N. Mex. | Lat 33°33', long 104°31', Chavez County, at culvert on U.S. Highway 285, 4.7 miles north of junction of U.S. Highway 70 and 285, and 10 miles north of Roswell. | .04 | 1952- | 1973 | (b) | (+) |
| 08389000 | Rio Bonito near Fort Stanton, N. Mex. | Lat 33°31'05", long 105°29'10", Lincoln County, at bridge on U.S. Highway 380, 2.5 miles northeast of Fort Stanton. | a85 | 1955- | 5- -73 | 3.59 | 157 |
| 08389060 | Rio Bonito tributary near Fort Stanton, N. Mex. | Lat 33°31'15", long 105°28'05", Lincoln County, at culvert on U.S. Highway 380, 150 ft above mouth, and 3.5 miles northeast of Fort Stanton. | .72 | 1955- | 1973 | - | 0 |
| 08390050 S | Rio Hondo tributary at Tinnie, N. Mex. | Lat 33°22'15", long 105°13'01", Lincoln County, upstream from culvert on U.S. Highway 70-380, 0.5 mile east of junction of U.S. Highways 70-380 and State Highway 368, and at Tinnie. | .23 | 1971- | 7-29-73 | 3.81 | (+) |
| 08390150 | Gallo Canyon near Picacho, N. Mex. | Lat 33°18', long 105°10', Lincoln County, 500 ft east of road, 5 miles south of Picacho. | 1.32 | 1962- | 9-10-73 | 9.19 | (+) |
| 08393700 | Pancho Canyon near Arabela, N. Mex. | Lat 33°17', long 105°12', Lincoln County, 200 ft downstream from dip on State Highway 368, 5.6 miles south of Arabela. | 16.7 | 1962- | 1973 | (b) | (+) |
| 08393900 | Eight Mile Draw near Roswell, N. Mex. | Lat 33°25', long 104°39", Chavez County, 6.5 miles west of Roswell. | 397 | 1941<br>1952- | 1973 | (b) | <10 |
| 08394300 S | Twin Butte Canyon tributary near Roswell, N. Mex. | Lat 33°10'34", long 104°51'30", Chavez County, about 0.1 mile upstream from mouth and about 22 miles southwest of Roswell. | 5.01 | 1968- | 1973 | - | 0 |
| 08397390 | Curtis Canyon near Mayhill, N. Mex. | Lat 32°52', long 105°31', Otero County, 0.25 mile above SCS dam, 0.4 mile west of State Highway 130, and 2.5 miles southwest of Mayhill. | 10.3 | 1959- | 1973 | (b) | (+) |
| 08397400 S | Hyatt Canyon near Cloudcroft, N. Mex. | Lat 33°56', long 105°30', Otero County, 0.5 mile south of State Highway 83, and 7 miles east of Cloudcroft. | 3.08 | 1953- | 8-15-73 | 1.47 | (+) |
| 08397600 | Rio Penasco near Dunken, N. Mex. | Lat 33°52'55", long 105°10'40", Chavez County, on bridge on State Highway 24, 5 miles north of Dunken. | 583 | 1952-56<br>1956-62‡<br>1963- | 7-29-73 | 7.78 | (+) |
| 08404600 S | Pecos River tributary at Carlsbad, N. Mex. | Lat 32°26'50", long 104°15'48", Eddy County, upstream from culvert on U.S. Highway 285, at entrance to Botanical-Zoological Gardens, 2.9 miles northwest of county court house in Carlsbad. | .47 | 1971- | 1973 | - | 0 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (sq mi) | Period of record | Annual maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge (cfs) |
| | | **Rio Grande basin--Continued** | | | | | |
| 08405050 | Last Chance Canyon tributary near Carlsbad Caverns, N. Mex. | Lat 32°17'30", long 104°36'20", Eddy County, above culvert on State Highway 137, 0.1 mile north of road to Sitting Bull Falls, and 12.5 miles northwest of Carlsbad Caverns. | .2 | 1959- | 9- 7-73 | 1.43 | 22 |
| 08405100 | Mosley Canyon near White City, N. Mex. | Lat 32°15', long 104°20', Eddy County, 600 ft below dip on Dark Canyon road, and 5.5 miles north of White City. | 14.6 | 1959- | 1973 | (b) | (+) |
| 08436000 | San Simon Swale tributary near Jal, N. Mex. | Lat 32°09', long 103°22', Lea County, 0.4 mile south of State Highway 128, and 10.7 miles west of Jal. | a20 | 1963- | 1973 | - | 0 |
| 08437620 S | Monument Draw tributary near Monument, N. Mex. | Lat 32°39'44", long 103°27'16", Lea County, upstream from culvert on U.S. Highway 62-180, about 12 miles northwest of Monument and 19.5 miles west of Hobbs. | 6.23 | 1968- | 1973 | (b) | (+) |
| | | **Mimbres River basin** | | | | | |
| 08477100 S | Willow Springs Canyon at Mimbres, N. Mex. | Lat 32°51'20", long 107°58'35", Grant County, about 600 ft downstream from State Road 61, 0.2 mile north of post office in Mimbres. | 3.84 | 1970- | 7-14-73 | 3.37 | (+) |
| 08477200 S | Iron Creek near Kingston, N. Mex. | Lat 32°54'50", long 107°46'35", Grant County, 50 ft east of State Highway 180, 1.6 road miles west of Emory Pass, and 4.5 miles west of Kingston. | .74 | 1955- | 1973 | (b) | (+) |
| 08477560 | Little Walnut Creek near Silver City, N. Mex. | Lat 32°48'20", long 108°17'35", Grant County, 85 ft above dip on Bear Mountain Road, and 2 miles north of Silver City. | 5.10 | 1959- | 7- 6-73 | 2.01 | 450 |
| 08477570 | Silva Creek tributary at Silver City, N. Mex. | Lat 32°47'42", long 108°16'47", Grant County, 350 ft above dip on Little Walnut Road, and 0.7 mile north of boundary of Silver City. | 2.12 | 1958- | 7- 6-73 | 2.22 | 178 |
| 08477580 | Silva Creek at Silver City, N. Mex. | Lat 32°46'41", long 108°16'41", Grant County, 190 ft above Twelfth Street bridge at Silver City. | 10.0 | 1958- | 7- 6-73 | 2.38 | 300 |
| 08477590 | Pinos Altos Creek at Silver City, N. Mex. | Lat 32°46'52", long 108°16'04", Grant County, 2 blocks below U.S. Highway 260 at Silver City. | 4.63 | 1958- | 1973 | (b) | (+) |
| 08478000 | Cameron Creek at Central, N. Mex. | Lat 32°47', long 108°10', Grant County, 0.5 mile above culvert on U.S. Highway 260, at north edge of Central. | 18.8 | 1954- | 7- 6-73 | 3.21 | 605 |
| 08478500 | Mimbres River at Deming, N. Mex. | Lat 32°17'00", long 107°45'35", Luna County, at bridge on U.S. Highway 260, at north end of Deming. | 1,370 | 1954- | 7-17-73 | 2.13 | 620 |
| 08478600 | Mimbres basin tributary near Florida, N. Mex. | Lat 32°21'25", long 107°37'35", Luna County, above culvert on State Highway 26, and 5 miles southwest of Florida. | .55 | 1959- | 1973 | - | 0 |
| 08478800 | Seventysix Draw tributary near Waterloo, N. Mex. | Lat 31°56'34", long 107°44'38", Luna County, upstream from culvert on State Road 11, 3.9 miles southeast of Waterloo, and 7.9 miles north of Columbus. | .2 | 1967- | 1973 | - | 0 |
| | | **Playas Valley** | | | | | |
| 08479300 | Deer Creek tributary near Antelope Wells, N. Mex. | Lat 31°23'00", long 108°42'15", Hidalgo County, 0.1 mile below dip on State Highway 79, 2.5 miles east of San Luis Pass, and 12 miles west of Antelope Wells. | 4.3 | 1959- | 7-27-73 | 1.99 | 300 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (sq mi) | Period of record | Annual maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge (cfs) |
| | | **Tularosa Valley** | | | | | |
| 08480100 | White Oaks Canyon at White Oaks, N. Mex. | Lat 33°46', long 105°44', Lincoln County, 40 ft upstream from culvert on State Highway 349, 1 mile northeast of White Oaks. | 1.14 | 1961- | 7-17-73 | d1.3 | (+) |
| 08480150 | White Oaks Canyon near Carrizozo, N. Mex. | Lat 33°44', long 105°50', Lincoln County, 100 ft upstream from culvert on U.S. Highway 54, 6 miles north of Carrizozo. | 31 | 1959<br>1961- | 7-17-73 | 1.95 | c760 |
| 08480170 S | Nogal Creek tributary near Nogal, N. Mex. | Lat 33°34'54", long 105°41'10", Lincoln County, upstream from culvert on U.S. Highway 380, about 2.0 road miles west of Indian Divide, 7 miles northwest of Capitan and 2 miles north of Nogal. | 1.94 | 1968- | 1973 | (b) | <10 |
| 08480200 | Taylor Canyon tributary near Bingham, N. Mex. | Lat 33°48', long 106°12', Socorro County, 200 ft north of U.S. Highway 380, 12 miles southeast of Bingham. | 2.66 | 1961- | 1973 | 1.31 | (+) |
| 08480590 | Tularosa Valley tributary near Oscura, N. Mex. | Lat 33°24'41", long 106°04'09", Lincoln County, 50 ft below culvert on U.S. Highway 54, and 5.2 miles south of Oscura. | 3.22 | 1958- | 1973 | - | 0 |
| 08480650 | Minnie Hall Draw near Three Rivers, N. Mex. | Lat 33°25', long 106°05', Lincoln County, 8 miles northeast of Three Rivers. | 9.70 | 1956- | 7-30-73 | 10.62 | <500 |
| 08480700 S | Indian Creek near Three Rivers, N. Mex. | Lat 33°22'10", long 105°53'25", Otero County, 150 ft above diversion dam, and 12 miles east of Three Rivers. | 6.8 | 1956-58‡<br>1959- | 7-15-73 | 2.57 | 16 |
| 08480900 | Indian Creek at mouth near Three Rivers, N. Mex. | Lat 33°22'45", long 105°57'25", Otero County, 75 ft above diversion dam, 0.35 mile above mouth, and 5.5 miles east of Three Rivers. | 10.9 | 1956-58‡<br>1959- | 1973 | (b) | <100 |
| 08481000 | Three Rivers at Three Rivers N. Mex. | Lat 33°18'10", long 106°04'20", Otero County, 150 ft below Southern Pacific Railroad bridge, 400 ft above bridge on U.S Highway 54, and 1.3 miles south of Three Rivers. | 96.0 | 1956- | 5-14-73 | 3.61 | 2,300 |
| 08481100 | Tularosa Valley tributary near Three Rivers, N. Mex. | Lat 33°18', long 106°05', Otero County, at culvert on U.S. Highway 54, 1.6 miles south of Three Rivers. | 13.8 | 1952- | 7- 9-73 | .13 | 123 |
| 08486200 | Black Prince Canyon tributary near Organ, N. Mex. | Lat 32°27', long 106°32', Dona Ana County, above culvert on U.S. Highway 70, 2.3 miles east of San Augustin Pass, and 4.0 miles east of Organ. | .73 | 1959- | 1973 | - | 0 |
| 08486400 | Tularosa Valley tributary near Orogrande, N. Mex. | Lat 32°24'55", long 106°04'20", Otero County, at bridge on U.S. Highway 54, and 2.7 miles northeast of Orogrande. | 2.53 | 1959- | 1973 | (b) | (+) |
| | | **Estancia Valley** | | | | | |
| 08488000 | Estancia Valley tributary at Cedar Grove, N. Mex. | Lat 35°32', long 106°11', Santa Fe County, 50 ft upstream from culvert on State Highway 344, 0.1 mile south of Cedar Grove. | 1.21 | 1955<br>1961- | 1973 | (b) | (+) |
| 08488100 | Juan Tomas Canyon near Edgewood, N. Mex. | Lat 35°10', long 106°14', Santa Fe County, 140 ft upstream from culvert on U.S. Highway 66, 2.5 miles northwest of Edgewood. | a20 | 1962- | 1973 | (b) | (+) |
| 08488170 S | Chavez Draw tributary near Clines Corners, N. Mex. | Lat 35°01'06", long 105°49'06", Torrance County, one mile north of Interstate 40, 13 miles east of Moriarty and 9 miles west of Clines Corners. | 2.73 | 1968- | 4- -73 | 5.67 | 15 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (sq mi) | Period of record | Annual maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge (cfs) |
| | | **Estancia Valley--Continued** | | | | | |
| 08488200 | Osita Draw near Clines Corners, N. Mex. | Lat 35°00', long 105°46', Torrance County, 100 ft upstream from culvert on U.S. Highway 66, 7.5 miles west of Clines Corners. | a10 | 1961- | 7- 2-73 | 3.82 | 610 |
| 08488500 | Canon de Torreon at Torreon, N. Mex. | Lat 34°43'20", long 106°17'50", Torrance County, at culvert on State Highway 10, in Torreon. | 18.2 | 1954- | 1973 | (b) | < 25 |
| 08488600 S | Arroyo del Cuervo near Torreon, N. Mex. | Lat 34°41'35", long 106°18'27", Torrance County, in Town of Torreon Grant, about 0.3 mile above culvert on State Road 10 and 2 miles south of Torreon. | 11.8 | 1969- | 4- -73 | 1.99 | 76 |
| 08489000 | Canada del Leon near Mountainair, N. Mex. | Lat 34°25', long 106°29', 0.25 mile above culvert on State Highway 10, and 8.4 miles southeast of Mountainair. | 3.9 | 1953- | 1973 | - | 0 |
| | | **Salt basin** | | | | | |
| 08492500 | Fleming Draw near Pinon, N. Mex. | Lat 32°31', long 105°21', Otero County, 0.2 mile above dip in ranch road, and 7.5 miles south of Pinon. | 16.6 | 1959- | 1973 | (b) | 200 |
| | | **San Augustin Plains basin** | | | | | |
| 08500000 S | Swingle Canyon near Datil, N. Mex. | Lat 34°11'17", long 107°53'55", Catron County, about 0.3 mile upstream from U.S. Highway 60, and 4.3 miles northwest of Datil. | 6.35 | 1970- | 1973 | (e) | - |
| | | **San Juan River basin** | | | | | |
| 09346200 | Rio Amargo at Dulce, N. Mex. | Lat 36°56'00", long 107°00'00", Rio Arriba County, under bridge on State Highway 17, at Dulce. | 168 | 1956- | 5- -73 | 5.06 | 720 |
| 09350700 S | Ruben Canyon near Gobernador, N. Mex. | Lat 36°44'26", long 107°14'33", Rio Arriba County, in Carson National Forest, upstream from culvert on State Highway 17, and 6.5 miles east of Gobernador. | 5.06 | 1970- | 1973 | (b) | < 10 |
| 09350800 | Vaqueros Canyon near Gobernador, N. Mex. | Lat 36°44', long 107°17', Rio Arriba County, 100 ft east of State Highway 17 and 4.2 miles east of Gobernador. | 60.5 | 1956- | 5- -73 | d4.6 | 370 |
| 09355700 | Gobernador Canyon near Gobernador, N. Mex. | Lat 36°41'05", long 107°25'10", San Juan County, 0.2 mile south of State Highway 17, and 4 miles southwest of Gobernador. | 19.8 | 1956- | 3- -73 | 4.43 | 465 |
| 09356400 | Manzanares Canyon near Turley, N. Mex. | Lat 36°44'15", long 107°42'15", San Juan County, 600 ft above culvert on State Highway 17, and 4.2 miles east of Turley. | 3.20 | 1956- | 9-10-73 | 4.30 | 1,100 |
| 09356520 S | Burro Canyon near Lindrith, N. Mex. | Lat 36°16'21", long 107°14'46", Rio Arriba County, upstream from culvert on State Highway 537, 11.5 miles west of Lindrith. | 9.11 | 1970- | 8-20-73 | 4.63 | 81 |
| 09357200 | Gallegos Canyon tributary near Nageezi, N. Mex. | Lat 36°28', long 107°55', San Juan County, at culvert on State Highway 44, 1.1 miles northwest of Huerfano Trading Post, and 12.5 miles northwest of Nageezi. | .20 | 1952- | 3- -73 | 1.11 | 44 |
| 09367400 S | La Plata River tributary near Farmington, N. Mex. | Lat 36°47'10", long 108°13'31", San Juan County, about 700 ft upstream from culvert on State Highway 17 and 4.1 miles northwest of Farmington. | 1.03 | 1970- | 3- -73 | 4.25 | (+) |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (sq mi) | Period of record | Annual maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge (cfs) |
| | | San Juan River basin--Continued | | | | | |
| 09367530 | Locke Arroyo near Kirtland, N. Mex. | Lat 36°44', long 108°18', San Juan County, on upstream side of abandoned culvert, 200 ft above U.S. Highway 550, 0.4 mile above mouth, and 3.3 miles east of Kirtland. | 2.96 | 1951- | 9-10-73 | d.91 | 54 |
| 09367550 S | Stevens Arroyo near Kirtland, N. Mex. | Lat 36°46'00", long 108°22'10", San Juan County, upstream from gravel road to Young's Lake, 0.6 mile north of El Paso Natural Gas, San Juan Plant and 2.3 miles north of Kirtland. | 4.59 | 1970- | 7-18-73 | 2.57 | (+) |
| 09367840 | Yazzie Wash near Mexican Springs, N. Mex. | Lat 35°50'40", long 108°53'00" McKinley County, 5.0 miles northwest of Mexican Springs, and 23 miles north of Gallup. | a2.1 | 1953-54 1956- | 7 -7-73 | 3.35 | 183 |
| 09367860 | Chusca Wash near Mexican Springs, N. Mex. | Lat 35°48'40", long 108°50'50", McKinley County, 1.8 miles northwest of Mexican Springs, and 20 miles north of Gallup. | a8.7 | 1953- | 4- -73 | 2.14 | 440 |
| 09367900 S | Black Springs Wash near Mexican Springs, N. Mex. | Lat 35°45'40", long 108°49'00", McKinley County, 2.5 miles south of Mexican Springs and 17 miles north of Gallup. | 7.05 | 1954- | 7- 7-73 | -.47 | 48 |
| 09367920 | Coyote Wash tributary near Naschitti, N. Mex. | Lat 36°05'55", long 108°41'48", San Juan County, on bridge on U.S. Highway 666, 2.4 miles north of Naschitti, and 39 miles north of Gallup. | 12.0 | 1967- | 8-27-72<br>9-10-73 | 5.07<br>3.50 | (+)<br>(+) |
| 09367940 | Theodore Wash near Newcomb, N. Mex. | Lat 36°21'39", long 108°43'09", San Juan County, on bridge on U.S. Highway 666, 5.2 miles north of Newcomb. | 37.4 | 1967- | 8-27-72<br>3- -73 | d13.4<br>3.44 | 2,070<br>(+) |
| | | Little Colorado River basin | | | | | |
| 09386100 | Largo Creek near Quemado, N. Mex. | Lat 34°19'25", long 108°31'40", Catron County, on downstream side of bridge on ranch road 2.5 miles southwest of Quemado. | 151 | 1954- | 9-11-73 | 2.40 | 380 |
| 09386150 | Mangas Creek tributary near Pietown, N. Mex. | Lat 34°18', long 108°10', Catron County, above culvert on U.S. Highway 60, 1.3 miles west of Pietown Post Office. | a.08 | 1952- | 1973 | (b) | (+) |
| 09386200 | Carrizo Creek near Salt Lake N. Mex. | Lat 34°31', long 109°01', Catron County, on left downstream wingwall of bridge, 1.3 miles east of New Mexico-Arizona State line and 15 miles west of Salt Lake. | f560 | 1957- | 5- -73 | 4.10 | (+) |
| 09387050 | Galestena Canyon tributary near Black Rock, N. Mex. | Lat 34°58'45", long 108°40'00", McKinley County, 100 ft below bridge on State Highway 32 and 10.5 miles southeast of Black Rock. | a19 | 1957- | 7- 8-73 | 2.12 | 82 |
| 09395400 | Milk Ranch Canyon near Fort Wingate, N. Mex. | Lat 35°25'55", long 108°33'30", McKinley County, 0.5 mile below culvert on secondary road between Fort Wingate and McGaffey and 3 miles south of Fort Wingate. | 14.0 | 1949 1953- | 7-17-73 | 1.36 | 380 |
| 09395500 | Puerco River at Gallup, N. Mex. | Lat 35°32', long 108°44', McKinley County, on right bank north of the Santa Fe RR freight depot, 1,500 ft above Second Street Bridge at Gallup. | 558 | 1940-46‡ 1956- | 5- 6-73 | 4.42 | 1,500 |
| 09395600 | Wagon Trail wash near Gamerco, N. Mex. | Lat 35°39', long 108°47', McKinley County, above abandoned culvert on former U.S. Highway 666, 0.5 mile north of junction of U.S. Highway 666 and State Highway 68, 4.5 miles north of Gamerco. | .38 | 1951- | 6- 1-73 | d.73 | 50 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (sq mi) | Period of record | Annual maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge (cfs) |
| | | Gila River basin | | | | | |
| 09430300 | Copperas Canyon near Pinos Altos, N. Mex. | Lat 33°05', long 108°13', Grant County, on east side of Copperas Canyon road and 15 miles north of Pinos Altos. | 3.95 | 1963- | 1973 | (b) | (+) |
| 09430900 | Duck Creek at Cliff, N. Mex. | Lat 32°58', long 108°36', Grant County, at Cliff below bridge on State Highway 211, and 0.6 mile above mouth. | 228 | 1957- | 7-27-73 | 8.75 | 5,050 |
| 09437200 S | Mexican Canyon at Virden, N. Mex. | Lat 32°41'03", long 108°59'00", Hidalgo County, upstream from dip in State Road 82, and about 0.8 mile east of Virden. | 3.40 | 1968- | 7-18-73 | 11.38 | (+) |
| 09438200 | Animas Creek near Cloverdale, N. Mex. | Lat 31°34'15", long 108°52'30", Hidalgo County, near head of small box canyon 0.1 mile west of State Highway 338, and 11 miles north of Cloverdale. | 157 | 1959- | 7-15-73 | 4.38 | 510 |
| 09442630 S | Mail Hollow near Luna, N. Mex. | Lat 33°47'38", long 108°56'59", Catron County, upstream from culvert on U.S. Highway 180, 2.3 miles south of Luna. | 4.20 | 1970- | 8-29-73 | 2.21 | 20 |
| 09442650 | Romero Creek near New Mexico-Arizona State line near Luna, N. Mex. | Lat 33°57', long 108°59', Catron County, at culvert on Luna-Underwood Lake road, about 1 mile east of New Mexico-Arizona State line, and 8 miles northwest of Luna. | 10.8 | 1958- | 5- -73 | 9.46 | 280 |
| 09442660 | Trout Creek at Luna, N. Mex. | Lat 33°51', long 108°58, Catron County, 500 ft downstream from bridge on Luna-Red Hill road and 2.6 miles north of Luna. | 31.9 | 1954- | 1973 | (b) | < 40 |
| 09442695 S | Negro Canyon at Aragon, N. Mex. | Lat 33°53', long 108°33', Catron County, above culvert on State Highway 12, at west edge of Aragon. | 9.62 | 1958- | 8- 2-73 | 2.27 | 360 |
| 09442700 | Apache Creek near Apache Creek, N. Mex. | Lat 33°55'50", long 108°39'45", Catron County, 7 miles north of Apache Creek. | 94.6 | 1957- | 1973 | (b) | 100 |
| 09442740 | Tularosa River near Reserve, N. Mex. | Lat 33°44'00", long 108°42'10", Catron County, 150 ft west of Eagle Peak Lookout road and 3.3 miles northeast of Reserve. | 426 | 1956- | 5- -73 | 3.38 | 290 |
| 09443950 | Red Colt Canyon at Pleasanton, N. Mex. | Lat 33°15'30", long 108°52'15", Catron County, above culvert on U.S. Highway 260, and 1 mile south of Pleasanton. | 3.00 | 1959- | 8- 2-73 | 9.70 | (+) |
| 09455800 | Steins Creek at Steins, N. Mex. | Lat 32°14', long 109°00', Hidalgo County, at culvert on State Highway 14, 0.9 mile west of Steins. | 1.26 | 1959- | 1973 | - | 0 |

< Less than.
S Flood-hydrograph site.
+ Discharge not yet determined.
‡ Operated as continuous-record gaging station.
a Approximately.
b Peak did not reach bottom of gage.
c Estimated.
d From floodmark.
e Gage height not determined.
f contributing area.

## Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations are given in the following table. Those that are measurements of base flow are designated by an asterick (*); measurements of peak flow by a dagger (+).

Discharge measurements made at miscellaneous sites during calendar year 1973

| Stream | Tributary to | Location | Drainage area (sq mi) | Measured previously (water years) | Measurements | |
|---|---|---|---|---|---|---|
| | | | | | Date | Discharge (cfs) |
| **Arkansas River basin** | | | | | | |
| Chicorica Creek | Canadian River | Lat 36°46'13", long 104°23'45", in S½ sec.4, T.29 N., R.24 E., Colfax County, at highway bridge near east boundary of Maxwell Grant, 300 ft downstream from Una de Gato Creek, 4.4 miles northeast of Hebron, and 9 miles south of Raton, N. Mex. | 381 | 1945-52‡<br>1966-72 | 2-14-73<br>3- 7-73<br>4-10-73<br>4-20-73<br>5- 8-73<br>6-20-73<br>8- 9-73<br>8-29-73<br>9-18-73<br>10-12-73<br>10-30-73<br>12- 4-73 | a2.0<br>a1.5<br>a8.0<br>a20<br>a60<br>a8.0<br>5.3<br>4.0<br>1.8<br>4.0<br>a2.0<br>4.3 |
| Canadian River | Arkansas River | Lat 35°24'12", long 104°11'18", San Miguel County, in Pablo Montoya Grant, 300 ft below Conchas Dam, and 24 miles north of Newkirk. | 7,417 | 1936-38‡<br>1942-72‡ | 2-18-73<br>11- 8-73 | 3.1<br>4.5 |
| Canadian River | Arkansas River | Lat 35°23'35", long 103°02'30", in SW¼ sec.32, T.14 N., R.37 E., Quay County, at N.Mex.-Texas state line, 14.7 miles north of Glenrio, N. Mex. | - | 1969-72 | 1- 8-73<br>2-20-73<br>4- 6-73<br>4-30-73<br>5-21-73<br>6-11-72 | 9.2<br>14<br>47<br>15<br>58<br>6.2 |
| **Rio Grande basin** | | | | | | |
| Red River | Rio Grande | Lat 36°40'53", long 105°39'24", in NW¼NW¼ sec.10, T.28 N., R.12 E., Taos County, 0.3 mile downstream from State Fish Hatchery, near Questa, N. Mex. | - | 1963<br>1965-66<br>1969-72 | 1- 9-73<br>2- 1-73<br>2-21-73<br>3-21-73<br>4-12-73<br>5-17-73<br>8- 7-73<br>8-29-73<br>9-18-73<br>11- 5-73<br>11-20-73<br>12- 5-73 | *33<br>*34<br>*33<br>42<br>47<br>254<br>60<br>53<br>49<br>46<br>41<br>*33 |
| Santa Fe River | Rio Grande | Lat 35°41'17", long 105°56'42", Santa Fe County, at De Pouri Street Bridge in Santa Fe. | - | - | 5- 4-73 | 49 |
| Santa Fe River | Rio Grande | Lat 35°40'20", long 105°59'11", Santa Fe County, at Camino Carlos Rael crossing, 500 feet downstream from Santa Fe Grant boundary, at Santa Fe. | - | - | 5- 4-73 | 48 |
| Santa Fe River | Rio Grande | Lat 35°39'27", long 106°01'31", Santa Fe County, at road crossing, 0.5 mile west of Agua Fria, and 4.5 miles southwest of Santa Fe. | - | - | 5- 4-73 | 48 |
| Santa Fe River | Rio Grande | Lat 35°38'44", long 106°02'39", Santa Fe County, at road crossing, 1.7 miles southwest of Agua Fria, near Santa Fe. | - | - | 5- 4-73 | 46 |

a Estimated.
‡ Operated as a continuous-record gaging station.
* Base flow.

Measurements at miscellaneous sites

Discharge measurements made at miscellaneous sites during calendar year 1973

| Stream | Tributary to | Location | Drainage area (sq mi) | Measured previously (water years) | Measurements | |
|---|---|---|---|---|---|---|
| | | | | | Date | Discharge (cfs) |
| **Rio Grande basin--Continued** | | | | | | |
| Santa Fe River | Rio Grande | Lat 35°38'17", long 106°04'31", Santa Fe County, at gravel pit 1.2 miles northeast of Santa Fe Municipal Airport, and 8 miles southwest of Santa Fe. | - | - | 5- 4-73 | 46 |
| Santa Fe River | Rio Grande | Lat 35°35'35", long 106°19'45", Sandoval County, in Pueblo de Cochiti Grant, 0.9 mile above mouth and 1.5 miles northeast of Pena Blanca. | - | - | 5- 4-73 | 26 |
| Alamosa Creek | Rio Grande | Lat 33°34'09", long 107°35'33", in SE¼ sec.31, T.8 S., R.7 W., Socorro County, just downstream from Wildhorse Creek, and 15 miles northwest of Monticello, N. Mex. | 403 | 1931-42‡<br>1958-71‡<br>1972 | 2- 6-73<br>5- 3-73<br>8-29-73<br>11-14-73 | 9.9<br>*7.0<br>*7.3<br>*6.3 |
| Blue Springs | Black River | Lat 32°11'07", long 104°16'50", SW¼NE¼SW¼ sec.27, T.24 S., R.26 E., above all diversions 5.5 mi (8.8 km) east of White City, N. Mex. | - | 1907<br>1919-20<br>1923<br>1935<br>1952-70 | 10-31-73<br>12- 7-73<br>12-28-73 | *6.5<br>*8.7<br>*8.7 |
| Pecos River | Rio Grande | Lat 32°13'05", long 104°00'08", SE¼SW¼NE¼ sec.17, T.24 S., R.29 E., Eddy County, at Fishing Rock Crossing, 4.1 mi (6.6 km) southeast of Malaga, N. Mex. | - | 1953-54<br>1962-72 | 2-14-73<br>4- 3-73<br>6-13-73<br>8- 1-73<br>9- 5-73<br>10- 3-73<br>11-16-73<br>12-14-73 | 34<br>27<br>53<br>46<br>35<br>64<br>51<br>50 |
| Pecos River | Rio Grande | Lat 32°10'42", long 103°59'50", NW¼NW¼ sec.33, T.24 S., R.29 E., in Eddy County, at first ford 2.6 mi (4.2 km) below Pierce Canyon Crossing and 5.6 mi (9.0 km) southeast of Malaga, N. Mex. | - | 1959<br>1961-64<br>1966-72 | 2-14-73<br>4- 3-73<br>6-13-73<br>8- 1-73<br>9- 5-73<br>10- 3-73<br>11-16-73<br>12-14-73 | 32<br>22<br>55<br>56<br>36<br>70<br>52<br>48 |
| **Gila River basin** | | | | | | |
| Mangas Creek | Gila River | Lat 32°50'48", long 108°30'57", in NW¼NE¼ sec.8, T.17 S., R.16 W., Grant County, 0.4 mile northwest of Mangas Springs. | - | 1972 | 2-14-73<br>3- 7-73<br>5- 4-73<br>7-23-73<br>9-20-73<br>11- 7-73 | *1.9<br>*1.9<br>*1.6<br>*1.3<br>*1.6<br>*1.7 |

a Estimated.
‡ Operated as a continuous-record gaging station.
* Base flow.

## SEEPAGE INVESTIGATIONS

A seepage or low-flow investigation along a watercourse involves discharge measurements or observations of no flow at selected sites in a given reach of the channel, plus measurements of inflow and diversions, field commentary relative to observations, water samples and temperatures, and any other relevant data. Measuring sites are described to the extent that they may be used in subsequent investigations. Sometimes temporary recording installations are used to supplement records at regular gaging stations in the study of flow trends.

Field work proceeds from the most upstream measuring site. Hydrographers may alternate measurements, or the main reach be subdivided and hydrographers assigned to each subreach, with overlap measurements to be made at joining points (These would be listed together, the discharge above the line representing last measurement of the hydrographer working the upper reach).

The results of chemical analyses will be published in Part 2 of this report. Indicated gains or losses may sometimes appear incompatible because of diurnal or other flow variations, or because of small inaccuracies in open-channel measurements. Trends in a given reach may vary with the seasons, or because of regulation. Successive investigations can serve to delineate a sustained trend, or a progressive change in trend.

## RIO GRANDE BASIN

### Santa Fe River seepage investigations

Two series of discharge measurements were made during the 1973 calendar year on the Santa Fe River between the Delgado Street Bridge in Santa Fe (river mile 28.0), and the mouth near Pena Blanca (river mile 0.0) to study gains and losses in the reach. The measurements were made on the recession of a spill from Nichols Reservoir that started in late April and continued until early July. The first series of measurements was made on June 18 when the rate of flow was still relatively high. The second series was made on July 3 at a lower rate of flow with the discharge still decreasing a few cubic-feet per second each day. Two temporary gage installations were operated during the investigation, both upstream from the regular gage "above Cochiti Lake" (see sta 08317200). One temporary gage was located at the Don Gaspar Street bridge in Santa Fe, the other at the road ford near the Santa Fe Municipal Airport. The upstream installation indicated a gradually decreasing inflow to the reach on both days. Small variations in flow were recorded by the temporary gage near the airport and at the regular gaging station on both days, which might be attributable to variations of inflow from the two Santa Fe municipal sewage treatment plants. Seven miscellaneous measurements were made along this same reach of the Santa Fe River on May 4, 1973, and are published as "Measurements at miscellaneous sites" in this report. No other previous seepage investigations have been made along this reach.

Most of the measurements made during these two investigations are rated as good (within 5%) or fair (within 8%). This accuracy as well as the variation in inflow should be taken into consideration in evaluating the indicated gains and losses.

RIO GRANDE BASIN

Santa Fe River seepage investigations

| Stream | Location | June 18, 1973 | | | | | July 3, 1973 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Time | Water temp °C | Discharge, in cfs: Main stream | Trib or diver. | Indic. gain or loss | Time | Water temp °C | Discharge, in cfs: Main stream | Trib or diver. | Indic. gain or loss |
| Santa Fe River | Lat 35°41'04", long 105°55'50", at Delgado St. bridge, Santa Fe | 0915 | 14.0 | 32.4 | - | - | 0700 | 15.0 | 12.1 | - | - |
| Do. | Lat 35°41'07", long 105°56'27", at Don Gaspar St. bridge, Santa Fe | 1045 | 14.5 | 36.3 | - | +3.9 | 0800 | 15.5 | 13.0 | - | +0.9 |
| Do. | Lat 35°41'05", long 105°57'59", at Alire St. bridge, Santa Fe | 1140 | 19.0 | 37.2 | - | +.9 | 0900 | 17.0 | 11.2 | - | -1.8 |
| Do. | Lat 35°40'18", long 105°59'12", at Camino Carlos Rael, Santa Fe | 1300 | 17.0 | 34.5 | - | -2.7 | 0940 | 18.5 | 10.9 | - | -.3 |
| Do. | Lat 35°39'02", long 106°02'10", at Agua Fria nr Santa Fe | 1330 | 18.0 | 32.6 | - | -1.9 | 1020 | 19.0 | 9.57 | - | -1.3 |
| Sewage inflow (Siler Rd plant) | Lat 35°38'41", long 106°02'37", at mouth adjacent to State Hwy 22 at Agua Fria nr Santa Fe | 1410 | 29.0 | - | +0.10 | - | 1050 | 20.5 | - | +0.03 | - |
| Sewage inflow (Airport Rd plant) | Lat 35°37'49", long 106°05'22", at mouth nr Santa Fe Municipal Airport nr Santa Fe | 1435 | 22.0 | - | +4.11 | - | 1110 | 23.0 | - | +6.60 | - |
| Santa Fe River | Lat 35°37'43", long 106°05'33", below road ford nr Santa Fe Municipal Airport nr Santa Fe | 1515<br>0900 | 22.0<br>15.0 | 37.0<br>*36.5 | -<br>- | +.2<br>- | 1200<br>0710 | -<br>17.0 | *15.0<br>11.8 | -<br>- | -1.2<br>- |
| Do. | Lat 35°36'06", long 106°07'19", at road ford 0.4 mi north of Cieneguilla Church nr Canon | 1010 | 15.5 | 33.9 | - | -2.6 | 0750 | 17.0 | 10.4 | - | -1.4 |
| Do. | Lat 35°33'27", long 106°08'59", above mouth of Cienega Creek at La Cienega | 1110 | 17.0 | 33.6 | - | -.3 | 0850 | 17.5 | 10.7 | - | +.3 |
| Cienega Creek | Lat 35°33'26", long 106°09'00", above mouth of Alamo Creek at La Cienega | 1145 | 23.0 | - | +1.11 | - | 0920 | 21.5 | - | +.49 | - |
| Alamo Creek | Lat 35°33'25", long 106°09'00", at mouth at La Cienega | 1200 | 23.0 | - | +.07 | - | 0940 | 21.5 | - | +.004 | - |
| Santa Fe River | Lat 35°32'49", long 106°13'41", at regular gage (Sta 08317200) at mouth of canyon above Cochiti Lake nr Pena Blanca | 1305 | 21.0 | 34.9 | - | +.1 | 1035 | 23.0 | 11.9 | - | +.7 |
| ditch | Lat 35°32'49", long 106°13'41", on right bank adjacent to Sta 08317200 | 1320 | - | - | 0 | - | 1100 | 23.0 | - | -.24 | - |
| Santa Fe River | Lat 35°34'56", long 106°17'31", above Cochiti Lake spillway nr Pena Blanca | 1410 | 24.5 | 25.3 | - | -9.6 | 1140 | 30.0 | 4.06 | - | -8.0 |
| Do. | Lat 35°35'35", long 106°19'45", 0.1 mi upstream from State Hwy 22 and 0.9 mi upstream from mouth nr Pena Blanca | 1450 | 25.0 | 22.4 | - | -2.9 | 1220 | 31.0 | 2.67 | - | -1.39 |
| Do. | Lat 35°36'03", long 106°20'25", at mouth nr Pena Blanca | | (not measured) | | | | 1245 | - | 0 | - | -2.67 |

*Estimated

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