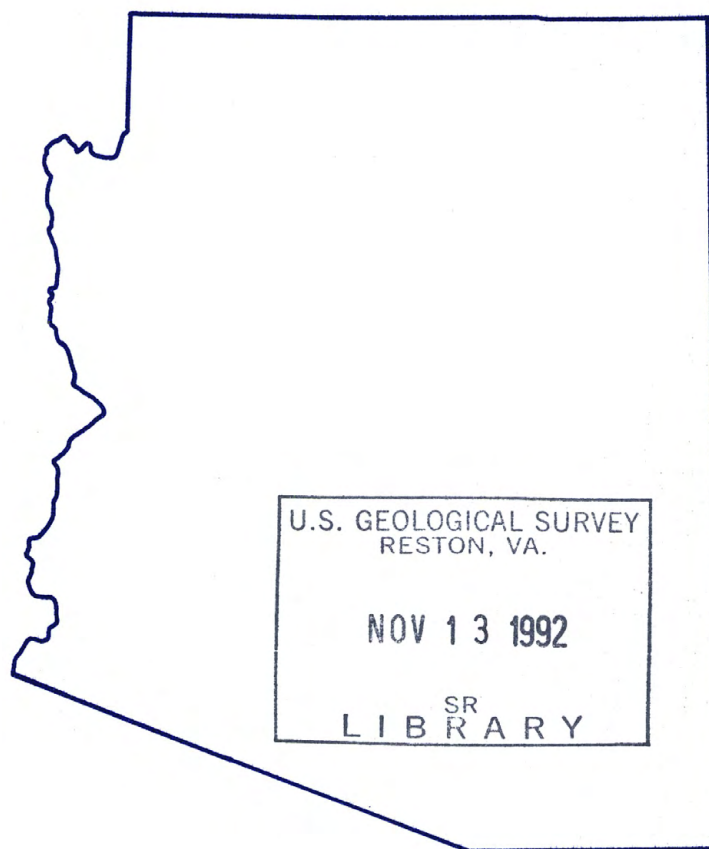


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Water Resources Data Arizona Water Year 1991



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT AZ-91-1
Prepared in cooperation with the State of Arizona
and with other agencies

CALENDAR FOR WATER YEAR 1991

1990

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

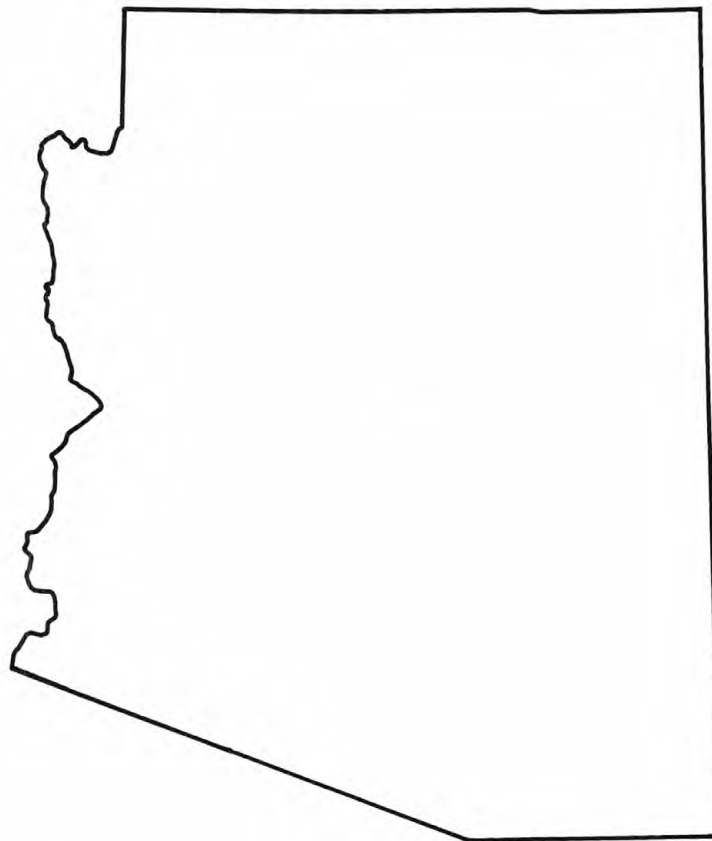
1991

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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27	28	29	30	31			24	25	26	27	28			24	25	26	27	28	29	30
														31						
APRIL							MAY							JUNE						
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7	8	9	10	11	12	13								2	3	4	5	6	7	8
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28	29	30					19	20	21	22	23	24	25	23	24	25	26	27	28	29
							26	27	28	29	30	31		30						
JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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7	8	9	10	11	12	13								8	9	10	11	12	13	14
14	15	16	17	18	19	20	4	5	6	7	8	9	10	15	16	17	18	19	20	21
21	22	23	24	25	26	27	11	12	13	14	15	16	17	22	23	24	25	26	27	28
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							25	26	27	28	29	30	31							



Water Resources Data Arizona Water Year 1991

by F.C. Boner, R.G. Davis, and N.R. Duet



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT AZ-91-1
Prepared in cooperation with the State of Arizona
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

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PREFACE

This volume of the annual hydrologic data report of Arizona is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each state, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines. Most of the data were collected, computed, and processed from field offices. Chiefs-in-charge of the field offices are:

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Bobby L. Wallace, Phoenix
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Howard F. McCormack, Yuma

The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines. The following individuals contributed significantly to the collection, processing, and tabulation of the data:

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This report was prepared in cooperation with the State of Arizona and with other agencies, under the general supervision of R. D. Mac Nish, District Chief, Arizona.

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Prepared in cooperation with the State of Arizona and with other agencies.					
16. Abstract					
Water discharge data for the 1991 water year for Arizona consist of records of stage, discharge, and water quality of streams; stage, contents, water quality of lakes and reservoirs; water levels of observation wells; and quality of ground water. This report contains discharge records for 189 gaging stations, annual peaks for 28 crest-stage partial-record stations, and discharge measurements at 14 miscellaneous site; contents only records for 9 lakes and reservoirs; stage and contents for 1 lake; elevation only for 1 streamflow station; 20 supplementary records, included with gaging-station records, consisting of monthend or monthly stage, contents, and evaporation of lakes and reservoirs, diversions, and return flows; water-quality records for 40 continuous-record stations and 5 miscellaneous sites; water levels for 1,086 observation wells; and water-quality data for water from 174 wells. The data represent that part of the National Water Data System operated by the U.S. Geological Survey cooperating Federal and State Agencies in Arizona.					
17a. Descriptors					
*Arizona, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperatures, Sampling sites, Water levels, Water analyses.					
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SURFACE-WATER STATIONS,
IN DOWNSTREAM ORDER, FOR WHICH
RECORDS ARE PUBLISHED IN THIS VOLUME

[Letters after station name designate type of data: (c) chemical; (d) discharge; (e) elevation; (g) gage height; (m) microbiological (bacteria); (p) pesticide; (q) specific conductance (daily); (r) radio-chemical; (s) suspended sediment; (t) water temperature (daily); (v) contents]

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WATER RESOURCES DATA FOR ARIZONA, WATER YEAR 1991

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Arizona each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data for Arizona."

This report includes records on both surface and ground water in the State. Specifically, it contains: (1) Discharge records for 189 streamflow-gaging stations, and for 28 crest-stage, partial-record streamflow stations; (2) stage and/or content records for 10 lakes and reservoirs; (3) water-quality records for 40 streamflow-gaging stations, for 5 miscellaneous sites, and for 174 wells; and (4) water-level records for 1,086 observation wells. Records included for stream stages and for ground-water levels are only a small fraction of those obtained during the water year.

This series of annual reports for Arizona began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Arizona were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Part 9." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the University of Arizona, Arizona State University, and the State of Arizona in Phoenix; principal cities in the United States; or may be purchased from the U.S. Geological Survey, Books and Open-File Reports, Federal Center, Building 41, Box 25425, Denver, Colorado 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report AZ-91-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the

National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Information for ordering specific reports and data retrievals may be obtained from the district chief at the address given on the back of the title page or by telephone (602) 670-6671, FTS 762-6671.

COOPERATION

The U.S. Geological Survey and organizations of the State of Arizona have had cooperative agreements for the systematic collection of surface-water records since 1912, for ground-water levels since 1939, and for water-quality records since 1969. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Arizona Department of Environmental Quality, E. Fox, director.
Arizona Department of Water Resources, E. A. Riecke, director.
City of Tucson, T. J. Volgy, mayor, T. J. Wilson, manager.
Flood Control District of Maricopa County, D. E. Sagramoso, chief engineer and general manager.
Gila Valley Irrigation District, Dennis Layton, president.
Maricopa County Municipal Water Conservation District No. 1, H. S. Raymond, president, and J. A. Falbo, general-manager.
Metropolitan Water District of Southern California, Carl Boronkay, general manager.
Pima County Flood Control District, R. T. Morrison, chairman, board of supervisors.
Salt River Valley Water Users' Association, John R. Lassen, president, and Oren D. Thompson, associate general manager-water.
Show Low Irrigation Company, Chester Adams, secretary-treasurer.

Assistance in the form of funds or services was given by the Bureau of Land Management, Bureau of Reclamation, Fish and Wildlife Service, and National Park Service, U.S. Department of the Interior; by the Corps of Engineers, U.S. Army; by the Forest Service, U.S. Department of Agriculture; by the International Boundary and Water Commission, U.S. Department of State; and by the Federal Power Commission. Assistance in collecting records was furnished by the Arizona Public Service Co. Organizations that supplied data are acknowledged in station descriptions.

HYDROLOGIC CONDITIONS

As is common in Arizona, streamflow varied greatly in the 1991 water year--from month to month throughout the year and from place to place in the State. The variations are related to differences in precipitation, temperature, topography, and geology. The yearly discharge at 6 key gaging stations ranged from 59 to 319 percent of the median of yearly discharges. The median of the yearly discharges is defined as the middle value of discharge when arranged in order of size. For the index stations, the median is computed from the yearly discharges for the 1951-80 period of record.

The yearly discharge for the 1991 water year was excessive at 1 index station, deficient at 3 stations, and within the normal range at 2 stations. Excessive discharge is defined as a discharge greater than the 75 percent quartile, i.e., greater than 75 percent of the values arranged in order of magnitude; deficient discharge is less than the 25 percent quartile.

The yearly discharge for the 1991 water year and the relation to the median of yearly discharges for the period 1951-80 for the 6 index gaging stations are given below.

<u>Station</u>	<u>Discharge (acre-feet)</u>	<u>Percent of median</u>
Little Colorado River near Cameron	124,600	84
Virgin River at Littlefield	72,590	**63
Gila River at head of Safford Valley, near Solomon	630,600	*318
San Pedro River at Charleston	15,120	**59
Salt River near Roosevelt	1,059,000	*291
Verde River below Tangle Creek, above Horseshoe Dam	462,900	151

*Excessive

**Deficient

The discharge of the Colorado River near Grand Canyon was 8,544,000 acre-ft; the flow of the Colorado River at this point is affected by storage in upstream reservoirs, and this gaging station is not used as an index station.

The discharge of the San Pedro River at Charleston was 15,120 acre-ft for the 1991 water year, which is 45 percent of the median flow for the period of record, 1905, 1913-91. The San Pedro River is a stream that is subject to large variations in flow--from place to place along the river and from time to time. For example, the flow for 1962 was only about 38 percent of median but for 1926 was about 353 percent of median.

Storage increased in 3 and decreased in 2 of the 5 major reservoirs during the 1991 water year. Change in contents during the year and percentage of average contents on September 30 for the period of record for several reservoirs are given below.

<u>Reservoir</u>	<u>Change in contents, 1991 water year (acre-feet)</u>	<u>Average contents on September 30 (percent)</u>
Lake Powell	-1,019,000	---
Lakes Mead-Mohave	-827,000	100
San Carlos Reservoir.....	+301,100	188
Salt-Verde system	+751,200	187
Lake Pleasant	+19,800	168

Diversions of streamflow for irrigation of Arizona lands in the 1991 water year was 2,966,000 acre-ft. About 2,285,000 acre-ft was diverted from the Colorado River for use by the Colorado River Indian Reservation, the Gila Project, and the Yuma Project. About 620,000 acre-ft of the water diverted from the Colorado River was returned to the river or was discharged across the Arizona-Sonora international boundary. About 681,000 acre-ft of streamflow was diverted from the Gila River basin for use in Safford Valley, the San Carlos Project, and the Salt River Project.

Figure 1 shows the discharge for the 1991 water year compared with the median runoff for the period 1951-80 at three representative gaging stations for which long-term records are available.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man. Included in this program in Arizona is station 09508300, Wet Bottom Creek near Childs.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research. The stations included in this network in Arizona are labeled in the text of this report.

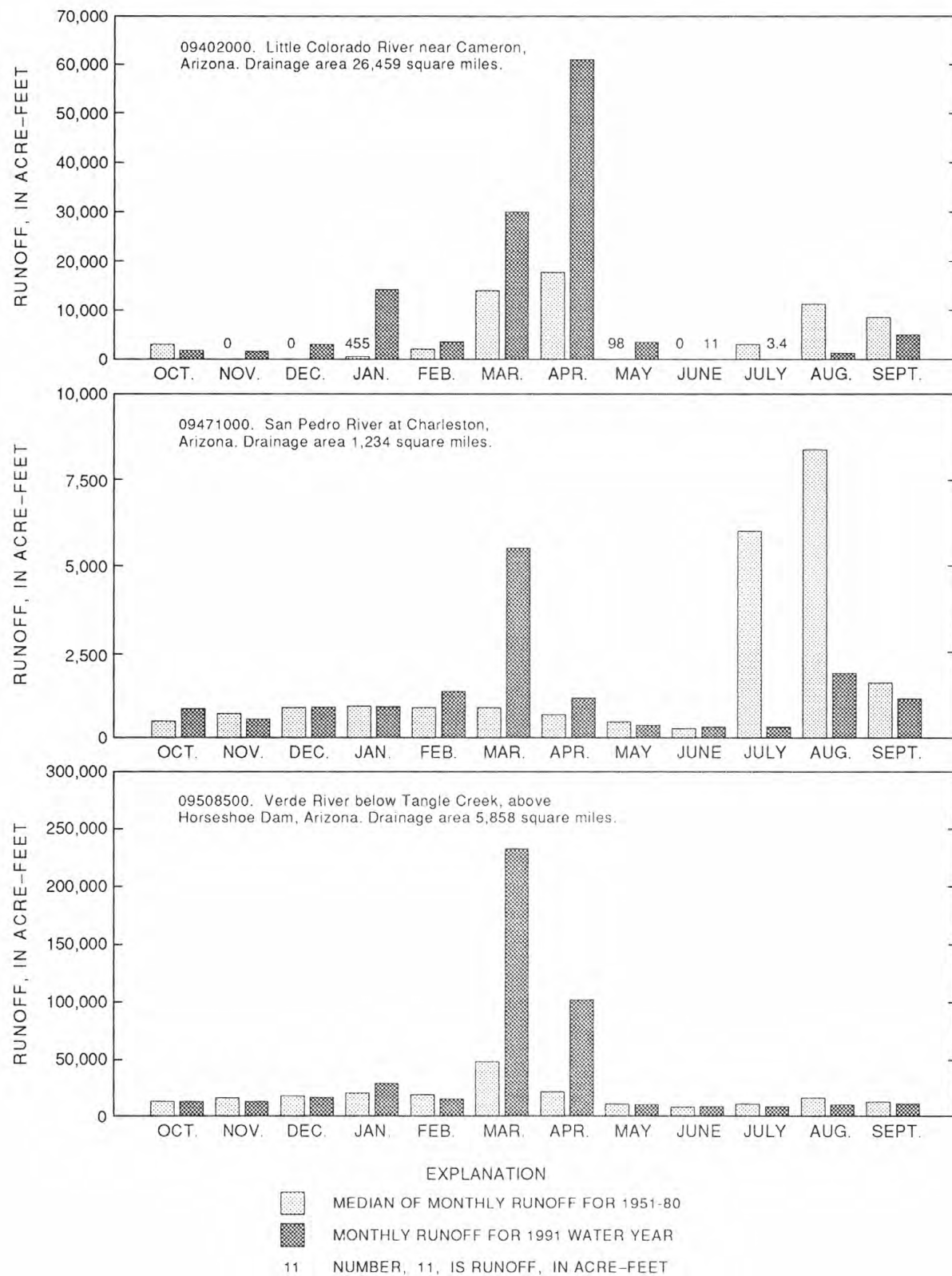


Figure 1.--Runoff during 1991 water year compared with median runoff for period 1951-80 for three representative gaging stations.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States. Included in this network in Arizona are stations 09508300, Wet Bottom Creek near Childs; and 09522000, Colorado River at Northerly International Boundary above Morelos Dam, near Andrade, CA.

Tritium network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States. Included in this network in Arizona is station 09429490, Colorado River above Imperial Dam, AZ-CA.

Arizona fixed station network is part of the State water-pollution control program and includes a network of water-quality stations that build upon the NASQAN network. This network provides essential data for State water-quality assessment programs including the biennial report required by the Federal Clean Water Act. Included in this network of nine stations are six NASQAN stations with expanded parametric coverage. The stations are: 09380000, Colorado River at Lees Ferry (expanded NASQAN); 09427520, Colorado River below Parker Dam; 09466500, Gila River at Calva (expanded NASQAN); 09498500, Salt River near Roosevelt (expanded NASQAN); 09502000, Salt River below Stewart Mountain Dam; 09508500, Verde River below Tangle Creek, above Horseshoe Dam (expanded NASQAN); 09510000, Verde River below Bartlett Dam; 09518000, Gila River above diversions, at Gillespie Dam (expanded NASQAN); and 09522000, Colorado River at northerly international boundary, above Morelos Dam, near Andrade, CA (expanded NASQAN).

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1991 water year that began October 1, 1990, and ended September 30, 1991. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations where the data were collected are shown in figures 4 through 7. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological

Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Arizona, for surface-water stations where only miscellaneous measurements are made.

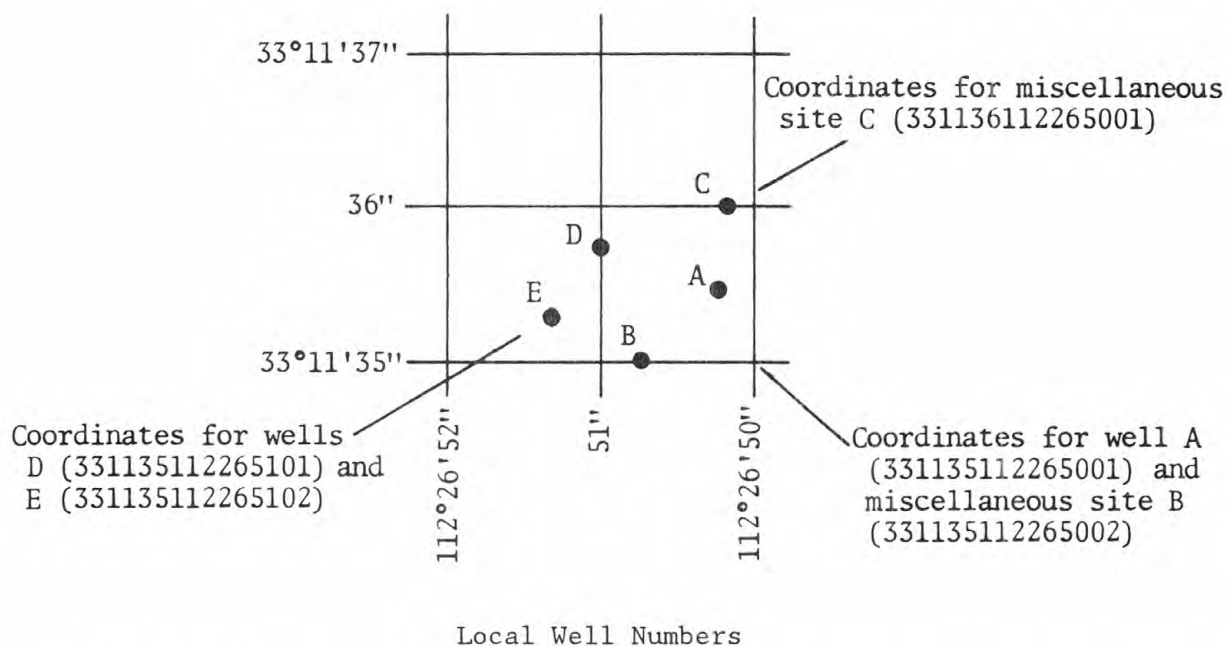
Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 09402500, which appears just to the left of the station name, includes the two-digit Part number "09" plus the six-digit downstream-order number "402500." The Part number designates the major river basin; for example, part "09" is the Colorado River basin.

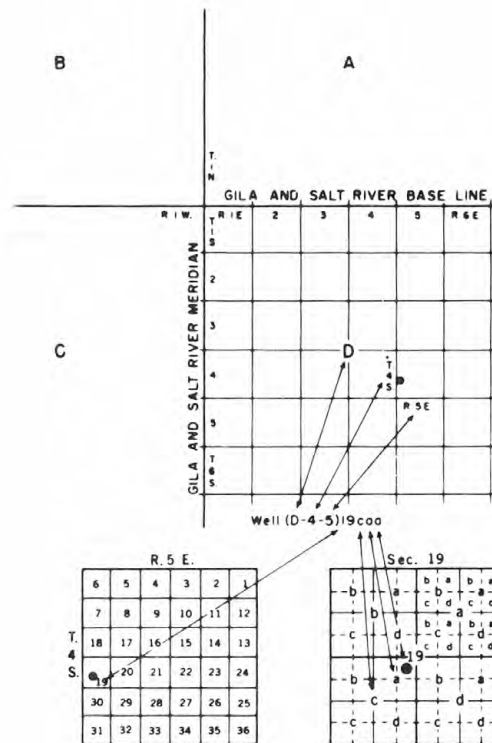
Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number, and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number, however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure 2.)



A local well number is assigned to each ground-water site based on the Gila and Salt River meridian and base line (see figure 3). Also, a different numbering system is used on the Navajo and Hopi Indian Reservations. The Navajo Indian Reservation is divided into 17 administrative districts, numbered 1 to 5 and 7 to 18, and the Hopi Indian Reservation comprises district 6. The area is further divided into 15-minute quadrangles arbitrarily numbered from 1 to 151 starting in the northeast corner of the area and numbering consecutively in rows from east to west. Within the 15-minute quadrangle the well is located in miles south and west from the northeast corner of the quadrangle. The first two numbers in the well number represent the district, the next three numbers are the quadrangle, the decimal numbers are miles west by (X) miles south of the northeast corner of the quadrangle. Thus, the number 02 021-05.28X10.68 states that the well is in district 2, quadrangle 21, and is 5.28 miles west by 10.68 miles south of the northeast corner of the quadrangle.

Figure 2.--System for numbering wells and miscellaneous sites (latitude and longitude)



The well numbers used by the Geological Survey in Arizona are in accordance with the Bureau of Land Management's system of land subdivision. The land survey in Arizona is based on the Gila and Salt River meridian and base line, which divide the State into four quadrants. These quadrants are designated counterclockwise by the capital letters A, B, C, and D. All land north and east of the point of origin is in A quadrant, that north and west in B quadrant, that south and west in C quadrant, and that south and east in D quadrant. The first digit of a well number indicates the township, the second the range, and the third the section in which the well is situated. The lowercase letters a, b, c, and d after the section number indicate the well location within the section. The first letter denotes a particular 160-acre tract, the second the 40-acre tract, and the third the 10-acre tract. These letters also are assigned in a counterclockwise direction, beginning in the northeast quarter. If the location is known within the 10-acre tract, three lowercase letters are shown in the well number. In the example shown, well number (D-4-5)19caa designates the well as being in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T. 4 S., R. 5 E. Where more than one well is within a 10-acre tract, consecutive numbers beginning with 1 are added as suffixes.

Figure 3.--Well-numbering system in Arizona.

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time or any period of time, during the period of record. Complete records of lake and reservoir contents, similarly, are those for which stage or contents may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record and crest-stage partial-record stations for which data are given in this report are shown in figures 4 through 7.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake contents. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in U.S. Geological Survey Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI), Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge are prepared for any stage within the range of the measurements. If it is necessary to define extremes of discharge outside the range of current-meter measurements, the curves are extended using (1) logarithmic plotting; (2) velocity-area studies; (3)

results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dam or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. 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 of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes or observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available surveys, curves, or tables defining the relationship of stage and contents. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. When this is done, the contents computed may become increasingly in error as time increases since the last survey. Discharges over lake or reservoir spillways are computed from stage-discharge relationships, in the same manner as other stream discharges are computed.

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 from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basin. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation.

The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time when the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted 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 most recently revised figure was published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see Definition of Terms), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph

will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station, and possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of this reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum discharges or contents. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possible, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District office to determine if the published records were revised after the station was discontinued. If the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton storage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified by flagging individual daily values with the letter symbol "e" and printing the table footnote, "e Estimated."

Accuracy of the Records

The accuracy of streamflow records 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 measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second (ft^3/s) for values less than 1 ft^3/s , to the nearest tenth between 1.0 and 10 ft^3/s , to whole numbers between 10 and 1,000 ft^3/s , and to three significant figures for more than 1,000 ft^3/s . The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of sites as well as an index of records of discharge collected by other agencies but not published by the U.S. Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Several components of the National Water Information System (NWIS) are on the Arizona District computer. Many of the data published in this report and much additional information can be retrieved from the data bases. The Ground Water Site Inventory (GWSI) data base contains station numbers, well and miscellaneous site numbers, local well numbers, locations, and other descriptive data for all Geological Survey data-collection sites. GWSI contains most of the data collected for wells except for chemical analyses. The Automated Data Processing System (ADAPS) contains most surface-water data except for site descriptions and

chemical analyses. The Water Quality Data Processing System (QW) contains chemical analyses of water from ground-water and surface-water sites.

Data retrievals from the three data bases are available at cost on paper or nine-track computer tape. Some of the retrievals produce data in a format suitable for machine reading that does not contain blank lines or page headers.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuous-record station is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 5 and 6.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

Onsite Measurement and Sample Collection

In obtaining water-quality data, a major concern is the assurance that the data obtained represent the in-situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, are made onsite when samples are taken. To assure that measurements made in the laboratory also represent the in-situ water, carefully prescribed procedures are followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in "Techniques of Water-Resources Investigations," Book 1, Chapter D2; Book 3, Chapter C2; Book 5, Chapters A1, A3, and A4. All these references are listed on pages 39 and 40 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Arizona District office.

One sample can adequately define the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values for each constituent measured and are based on hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the District office whose address is given on the back of the title page of this report.

Water Temperature

Water temperatures are measured at the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at

about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

Sediment

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

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

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

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

Cross-Sectional Data

Cross-sectional survey of water temperature, pH, specific conductance, dissolved oxygen, and suspended sediment are done at all NASQAN and Hydrologic Bench-mark stations during various seasons and surface-water discharges. Documentation of cross-section variation of water quality is essential in order to determine how many samples in a cross section are necessary to ensure a representative composite sample.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the U.S. Geological Survey's National Water-Quality Laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in Techniques of Water-Resources Investigations, Book 5, Chapter C1; methods used by the laboratories are given in Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. All these references are listed on pages 39 and 40 of this report.

In March 1989, the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989. Sulfate values in this report have not been corrected for this bias.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and other data obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the individual parameters.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to ensure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
e	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptable range (non-ideal colony count)
M	Presence of material verified but not quantified.

Dissolved Trace-Element Concentrations

Note: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ($\mu\text{g/L}$) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Present data above the $\mu\text{g/L}$ level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey will begin using new trace-element protocols in the near future.

Records of Ground-Water Levels

Data from the basic Statewide network of observation wells are published herein. Each well is identified by means of a local well number. (See the section titled "Station Identification Numbers.")

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by ground-water areas arranged in alphabetical order (see figure 8 and page 321). The identification number for a given well is the local well number, an alphanumeric number, derived from the township-range location of the well.

Water-level records are obtained from direct measurements with a steel tape. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

Data Presentation

Each well record consists of two parts, the Site Information table and the table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data.

A table of water levels follows the site information table for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level obtained during the water year are listed. Included in the table are the highest and lowest observed water levels since the record began.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

Data Collection and Computation

Many of the records of ground-water quality in this report were obtained as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some ground-water areas but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other ground-water areas in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed on a following page. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analyses. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA immediately following the ground-water level records. Data for quality of ground water are listed alphabetically by ground-water area, and are identified by local well number. Each record consists of two parts, the Site Information table and the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

ACCESS TO WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

- * Station Header File - Contains descriptive information on more than 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.
- * Daily Value File - Contains more than 220 million daily values of stream flows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.
- * Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.
- * Water Quality File - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of both surface and ground water.
- * Ground-Water Site Inventory Data Base - Contains inventory data for more than 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requestor will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, VA 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch floppy disk; and, as noted in the introduction, on CD-ROM discs. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division's District offices. (See address on back of the title page.) A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report are defined below. See the table for converting inch-pound units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by a well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria, which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C±1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warmblooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C±0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m³), and periphyton and benthic organisms in grams per square meter (g/m²).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass, and

represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells per volume (cells/volume) refers to the number of cells of any organism that are counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually in milliliters (mL) or liters (L).

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

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

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

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

Cubic foot per second (ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second-day (cfs.d) 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, approximately 1.9835 acre-feet, or about 646,000 gallons or 2,445 cubic meters.

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

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate. It is recognized that certain kinds of samples cannot be filtered; to provide for this, procedures that are considered equivalent to filtering through a 0.45-micrometer membrane filter will be identified and announced at a later date.

Dissolved-solids concentration of water is determined either analytically or by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

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

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

where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same; to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a 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 include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the Earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water, together with all tributary surface streams and bodies of impounded surface water.

Gage datum is the elevation of the zero point of the reference gage from which gage height is determined as compared to the National Geodetic Vertical Datum of 1929. This elevation is established by a system of levels from known bench marks or by approximation from topographic maps.

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

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap that is required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

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

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Micrograms per gram ($\mu\text{g/g}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter ($\mu\text{g/L}$, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L , mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

Miscellaneous site is a location other than continuous- or partial-record stations where random discharge measurements are made or samples are collected to give better areal coverage of unusual flow events or water-quality conditions in a river basin.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area of the habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

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

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

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

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

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

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of micro-organisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, the periphyton also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

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

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

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

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

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

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

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

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

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

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

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

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrence of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that

passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solutions and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken.

Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 μm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 μm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom Animal
 Phylum Arthropoda
 Class Insecta
 Order Ephemeroptera
 Family Ephemeridae
Genus Hexageria
Species Hexageria limbata

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

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

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses, because different digestion procedures are likely to produce different analytical results.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

Turbidity of a sample is the reduction of transparency due to the presence of particulate matter. In this report it is expressed in Nephelometric turbidity units (NTU), obtained from the Nephelometric method for turbidity determination which measures the intensity of light scattered by suspended particles at 90° from the path of incident light source.

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1991, is called the "1991 water year."

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

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentration of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. McCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. Scott Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and Warren E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathburn, N. Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. *Levels of streamflow gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by Richard L. Cooley and Richard L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
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- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. J. Fishman and L. C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R. L. Wershaw, M. J. Fishman, R. R. Grabbe, and L. E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L. J. Britton and P. E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

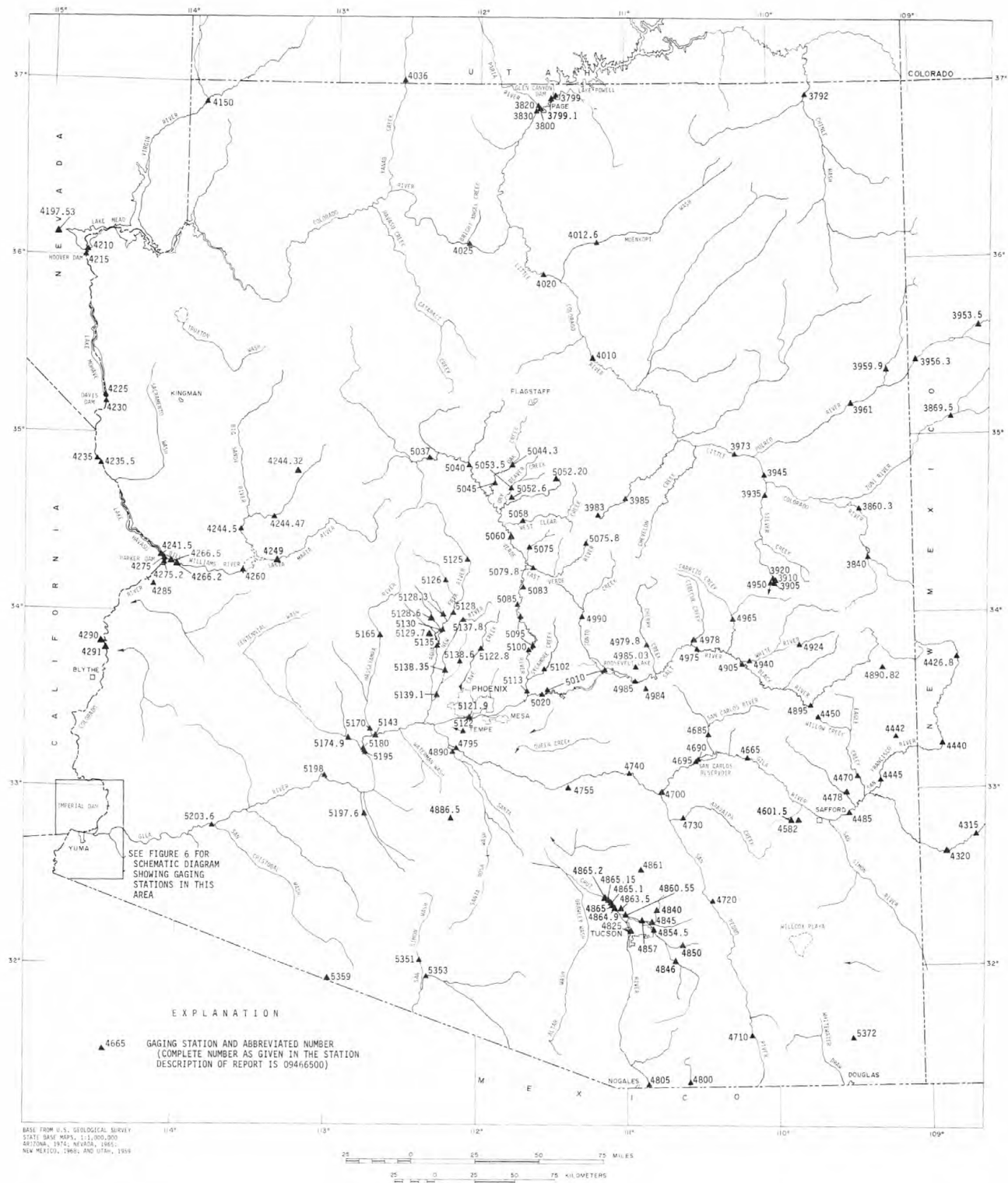


Figure 4.--Map of Arizona showing location of gaging stations.

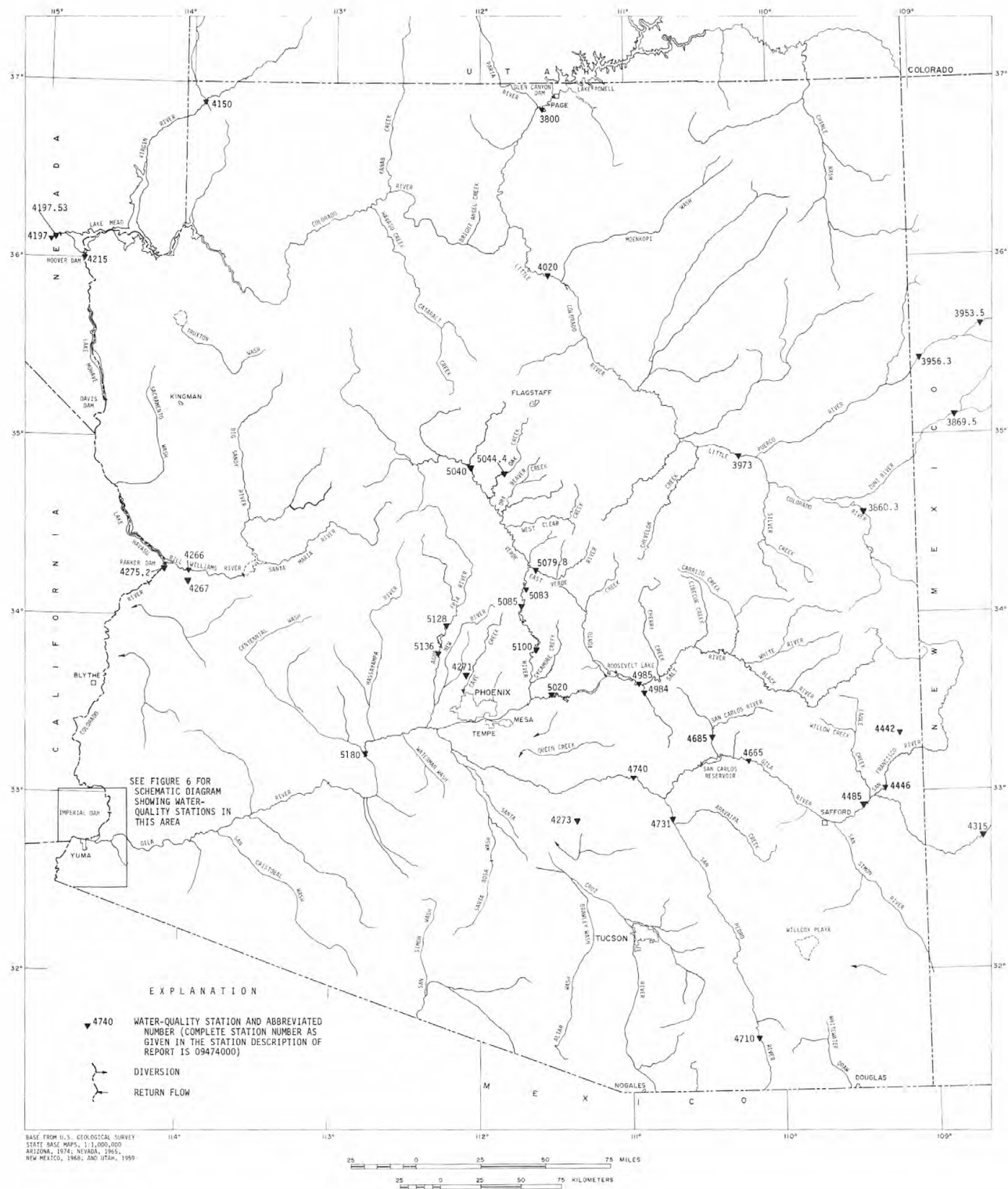


Figure 5.--Map of Arizona showing location of water-quality stations.

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

The following continuous-record streamflow stations in Arizona have been discontinued or converted to partial-record stations. Daily streamflow records were collected and published for the period of record shown for each station.

Station	Station Name	Drainage area (sq mi)	Period of record (water years)
09383200	Lee Valley Creek above Lee Valley Reservoir near Greer, AZ	a1.3	1966-72
09383220	Lee Valley tributary near Greer, AZ	a.5	1966-72
09383250	Lee Valley Creek below Lee Valley Reservoir, near Greer, AZ	a1.9	1966-72
09383300	Filler ditch at Greer, AZ	---	1960-77
09383400	Little Colorado River at Greer, AZ	29.1	1960-82
09383500	Nutrios Creek above Nelson Reservoir, near Springerville, AZ	83.3	1967-82
09383550	Nutrios Creek below Nelson Reservoir, near Springerville, AZ	86.7	1967-82
09384500	Lyman Reservoir near St. Johns, AZ	b811	1940-78
09385000	Lyman Canal below Lyman Reservoir, near St. Johns, AZ	---	1950-80
09385500	Little Colorado River below Lyman Reservoir, near St. Johns, AZ	b811	1941-80
09386000	Little Colorado River at St. Johns, AZ	b964	1906-7; 1909; 1929-33; 1935-40
09386500	Little Colorado River above Zuni River, near Hunt, AZ	b3,741	1940-72
09388000	Little Colorado River near Hunt, AZ	b6,383	1929-33; 1940-72
09390000	Silver Creek near Shumway, AZ	b172	1942-55
09392500	Show Low Creek at Show Low, AZ	90.2	1944-55
09393000	Silver Creek at Snowflake, AZ	b488	1906
09393400	Cottonwood Wash at Snowflake, AZ	262	1981-84
09394000	Silver Creek near Woodruff, AZ	b966	1929-33; 1935-52
09395650	Puerco River near Lupton, AZ	a1,050	1971-72
09395900	Black Creek near Lupton, AZ	494	1964-72; 1974-82
09396500	Puerco River near Adamana, AZ	b2,654	1940-49
09397000	Little Colorado River at Holbrook, AZ	b11,462	1905-7; 1949-73
09397500	Chevelon Creek below Wildcat Canyon, near Winslow, AZ	271	1947-70
09398000	Chevelon Creek near Winslow, AZ	b785	1905-6; 1915-19; 1929-72
09399000	Clear Creek near Winslow, AZ	621	1906; 1929-82
09399400	Jacks Canyon Creek near Winslow, AZ	295	1969-72
09399500	Salt Creek near Winslow, AZ	287	1939-41
09400000	Little Colorado River near Winslow, AZ	a16,100	1954-56
09400600	River de Flag at Flagstaff, AZ	51.0	1955-60
09401226	Coal Mine Wash tributary near Kayenta, AZ	.62	1977-81
09401229	Coal Mine Wash tributary No. 2 near Kayenta, AZ	.06	1977-79
09401239	Coal Mine Wash at mouth, near Shonto, AZ	137	1978-82
09401250	Moenkopi Wash near Moenkopi, AZ	a1,650	1973-76
09401280	Moenkopi Wash near Tuba City, AZ	1,904	1926-41
09401400	Moenkopi Wash near Tuba City, AZ	2,492	1941-53; 1965-78
09401500	Moenkopi Wash near Cameron, AZ	2,662	1953-65
09403000	Bright Angel Creek near Grand Canyon, AZ	101	1923-74
09403780	Kanab Creek near Fredonia, AZ	1,085	1963-80
09403990	Dogtown Wash above Dogtown Reservoir near Williams, AZ	4.69	1964-66
09404020	Dogtown Wash above Kaibab Reservoir, near Williams, AZ	15.4	1964-66
09404040	Cataract Creek near Williams, AZ	46.4	1965-72
09424000	Colorado River near Topock, AZ	ab176,300	1917-82
09424200	Cottonwood Wash No. 1 near Kingman, AZ	143	1964-78
09424470	Kirkland Creek near Kirkland, AZ	109	1973-83
09425000	Date Creek near Congress, AZ	127	1939-43
09425500	Santa Maria River near Alamo, AZ	1,439	1939-66
09426500	Bill Williams River at Planet, AZ	5,054	1913-15; 1928-46
09429010	Colorado River at Palo Verde Dam, AZ-CA	ab186,200	1969-88
09429280	Cibola Lake Inlet near Cibola, AZ	---	1975-89
09429290	Cibola lake Outlet near Cibola, AZ	---	1975-89

a Approximately

b Includes area which is probably noncontributing.

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station	Station Name	Drainage area (sq mi)	Period of record (water years)
09429300	Colorado River below Cibola Valley, AZ	ab187,800	1956-88
09438000	Gila River at New Mexico-Arizona State Line, near Virden, NM	3,349	1939-49
09442000	Gila River near Clifton, AZ	4,010	1911-18; 1928-89
09445500	Willow Creek near Point of Pines, near Morenci, AZ	102	1944-67
09446000	Willow Creek near Double Circle Ranch, near Morenci, AZ	149	1944-67
09446500	Eagle Creek near Double Circle Ranch, near Morenci, AZ	377	1944-67
09451000	Gila River near Solomon, AZ	7,896	1914-32; 1940-50
09454500	Cave Creek near Paradise, AZ	a39	1919-25
09455000	Cave Creek Canal near Paradise, AZ	---	1919-25
09455500	East Turkey Creek at Paradise, AZ	a8.2	1919-25
09456000	San Simon River near San Simon, AZ	814	1919-25; 1931-33; 1935-41
09456200	San Simon River below fandrop detention dam, near Bowie, AZ	1,400	1955-59
09456600	Gold Gulch below Creighton detention dam, near Bowie, AZ	104	1956-59
09456700	Gold Gulch below H-X detention dam, near Bowie, AZ	144	1956-59
09456800	San Simon River at Tanque, AZ	1,953	1957-59
09456900	Goat Well Wash below drop structure, near Solomon, AZ	77.2	1956-59
09457000	San Simon River near Solomon, AZ	2,192	1931-32; 1935-82
09458050	Marijilda Wash near Safford, AZ	10.9	1971-78
09458500	Gila River at Safford, AZ	10,459	1940-49; 1956-65
09460200	Frye Creek at Thatcher, AZ	24.3	1963-74
09466000	Gila River at Black Point, near Geronimo, AZ	11,329	1943-45
09470500	San Pedro River at Palominas, AZ	737	1930-33; 1935-41; 1950-81
09470800	Garden Canyon near Fort Huachuca, AZ	8.38	1959-65
09471300	Huachuca Canyon near Fort Huachuca, AZ	3.24	1961-64
09471500	San Pedro River at Fairbank, AZ	1,672	1926-28
09471550	San Pedro River near Tombstone, AZ	1,730	1967-86
09471560	St. David ditch near St. David, AZ	---	1967-72
09471590	Pomerene Canal near St. David, AZ	---	1967-72
09471800	San Pedro River near Benson, AZ	2,490	1966-76
09472100	Peck Canyon tributary near Redington, AZ	8.02	1967-72
09472500	San Pedro River near Mammoth, AZ	3,583	1931-41
09473020	Aravaipa Creek near Feldman, AZ	557	1919-21
09473100	San Pedro River below Aravaipa Creek, near Mammoth, AZ	4,343	1979-83
09473400	San Pedro River near Winkelman, AZ	4,430	1962-65
09473500	San Pedro River at Winkelman, AZ	4,453	1966-78
09474500	Gila River at the Buttes, AZ	a18,300	1898-99
09478500	Queen Creek at Whitlow Dam site (Whitlow's Ranch), near Superior, AZ	144	1948-59
09479000	Queen Creek near Florence Junction, AZ	192	1939-41
09479200	Queen Creek tributary at Apache Junction, AZ	.51	1961-68
09481000	Nogales Wash at Nogales, AZ	a37	1932-34
09481500	Sonoita Creek near Patagonia, AZ	209	1930-33; 1935-72
09482000	Santa Cruz River at Continental, AZ	1,682	1940-46; 1951-85
09482400	Airport Wash at Tucson, AZ	23.0	1965-81
09483000	Tucson Arroyo at Vine Avenue, Tucson, AZ	8.2	1944-81
09483010	High School Wash at Tucson, AZ	.95	1973-83
09483100	Tanque Verde Creek near Tucson, AZ	43.0	1959-74
09483300	Sabino Creek near Mount Lemmon, AZ	3.19	1951-59
09484200	Bear Creek near Tucson, AZ	16.3	1959-74
09484560	Cienega Creek near Pantano, AZ	289	1968-75
09484590	Davidson Canyon Wash near Vail, AZ	50.5	1968-75
09485390	Atterbury Wast tributary at Tucson, AZ	4.97	1975-83
09485500	Pantano Wash at (near) Tucson, AZ	602	1940-41
09485550	Arcadia Wash at Tucson, AZ	2.72	1975-83
09485850	Rillito Creek near Tucson, AZ	892	1913-75
09486300	Canada del Oro near Tucson, AZ	250	1965-78

a Approximately

b Includes area which is probably noncontributing.

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station	Station Name	Drainage area (sq mi)	Period of record (water years)
09486600	Arivaca Wash near Arivaca, AZ	78.4	1967-72
09486800	Altar Wash near Three Points, AZ	465	1966-75
09487500	Santa Rosa Wash at Gu Komelik, near Sells, AZ	629	1954-59
09488000	Kohatk Wash near Chiapuk, near Sells, AZ	185	1954-59
09488500	Santa Rosa Wash near Valva Vo, near Sells, AZ	1,782	1954-80
09489070	North Fork of East Fork Black River near Alpine, AZ	38.1	1965-78
09489100	Black River near Maverick, AZ	315	1962-82
09489200	Pacheta Creek at Maverick, AZ	14.8	1957-80
09489700	Big Bonito Creek near Fort Apache, AZ	119	1957-81
09490800	North Fork White River near Greer, AZ	a39	1965-78
09491000	North Fork White River near McNary, AZ	a66	1945-54; 1957-85
09492000	North Fork White River at Whiteriver, AZ	357	1916-22
09492500	Rock Creek near Fort Apache, AZ	20.3	1955-60
09493000	East Fork White River at Fort Apache, AZ	135	1912-20
09493500	White River at Fort Apache, AZ	499	1912-19; 1921-22
09494300	Carrizo Creek above Corduroy Creek, near Show Low, AZ	225	1953-67
09494500	Corduroy Creek above Forestdale Creek, near Show Low, AZ	57.0	1952-61
09495500	Forestdale Creek near Show Low, AZ	33.4	1952-61
09496000	Corduroy Creek near Mouth, near Show Low, AZ	203	1951-75
09496600	Cibecue No. 1 tributary to Carrizo Creek, near Show Low, AZ	.099	1958-71
09496700	Cibecue No. 2 tributary to Carrizo Creek, near Show Low, AZ	.065	1958-71
09497850	Canyon Creek near Globe, AZ	316	1975-81
09497900	Cherry Creek near Young, AZ	62.1	1963-77
09498800	Tonto Creek near Gisela, AZ	430	1964-75
09498870	Rye Creek near Gisela, AZ	122	1965-85
09499500	Tonto Creek near Roosevelt, AZ	838	1913-40
09500500	Salt River at Roosevelt (at reservoir site) (near Livingstone), AZ	5,824	1904-7
09502500	Salt River at McDowell, AZ	6,268	1904-9
09502800	Williamson Valley Wash near Paulden, AZ	255	1965-85
09503000	Granite Creek near Prescott, AZ	36.3	1932-47
09503500	Willow Creek near Prescott, AZ	25.2	1932-37
09503720	Hell Canyon near Williams, AZ	14.9	1965-72
09503800	Volunteer Wash near Bellemont, AZ	b130	1965-72
09505000	Verde River at Camp Verde, AZ	b4,215	1913-20
09505200	Wet Beaver Creek near Rimrock, AZ	111	1961-82
09505250	Red Tank Draw near Rimrock, AZ	49.4	1957-78
09505300	Rattlesnake Canyon near Rimrock, AZ	24.6	1957-80
09505500	Beaver Creek at Camp Verde, AZ	433	1912-20
09505550	Verde River below Camp Verde, AZ	b4,653	1971-78
09506500	Verde River at Childs, near Camp Verde, AZ	b5,098	1913
09507600	East Verde River near Pine, AZ	6.34	1961-71
09507700	Webber Creek above West Fork Webber Creek, near Pine, AZ	4.79	1959-74
09507800	West Fork Webber Creek near Pine, AZ	4.07	1959-65
09507900	Webber Creek below West Fork Webber Creek, near Pine, AZ	9.63	1959-65
09507950	East Verde River near Payson, AZ	272	1961-65
09508000	Verde River below East Verde River, near Pine, AZ	b5,606	1934-41
09509000	Verde River above Bartlett Reservoir, near Cave Creek, AZ	b6,036	1938-45
09510070	West Fork Sycamore Creek above McFarland Canyon, near Sunflower, AZ	4.62	1965-74; 1982-86
09510080	West Fork Sycamore (Adler) Creek near Sunflower, AZ	9.82	1961-74
09510100	East Fork Sycamore Creek near Sunflower, AZ	4.52	1961-86
09510150	Sycamore Creek near Sunflower, AZ	52.3	1961-76
09510180	Rock Creek near Sunflower, AZ	15.2	1963-72
09512100	Indian Bend Wash near Scottsdale, AZ	62	1961-84
09512170	Salt River at Jointhead Dam, near Phoenix, AZ	13,225	1977-80
09512180	Salt River tributary No. 2 at Phoenix, AZ	a.035	1963-65

a Approximately

b Includes area which is probably noncontributing.

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station	Station Name	Drainage area (sq mi)	Period of record (water years)
09512300	Cave Creek near Cave Creek, AZ	121	1958-67
09512400	Cave Creek at Phoenix, AZ	252	1958-90
09513700	Agua Fria River tributary at Youngtown, AZ	.13	1961-68
09513800	New River at New River (near Black Canyon), AZ	84.6	1960-82
09513970	Agua Fria River at Avondale, AZ	2,066	1967-82
09514000	Buckeye Canal near Avondale, AZ	---	1953-71
09514500	Hassayampa River near Wagoner, AZ	77.9	1940-46
09515000	Hassayampa River at Walnut Grove, near Wagoner, AZ	106	1912-15;1917-18;1980-83
09515500	Hassayampa River at Box damsite, near Wickenburg, AZ	417	1938;1946-82
09517500	Centennial Wash near Arlington, AZ	1,870	1961-79
09520000	Gila River near Sentinel, AZ	51,610	1913-14
09520170	Rio Cornez near Ajo, AZ	243	1967-78
09520700	Gila River at mouth, near Yuma, AZ	57,950	1975-83
09521000	Colorado River at Yuma, AZ	ab246,500	1902-64
09521500	Colorado River and Pilot Knob wasteway (Colorado River) at Rockwood gate, CA	ab246,600	1945-50
09522200	Colorado River at southerly international boundary, near San Luis, AZ	ab246,700	1960-85
09527900	Mittry Lake Outlet Channel near Yuma, AZ	---	1975-83;1985-89
09528000	Yuma Canal at Laguna Dam, AZ-CA	---	1910-48
09529050	North Gila Drain No. 3 near Yuma, AZ	---	1962-89
09529100	Fortuna Wasteway near Yuma, AZ	---	1961-63;1965-89
09529400	South Gila Drain No. 2 near Yuma, AZ	---	1961-89
09536500	West Turkey Creek near Light, AZ	a19	1919-25
09537000	Whitewater Draw near Rucker, AZ	38.7	1919-25
09537500	Whitewater Draw (White, White Water River) near Douglas, AZ	1,023	1912-13;1918-19;1930-33;1935-82

a Approximately

b Includes area which is probably noncontributing.

DISCONTINUED SURFACE-WATER QUALITY STATIONS

The following surface-water-quality stations in Arizona have been discontinued or converted to partial-record stations. Water-quality data (daily or periodic samples with collection frequency not less than quarterly) were collected and published for the period of record shown for each station. Discontinued project stations with less than three years of record are not included. Information regarding these stations may be obtained from the District Chief at the address given on the back of the title page of this report.

[Type of record: (C) chemical, (S) sediment, (T) temperature]

Station number	Station name	Drainage area (mi ²)	Type of record	Period of record (water years)
09382000	Paria River at Lees Ferry, AZ	1,410	C,S,T	1942,1947-76,1978-79
09383400	Little Colorado River at Greer, AZ	29.1	C,S,T	1972-73,1976-79,1981-84,1987-88
09384000	Little Colorado River above Lyman Lake, near St. Johns, AZ	a706	C,S,T	1976-83
09390500	Show Low Creek near Lakeside, AZ	68.6	C,S,T	1976-79
09393400	Cottonwood Creek at Snowflake, AZ	262	C,S,T	1982-84
09394500	Little Colorado River at Woodruff, AZ	a8,072	C,S,T	1905-06,1950-57
09401200	Little Colorado River at Cameron, AZ	a23,119	C,S,T	1948-70,1975-86
09401250	Moenkopi Wash near Moenkopi, AZ	---	C,T	1973-76
09401260	Moenkopi Wash at Moenkopi, AZ	1,629	C,S,T	1974-81
09402500	Colorado River near Grand Canyon, AZ	ab141,600	C,S,T	1925-88
09403000	Bright Angel Creek near Grand Canyon, AZ	101	C,T	1944-49,1952-58,1962-74
09403780	Kanab Creek near Fredonia, AZ	1,085	C,S,T	1964-73
09421000	Lake Mead at Hoover Dam, AZ	ab171,700	C,T	1941-62,1964-85
09423000	Colorado River below Davis Dam, AZ	ab173,300	C,T	1969-87
09423640	Topock Marsh Outlet near Needles, CA	---	C,T	1980-81,1983
09423650	Topock Marsh Outlet near Topock, AZ	---	C,T	1975-77
09424000	Colorado River near Topock, AZ	ab176,300	C,T	1925-27,1952-62,1969-82
09428500	Colorado River Indian Reservation Main Canal near Parker, AZ	---	C,T	1970-83
09428510	Colorado River Indian Reservation Poston Canal Wasteway near Parker, AZ	---	C,T	1969-83
09429000	Palo Verde Canal near Blythe, CA	---	C,T	1970-85
09429030	Palo Verde Drain near Parker, AZ	---	C,T	*1962-68,1969-83
09429060	Colorado River Indian Reservation Lower Main Drain near Parker, AZ	---	C,T	*1962-68,1969-83
09429100	Colorado River below Palo Verde Dam, AZ	ab186,200	T	1956-66
09429130	Palo Verde Irrigation District Olive Lake Drain near Blythe, CA	---	C,T	*1963-65,1969-81
09429188	Colorado River at Taylor Ferry, near Blythe, CA	ab187,700	C,T	1970-83
09429220	Palo Verde Irrigation District Outfall Drain near Palo Verde, CA	---	C,T	*1962-65,*1967-68,1969-83
09429225	Palo Verde Irrigation District Anderson Drain near Palo Verde, CA	---	C,T	1969-81
09429300	Colorado River below Cibola Valley, AZ	ab187,800	C,T	1956-66,1969-83
09429600	Colorado River below Laguna Dam, AZ	ab188,600	C,T	1972-83
09429690	Colorado River above Gila River, near Yuma, AZ	ab188,700	C,T	*1961-68,1969-79
09442000	Gila River near Clifton, AZ	4,010	C,S,T	1976-79
09444500	San Francisco River at Clifton, AZ	a2,766	C,S,T	1943-44,1964-67
09458500	Gila River at Safford, AZ	10,459	C,T	1941-44
---	Gila River at Fort Thomas, AZ	---	C,T	1940-41,1943-44
09470000	Gila River at Winkelman, AZ	a13,268	C,S,T	1976-84
09470800	Garden Canyon near Fort Huachuca, AZ	8.38	C,S,T	1962-64
09471800	San Pedro River near Benson, AZ	2,500	S	1966-74
09473400	San Pedro River near Winkelman, AZ	4,449	C,S,T	1962-66
09473500	San Pedro River at Winkelman, AZ	4,471	C,S,T	1966-80
09473900	Mineral Wash at Kelvin, AZ	97.9	C,T	1956-58,1962-64

* Unpublished data

a Includes area which is probably noncontributing.

b Approximately

DISCONTINUED SURFACE-WATER QUALITY STATIONS--Continued

Station number	Station name	Drainage area (mi ²)	Type of record	Period of record (water years)
09480500	Santa Cruz River near Nogales, AZ	533	S,T	1966-74
09481710	Santa Cruz River at Rio Rico, AZ	1,004	C,T	1976-78
09489000	Santa Cruz River near Laveen, AZ	8,581	C,S,T	1976,1978-79
09490500	Black River near Fort Apache, AZ	1,232	C,S,T	1976-79
09494000	White River near Fort Apache, AZ	632	C,S,T	1976-79
09499000	Tonto Creek above Gun Creek, near Roosevelt, AZ	675	C,S,T	1976-79,1983
09504500	Oak Creek near Cornville, AZ	357	C,T	1954-64,1976-78
09506000	Verde River near Camp Verde, AZ	a5,009	C,S,T	1977,1979-84
09512600	Turkey Creek near Cleator	89.4	C,T	1980-82
09520700	Gila River near mouth, near Yuma	b57,950	C,S,T	*1961-68,1969-84
09521000	Colorado River at Yuma	ab246,500	C,S,T	1905,1926-28,1943-44,1947-63
09521100	Colorado River below Yuma Main Canal Wasteway, at Yuma, AZ	ab246,500	C,T	1976,1987-88
09522200	Colorado River at southerly international boundary, near San Luis, AZ	ab246,700	C,T	*1962-66,1969-79
09522500	Gila Gravity Main Canal at Imperial Dam, AZ	---	C,T	1956-81
09525500	Yuma Main Canal below Colorado River Siphon, at Yuma, AZ	---	C,T	*1926-28,1943-70
09527900	Mittrey Lake Outlet Channel near Yuma, AZ	---	C,T	1974-83
09529000	North Gila Drain No. 1, near Yuma, AZ	---	C,T	*1966-68,1969-81
09529050	North Gila Drain No. 3, near Yuma, AZ	---	C,T	*1966-68,1969-81
09529160	South Gila Pump Outlet Channel No. 3, near Yuma, AZ	---	C,T	1969-83
09529200	Bruce Church Drain near Yuma, AZ	---	C,T	*1966,1969-81
09529240	South Gila Pump Outlet Channel No. 2, near Yuma, AZ	---	C,T	*1968,1969-83
09529300	Wellton-Mohawk Main Outlet Drain near Yuma, AZ	---	C,T	*1961-68,1969-83
09529360	South Gila Pump Outlet Channel No. 1, near Yuma, AZ	---	C,T	*1968,1969-83
09529440	South Gila Pump Outlet Channel No. 4, near Yuma, AZ	---	C,T	1969-82
09530000	Reservation Main Drain No. 4 at Yuma, AZ	---	C,T	*1964-68,1969-81
09530200	Yuma Mesa Outlet Drain near Yuma, AZ	---	C,T	1972-83,1987-88
09530500	Drain 8-B near Yuma, AZ	---	C,T	1970-81,1987-88
09531700	Wellton-Mohawk Main Outlet Drain near Yuma, AZ	---	C,T	1969-74,1983-85
09531900	Main Outlet Drain Extension below Morelos Dam, AZ	---	C	1972-76
09534000	Main Drain at southerly international boundary, near San Luis, AZ	---	C,T	*1962-68,1969-83
09534300	West Main Canal Wasteway at Arizona-Sonora Boundary, AZ	---	C,T	1971-79
09534500	East Main Canal Wasteway at Arizona-Sonora Boundary, AZ	---	C,T	*1965-68,1969-79
09535300	Vamori Wash at Kom Vo, AZ	1,250	C,S,T	1978-86
09537500	Whitewater Draw near Douglas, AZ	1,023	C,T	1978-81

* Unpublished data

a Includes area which is probably noncontributing.

b Approximately

SAN JUAN RIVER BASIN

09379200 CHINLE CREEK NEAR MEXICAN WATER, AZ

LOCATION.--Lat 36°56'38", long 109°42'36", in sec.19, T.41 N., R.25 E. (unsurveyed), Apache County, Hydrologic Unit 14080204, in Navajo Indian Reservation, on right bank 150 ft upstream from bridge on U.S. Highway 160, 3 mi upstream from Walker Creek, 4 mi southwest of Mexican Water, 5 mi downstream from confluence of Chinle Creek and Laguna Creek, and 6 mi upstream from Arizona-Utah State line.

DRAINAGE AREA.--3,650 mi².

PERIOD OF RECORD.--October 1964 to current year (monthly discharge only for 1979). Prior to October 1970 published as Chinle Wash near Mexican Water.

REVISED RECORDS.--WDR AZ-88-1: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 4,720 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Some diversions upstream for irrigation, livestock tanks, and domestic use. Many Farms Reservoir, about 25 mi upstream, was built in 1939 with an original capacity of 25,000 acre-ft. The reservoir provides off-channel storage for irrigation of about 1,600 acres.

AVERAGE DISCHARGE.--27 years, 32.0 ft³/s, 23,180 acre-ft/yr; median of yearly mean discharges, 24 ft³/s, 17,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s Aug. 24, 1982, gage height, 13.87 ft, from rating curve extended above 3,100 ft³/s on basis of slope-area measurement at gage height 12.50 ft; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 28	1015	*3,590	*8.17	Aug. 4	1400	1,920	6.57
Jan. 6	0615	2,340	7.01	Aug. 13	1330	1,030	5.42
June 14	0945	763	4.97	Sept. 2	1130	598	4.65

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	.26	.67	1.5	3.1	6.4	e18	1.1	.46	.00	.42	22
2	7.3	.26	.65	e2.2	2.2	19	e15	.54	2.3	.00	.97	181
3	43	.37	.73	e2.0	8.6	30	e10	.64	.61	.00	.15	24
4	46	.29	.81	1.5	6.6	17	e5.0	.65	.36	.00	276	4.4
5	13	.30	1.0	645	5.5	12	e4.0	.68	1.0	.00	45	11
6	e5.3	.33	1.1	1300	7.9	9.6	e3.0	.69	.76	.00	25	116
7	e.69	.35	1.1	249	9.0	9.4	e2.0	.61	.56	.00	105	171
8	e.15	.35	1.2	172	6.0	11	e1.5	.51	.44	.00	29	85
9	e.00	.34	1.6	95	7.0	7.8	e1.0	.37	.26	.00	7.7	e15
10	e.00	.38	1.7	40	6.7	6.4	e1.0	.56	.26	.00	4.0	e1.1
11	.00	.38	1.8	26	31	8.0	e1.2	.65	.28	.00	2.4	e.14
12	2.6	.38	3.7	28	48	8.1	e1.4	.58	.22	.00	2.0	8.8
13	.13	.38	6.6	14	100	10	1.4	.53	.22	.00	239	32
14	.10	.39	6.7	12	65	e8.0	1.4	.35	146	.00	37	4.6
15	.05	.36	3.4	12	52	e6.0	1.9	.42	e35	.00	2.2	.08
16	.01	.40	10	11	47	e7.0	2.0	.57	e.78	.00	2.1	.00
17	.02	.38	12	9.7	46	e6.0	2.2	.39	e.00	.00	.83	.00
18	.03	.43	7.1	18	31	e5.0	1.0	.23	.00	.00	.28	.00
19	.05	.41	7.0	15	27	e4.0	21	.19	.00	.00	.24	.00
20	90	.42	6.0	10	14	e4.0	20	.15	.00	.00	.24	.00
21	68	.46	4.1	15	12	e4.0	15	.39	.00	.00	.21	.00
22	8.4	.42	e1.2	7.7	12	e5.0	3.2	.31	.00	.00	.21	.00
23	4.2	.46	e.78	3.8	12	e5.0	1.0	.37	.00	.98	.21	.00
24	.57	.45	e.60	3.3	9.6	e5.0	1.4	.45	.00	.24	.23	.01
25	.27	.51	e.53	3.2	8.5	e4.0	1.0	.62	.00	13	.34	.01
26	.25	.52	e.53	4.0	6.8	e4.0	.71	.45	.00	.75	.90	.03
27	.24	.59	e.53	4.5	6.8	e5.0	.69	.19	.00	.01	.32	.08
28	.23	.55	224	3.1	7.2	e6.0	.59	.02	.00	.00	.32	.09
29	.21	.59	3.1	5.6	---	e10	2.6	.23	.00	.00	.79	.10
30	.23	.65	2.8	4.8	---	e15	1.6	.13	.00	.00	1.6	9.2
31	.24	---	e1.4	4.2	---	e20	---	.05	.00	.00	8.7	---
TOTAL	292.02	12.36	314.43	2723.1	598.5	277.7	141.79	13.62	189.51	14.98	793.36	685.64
MEAN	9.42	.41	10.1	87.8	21.4	8.96	4.73	.44	6.32	.48	25.6	22.9
MAX	90	.65	224	1300	100	30	21	1.1	146	13	276	181
MIN	.00	.26	.53	1.5	2.2	4.0	.59	.02	.00	.00	.15	.00
AC-FT	579	25	624	5400	1190	551	281	27	376	30	1570	1360

CAL YR	1990	TOTAL	6029.54	MEAN	16.5	MAX	887	MIN	.00	AC-FT	11960
WTR YR	1991	TOTAL	6057.01	MEAN	16.6	MAX	1300	MIN	.00	AC-FT	12010

e Estimated

COLORADO RIVER MAIN STEM

09379900 LAKE POWELL AT GLEN CANYON DAM, AZ

LOCATION.--Lat 36°56'12", long 111°29'00", in sec.24, T.41 N., R.8 E., Coconino County, Hydrologic Unit 14070006, at Glen Canyon Dam on Colorado River, 900 ft upstream from bridge on U.S. Highway 89, 1.4 mi downstream from Wahweap Creek, 2 mi northwest of Page, and 12 mi downstream from Utah-Arizona State line.

DRAINAGE AREA.--111,700 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 1, 1964, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete-arch gravity dam; storage began Mar. 13, 1963; dam completed September 1963. Total capacity, (from capacity table computed by U.S. Bureau of Reclamations, based on a survey completed in 1985; used since October 1, 1990) 26,215,000 acre-ft consisting of the following: dead storage, 1,893,000 acre-ft below elevation 3,370 ft-sill of outlet gates; usable contents, 24,322,000 acre-ft between elevations 3,370 ft and 3,700 ft-top of conservation pool. Reservoir is used for power development, to provide storage replacement for upstream irrigation development, and to meet downstream requirements under the Colorado River Compact of 1922. Figures given herein represent usable contents; prior to Oct. 1, 1968, figures of total contents were published (prior to sealing of diversion tunnel July 7, 1965, all storage was usable).

COOPERATION.--Records furnished by U.S. Bureau of Reclamation.

EXTREMES (at 2400) FOR PERIOD OF RECORD.--Maximum contents, 26,373,000 acre-ft July 14, 1983, elevation, 3,708.34 ft; minimum since power pool level was reached (Aug. 16, 1964), 4,166,000 acre-ft Mar. 18, 1965, elevation, 3,490.76 ft.

EXTREMES (at 2400) FOR CURRENT YEAR.--Maximum contents, 15,891,000 acre-ft July 1, elevation, 3,639.05 ft; minimum, 14,533,000 acre-ft Apr. 12, elevation, 3,627.12 ft.

Capacity table (elevation, in feet, and usable contents, in acre-feet)

3,626	14,410,000	3,634	15,306,000
3,628	14,630,000	3,636	15,536,000
3,630	14,853,000	3,638	15,768,000
3,632	15,078,000	3,640	16,003,000

RESERVOIR STORAGE, IN THOUSANDS OF ACRE FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15717	15693	15557	15223	14921	14738	14590	14585	15169	15880	15466	14986
2	15727	15691	15558	15202	14909	14734	14587	14589	15216	15871	15464	14978
3	15729	15688	15542	15185	14902	14739	14577	14621	15252	15861	15437	14959
4	15723	15693	15536	15169	14892	14738	14567	14596	15288	15850	15442	14937
5	15717	15689	15526	15153	14886	14731	14566	14609	15315	15833	15430	14919
6	15715	15694	15512	15137	14879	14729	14574	14602	15337	15809	15414	14917
7	15712	15680	15499	15121	14869	14726	14566	14590	15357	15804	15398	14913
8	15709	15672	15492	15106	14868	14726	14560	14576	15387	15782	15392	14910
9	15698	15673	15485	15092	14872	14726	14553	14577	15429	15761	15378	14901
10	15691	15679	15472	15078	14878	14731	14542	14573	15450	15746	15360	14906
11	15688	15681	15457	15084	14869	14727	14541	14555	15477	15724	15347	14897
12	15689	15680	15446	15083	14854	14723	14533	14554	15508	15737	15331	14891
13	15688	15673	15433	15085	14845	14719	14533	14561	15537	15739	15320	14881
14	15691	15665	15434	15081	14839	14715	14538	14570	15558	15748	15301	14880
15	15689	15657	15433	15077	14832	14714	14541	14584	15596	15730	15284	14878
16	15686	15647	15439	15060	14820	14710	14540	14601	15633	15711	15266	14869
17	15680	15644	15422	15053	14824	14711	14544	14642	15659	15694	15250	14861
18	15676	15644	15413	15039	14814	14709	14541	14678	15682	15676	15236	14851
19	15681	15632	15400	15033	14798	14707	14544	14719	15698	15650	15218	14841
20	15682	15632	15389	15039	14785	14706	14542	14735	15722	15637	15202	14827
21	15681	15611	15377	15024	14778	14706	14560	14756	15741	15620	15183	14820
22	15686	15606	15363	15016	14766	14685	14566	14784	15767	15596	15165	14813
23	15686	15602	15346	14996	14764	14665	14560	14832	15795	15579	15144	14803
24	15686	15601	15328	14973	14762	14653	14563	14864	15810	15565	15124	14784
25	15683	15597	15309	14977	14757	14628	14566	14899	15820	15541	15110	14768
26	15689	15584	15291	14977	14754	14604	14563	14935	15824	15549	15092	14752
27	15694	15584	15274	14973	14747	14606	14573	14967	15835	15546	15070	14728
28	15697	15579	15266	14961	14741	14594	14586	14996	15843	15548	15052	14721
29	15700	15568	15260	14950	---	14599	14587	15026	15864	15534	15033	14708
30	15700	15564	15266	14943	---	14601	14588	15066	15888	15512	15014	14698
31	15697	---	15244	14933	---	14602	---	15122	---	15489	14998	---
MAX	15729	15694	15558	15223	14921	14739	14590	15122	15888	15880	15466	14986
MIN	15676	15564	15244	14933	14741	14594	14533	14554	15169	15489	14998	14698
(*)	3637.39	3636.24	3633.46	3630.71	3629.00	3627.75	3627.62	3632.39	3639.02	3635.59	3631.29	3628.61
(**)	a-20000	-133000	-320000	-311000	-192000	-139000	-14000	+534000	+766000	-399000	-491000	-300000
CAL YR	1990	MAX	a18887	MIN	15244	(**)	a-3048000					
WTR YR	1991	MAX	15888	MIN	14533	(**)	-1019000					

(*) Elevation, in feet, at end of month.

(**) Change in contents, in acre-feet.

a Based on new capacity table effective October 1, 1990.

COLORADO RIVER MAIN STEM

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09379910 COLORADO RIVER BELOW GLEN CANYON DAM, AZ

LOCATION.--Lat 36°55'18", long 111°28'58", in NW¼SE¼ sec.25, T.41 N., R.8 E., Coconino County, Hydrologic Unit 14070006, on left bank 4,500 ft downstream from Glen Canyon Dam, 2 mi west of Page, 13 mi downstream from Utah-Arizona State line, and 14.5 mi upstream from Lees Ferry.

DRAINAGE AREA.--111,700 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,100 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharge. Records good. Flow completely regulated since Mar. 13, 1963, by Lake Powell 4,500 ft upstream. Many diversions above Lake Powell for irrigation, municipal, and industrial use. No diversions or inflow between Lake Powell and the gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,600 ft³/s June 17, 1991, gage-height 38.29 ft; minimum daily 2,570 ft³/s Oct. 29, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,600 ft³/s June 17, gage-height 38.29 ft; minimum daily, 2,760 ft³/s Nov. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8430	8690	8010	14200	10100	10500	10700	8960	4890	18400	14400	9340
2	8370	6190	5990	14100	10200	8440	12300	9020	5040	18500	14400	9740
3	8340	6860	11200	14100	10100	4720	10100	5000	12700	18500	14400	14400
4	8380	2760	10400	14100	10200	10300	10600	5030	9490	18500	14100	14600
5	8360	8050	9660	14200	10200	9810	8080	5320	12700	18500	14600	14500
6	8410	7290	11000	14100	10100	9950	9710	14600	12300	18500	14500	14500
7	8400	8330	10800	14100	10200	10300	6860	15000	15600	18500	14600	13200
8	8410	10100	8280	14100	5060	8830	9420	14900	11500	18500	14900	9100
9	8410	5070	6570	14200	5050	7950	10700	15000	10300	18500	14600	14400
10	8380	5090	11500	14200	5080	3670	11000	14900	17000	18500	14000	14400
11	8440	5090	11100	5110	11200	11300	13400	14900	16800	18500	14100	14100
12	5130	7850	11600	5000	13100	11700	12200	14900	17300	5260	14600	14300
13	5140	9910	11300	5040	11800	9910	9620	14900	16500	5250	15000	14300
14	4230	9620	4990	11000	11900	12600	6900	15000	17300	5320	14900	13200
15	7980	10400	4980	10700	12600	11400	10700	14900	10800	17300	14900	9190
16	7970	11000	4980	10800	12100	9720	8240	15000	12400	17300	14900	14600
17	8000	8140	10400	11300	10500	6050	9500	4940	20300	17300	14500	14400
18	8000	4730	10600	13000	14900	11800	9790	4970	19300	17300	12400	14100
19	7990	11700	10600	8390	16000	10700	5020	5170	19400	17300	15000	14200
20	7950	10300	10700	8350	14900	11200	5030	14600	18800	17200	15000	14500
21	7990	12400	10600	10900	13100	11700	5050	14600	17200	17300	15100	13700
22	8000	7900	10700	11300	13500	11300	8960	14500	14300	17300	15000	9920
23	8020	8380	10700	14300	11700	10700	10300	14600	8200	17300	14900	14900
24	8010	7280	10700	15300	7320	6050	8300	14600	15300	17300	14700	15100
25	7940	6150	10700	5140	12100	13200	11400	14600	17500	17200	10400	15000
26	5180	10100	10700	5000	9060	13300	7700	14700	17400	5250	15100	14800
27	5150	11100	10700	5020	6550	11400	5350	14700	17200	5260	15000	15000
28	5160	9110	5140	10100	8030	10000	4070	14700	5130	5280	14900	14400
29	6260	8850	4990	10200	---	6910	10300	14700	5140	15900	15000	9860
30	7640	7580	4990	10200	---	4800	12800	14500	5210	18400	14900	12800
31	5590	---	14100	10200	---	4480	---	5070	---	18200	14500	---
TOTAL	229660	246020	288680	337750	296650	294690	274100	378280	403000	477620	449300	400550
MEAN	7408	8201	9312	10900	10590	9506	9137	12200	13430	15410	14490	13350
MAX	8440	12400	14100	15300	16000	13300	13400	15000	20300	18500	15100	15100
MIN	4230	2760	4980	5000	5050	3670	4070	4940	4890	5250	10400	9100
AC-FT	455500	488000	572600	669900	588400	584500	543700	750300	799400	947400	891200	794500
CAL YR	1990	TOTAL	3961470	MEAN	10850	MAX	20300	MIN	2760	AC-FT	7858000	
WTR YR	1991	TOTAL	4076300	MEAN	11170	MAX	20300	MIN	2760	AC-FT	8085000	

COLORADO RIVER MAIN STEM

09380000 COLORADO RIVER AT LEES FERRY, AZ
(National stream-quality accounting network)

LOCATION.--Lat 36°51'53", long 111°35'15", in NE¼ sec.13, T.40 N., R.7 E., Coconino County, Hydrologic Unit 14070006, in Navajo Indian Reservation, on left bank at head of Marble Gorge at Lees Ferry, just upstream from Paria River, 16 mi downstream from Glen Canyon Dam, 28 mi downstream from Utah-Arizona State line, and 61.5 mi upstream from Little Colorado River.

DRAINAGE AREA.--111,800 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming which is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1895 to current year. Estimates of monthly and annual discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 859: 1921-23. WSP 1313: 1914-21.

GAGE.--Water-stage recorder. Datum of gage is 3,106.16 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 19, 1923, nonrecording gages or reference points within 400 ft of present gage, at different datums.

REMARKS.--No estimated daily discharge. Records good. Flow regulated since Mar. 13, 1963, by Lake Powell, 16 mi upstream. Many diversions above Lake Powell for irrigation, municipal, and industrial use. No diversions or inflow between Lake Powell and the gage.

AVERAGE DISCHARGE.--51 years (water years 1912-62), 17,850 ft³/s, 12,930,000 acre-ft/yr; 27 years (water years 1965-91), 14,240 ft³/s, 10,320,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--1895-1962: Maximum discharge, 220,000 ft³/s June 18, 1921, gage height, 26.5 ft, from floodmarks, from rating curve extended above 120,000 ft³/s on basis of discharge computed for station near Grand Canyon; minimum, 750 ft³/s Dec. 27, 1924.

1963-91: Maximum discharge, 97,300 ft³/s June 29, 1983, gage height, 18.14 ft; minimum daily, 700 ft³/s Jan. 23, 24, 1963, result of closing coffer dam at Glen Canyon Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1868, about 300,000 ft³/s July 7, 1884, gage height, 31.5 ft, present site and datum, from floodmark at mouth of Paria River, from rating curve extended above 120,000 ft³/s on basis of discharge computed for flood of June 18, 1921, for station near Grand Canyon.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,500 ft³/s June 17, gage height, 11.95 ft; minimum daily, 3,630 ft³/s Nov. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8330	8150	8090	14400	10200	10400	9940	9840	4950	17300	14900	9830
2	8420	6680	6370	14300	10200	8770	12200	9200	5050	18200	14300	9240
3	8350	6710	10800	14400	10200	5430	10500	5790	12000	18300	14100	14100
4	8390	3630	10800	14400	10200	9570	10900	5180	10000	18300	13900	14500
5	8380	7360	10300	14400	10200	9660	8470	5390	12300	18300	14500	14500
6	8420	7630	10600	14400	10200	10100	9640	14700	12400	18300	14400	14600
7	8410	8390	11500	14400	10200	10300	7330	15200	15300	18300	14500	13200
8	8430	10100	8590	14300	5450	9210	9330	15200	12000	18300	14700	9240
9	8430	5710	6970	14400	4870	8030	10900	15200	10400	18300	14500	14000
10	8400	5040	11000	14400	4890	4340	11100	15200	16600	18300	13900	14300
11	8420	5030	11600	6080	10200	10300	13500	15200	16600	18300	13900	14000
12	5070	7440	11600	4900	13000	11700	12300	15200	17100	5910	14500	14200
13	4970	9650	11700	4920	12000	10400	10400	15200	17000	5010	14900	14300
14	4080	10000	6160	10500	12000	11800	7270	15200	17100	5010	14900	13300
15	7550	10400	4990	10600	12700	12000	10600	15200	11500	16100	14900	9240
16	7970	11300	4990	10700	11900	9900	8810	15200	12300	17000	14900	14200
17	7980	8650	9820	11400	10700	6540	9590	5300	19600	17000	14500	14500
18	8000	5510	10900	12700	14300	11400	10200	5090	19300	17000	12400	14100
19	8010	11100	10800	9070	16100	10900	5680	5090	19300	17000	14900	14100
20	7950	10500	10900	8620	15500	10900	5120	13800	18600	17000	14900	14400
21	7980	12100	10800	10600	13400	12100	5130	15000	17400	17000	15100	13700
22	8010	8990	10900	11300	13500	11300	8890	15000	14300	17000	15000	9910
23	8010	8410	10900	14200	11900	10900	10300	15000	9150	17100	14900	14200
24	8030	7740	10900	15400	7890	6680	8830	15000	14600	17000	14700	14900
25	8010	6440	10900	6360	11600	12300	11600	15000	17400	17000	10600	15000
26	5470	10100	10900	4850	9560	13500	8330	15000	17100	5860	14800	14700
27	5000	11200	10900	4860	7020	11800	5920	15000	17200	4980	15000	15000
28	5010	9620	5990	9570	7580	10500	4270	15000	6280	4980	15000	14600
29	6210	9040	4950	10200	---	7140	9660	15000	5020	14400	15000	9980
30	7130	7900	4930	10200	---	5160	13300	15000	5010	17600	14900	12600
31	6170	---	13200	10200	---	4610	---	6310	---	18000	14600	---
TOTAL	228990	250520	293750	341030	297460	297640	280010	387690	402860	468150	448000	398440
MEAN	7387	8351	9476	11000	10620	9601	9334	12510	13430	15100	14450	13280
MAX	8430	12100	13200	15400	16100	13500	13500	15200	19600	18300	15100	15000
MIN	4080	3630	4930	4850	4870	4340	4270	5090	4950	4980	10600	9240
AC-FT	454200	496900	582700	676400	590000	590400	555400	769000	799100	928600	888600	790300
CAL YR 1990	TOTAL	3983550	MEAN	10910	MAX	20000	MIN	3500	AC-FT	7901000		
WTR YR 1991	TOTAL	4094540	MEAN	11220	MAX	19600	MIN	3630	AC-FT	8122000		

09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January to July 1926, October 1926 to June 1927, August 1928 to December 1933, November 1942 to October 1945, October 1947 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1981, February 1982 to December 1987, October 1990 to September 1991.

pH: October 1990 to September 1991.

WATER TEMPERATURE: July 1949 to September 1981, February 1982 to December 1987, October 1990 to September 1991.

DISSOLVED OXYGEN: March to September 1991.

SUSPENDED-SEDIMENT DISCHARGE: October 1928 to December 1933, November 1942 to September 1944, October 1947 to September 1965.

INSTRUMENTATION.--Specific conductance and water temperature recorder March 1977 to September 1981, February 1982 to December 1987, and since October 1990; pH, since October 1990; dissolved-oxygen recorder since March 1991.

REMARKS.--Unpublished daily specific conductance measurements for period November 1942 to October 1945, October 1947 to September 1964 available from district office in Tucson, AZ. Temperature, conductance, and pH probes were out of water for servicing much of Feb. 5. Dissolved-oxygen instrument malfunctioned on many days from April to August.

Extreme values for the period of record include only those obtained after a normal flow release pattern from Glen Canyon Dam was started after July 31, 1965.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE (August 1965 to September 1981, February 1982 to December 1987, October 1990 to September 1991): Maximum, 1,260 microsiemens, Apr. 20, 21, 1967; minimum, 460 microsiemens, Aug. 10, 1965.

pH: Maximum, 8.3, on many days January to April and June 1991; minimum, 7.6, on several days in November and December 1990, and March 1991.

WATER TEMPERATURE (August 1965 to September 1981, February 1982 to December 1987, October 1990 to September 1991): Maximum, 21.0°C on several days during August, September, and October, 1965, 1967, 1968; minimum, 2.0°C on Jan. 29, 30, 1970.

DISSOLVED OXYGEN: Maximum recorded, 11.2 mg/L, Apr. 29, 1991; minimum recorded, 6.4 mg/L, Sept. 18, 1991.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,040 microsiemens, Apr. 29, 30; minimum, 793 microsiemens, Nov. 1.

pH: Maximum, 8.3, on many days from January through April and during June; minimum, 7.6 on several days during November, December, and March.

WATER TEMPERATURE: Maximum, 10.6°C, July 13, 26; minimum, 6.6°C, Jan. 29.

DISSOLVED OXYGEN (March to September 1991): Maximum recorded, 11.2 mg/L, Apr. 29; minimum recorded, 6.4 mg/L, Sept. 18.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00300)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)		
NOV 01...	1345	9980	830	8.1	21.0	9.0	1.3	681	8.0	78	15	<1	
JAN 30...	1430	13900	835	8.2	7.0	7.0	1.0	695	9.5	86	15	K1	
MAR 28...	1100	11900	985	8.1	15.0	7.5	0.60	685	8.2	76	12	<1	
MAY 18...	1220	5110	980	8.2	24.5	9.0	1.3	690	8.4	81	10	<1	
JUL 09...	0825	9610	915	7.9	20.5	9.0	1.2	678	7.4	72	<10	K1	
SEP 06...	1022	14300	906	8.1	22.5	9.5	0.40	680	7.6	75	12	--	
DATE		STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV 01...	K1	270	130	68	25	70	2	3.4	178	0	146	240	
JAN 30...	<1	270	130	66	25	69	2	3.2	164	0	134	230	
MAR 28...	K1	330	180	83	29	*91	2	3.9	182	0	149	250	
MAY 18...	K1	310	170	78	28	*84	2	4.1	178	0	146	270	
JUL 09...	K1	290	150	75	25	*84	2	3.5	176	0	144	270	
SEP 06...	--	300	160	73	28	80	2	3.8	168	0	138	270	

* Value verified.

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
NOV 01...	50	0.10	8.0	544	554	0.74	<1	--	<0.010	<0.010	0.400	0.300
JAN 30...	46	0.30	*7.8	556	529	0.76	5	--	<0.010	<0.010	0.180	0.190
MAR 28...	*66	0.20	8.0	646	623	0.88	10	--	<0.010	<0.010	0.400	0.350
MAY 18...	*66	0.40	7.6	641	629	0.87	7	0.400	0.010	<0.010	0.410	0.400
JUL 09...	60	0.50	7.7	637	614	0.87	5	--	<0.010	<0.010	0.370	0.360
SEP 06...	57	0.40	7.3	584	605	0.79	<1	--	<0.010	<0.010	0.310	0.330
DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 01...	<0.010	<0.010	--	<0.20	--	--	--	--	0.010	<0.010	<0.010	<0.010
JAN 30...	<0.010	<0.010	--	0.20	--	0.38	--	1.7	<0.010	<0.010	<0.010	<0.010
MAR 28...	<0.010	0.020	--	0.20	--	0.60	--	2.7	<0.010	<0.010	<0.010	<0.010
MAY 18...	0.020	0.030	--	<0.20	--	--	--	--	0.010	<0.010	<0.010	<0.010
JUL 09...	<0.010	0.030	0.17	0.30	0.20	0.67	0.56	3.0	<0.010	0.020	<0.010	<0.010
SEP 06...	<0.010	<0.010	--	0.30	--	0.61	--	2.7	<0.010	<0.010	<0.010	<0.010
DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
NOV 01...	<10	1	1	97	<0.5	90	16	1.0	18	<1	<3	6
JAN 30...	--	1	2	98	--	90	<1	1.0	2	<1	--	3
MAR 28...	<10	<1	1	*110	<0.5	100	<1	1.0	3	<1	<3	3
MAY 18...	<10	1	2	*110	<0.5	90	<1	<1.0	5	<1	<3	4
JUL 09...	--	2	2	110	--	90	<1	1.0	6	<1	--	4
SEP 06...	<10	2	1	120	<0.5	90	<1	1.0	2	<1	<3	2

* Value verified.

< Actual value is known to be less than value shown.

COLORADO RIVER MAIN STEM

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09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)
NOV 01...	1	60	<3	2	<1	31	<10	1	<0.10	<0.1	<10
JAN 30...	1	20	4	1	<1	--	<10	1	<0.10	--	--
MAR 28...	1	*130	3	1	<1	39	<10	<1	<0.10	<0.1	<10
MAY 18...	2	90	<3	2	1	34	30	1	<0.10	<0.1	<10
JUL 09...	<1	1800	5	<1	<1	--	120	<1	<0.10	--	--
SEP 06...	<1	30	<3	<1	1	37	<10	<1	0.60	<0.1	<10

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 01...	1	2	3	<1.0	840	<6	<10	<3	85	2	54
JAN 30...	--	<1	2	<1.0	--	--	<10	3	67	2	75
MAR 28...	1	3	2	<1.0	*1000	<6	20	5	21	6	193
MAY 18...	2	2	<1	<1.0	*960	<6	10	3	74	7	97
JUL 09...	--	3	3	<1.0	--	--	<10	12	--	--	--
SEP 06...	<1	3	4	<1.0	970	<6	<10	6	71	1	39

* Value verified.

< Actual value is known to be less than value shown.

COLORADO RIVER MAIN STEM

09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	911	866	881	856	793	831	853	807	827	859	831	845
2	913	882	902	876	840	857	841	825	835	848	838	843
3	898	865	885	852	836	845	847	819	832	838	815	826
4	901	865	886	847	836	842	856	830	845	815	805	809
5	882	864	876	843	819	830	852	824	844	810	806	807
6	891	865	878	847	831	837	846	812	838	811	804	807
7	891	862	880	851	837	846	848	824	835	809	807	808
8	891	863	879	847	827	839	842	811	828	814	806	809
9	905	862	889	844	816	832	839	807	823	815	811	813
10	869	849	863	826	810	819	849	801	824	815	809	813
11	886	859	872	842	822	832	843	819	831	812	810	811
12	888	878	885	834	804	822	844	820	831	813	809	811
13	879	855	873	831	801	818	848	822	837	812	808	810
14	867	852	860	831	799	821	854	836	847	812	806	810
15	863	847	855	831	801	820	863	845	851	815	809	813
16	861	854	858	831	813	825	866	838	855	816	810	813
17	864	845	855	838	810	829	852	836	844	815	812	813
18	863	852	857	844	826	837	843	829	835	819	811	816
19	862	838	850	830	812	824	839	828	833	820	814	818
20	851	835	843	834	814	825	859	832	842	819	815	817
21	864	850	858	838	817	831	879	863	871	819	811	815
22	860	841	850	855	811	839	876	860	870	816	808	812
23	849	838	843	837	817	824	882	859	871	813	807	811
24	852	843	849	827	807	819	875	847	861	820	807	813
25	855	843	849	833	808	824	860	838	847	820	808	816
26	854	842	848	840	802	822	846	833	838	813	807	810
27	843	831	840	856	818	840	835	827	832	816	809	813
28	839	826	835	860	818	843	832	826	829	821	814	815
29	841	827	833	849	814	828	827	824	826	845	819	827
30	851	827	839	837	809	820	842	823	831	849	822	838
31	852	805	832	---	---	---	858	838	846	842	811	831
MONTH	913	805	861	876	793	831	882	801	841	859	804	817
	FEBRUARY			MARCH			APRIL			MAY		
1	848	823	833	874	865	870	971	944	958	1030	980	1010
2	839	823	831	881	869	874	980	951	966	1010	991	996
3	837	818	829	895	877	886	976	958	968	1000	986	994
4	830	816	825	889	876	883	974	960	966	990	975	982
5	---	---	---	910	882	892	973	969	971	997	974	985
6	835	830	833	928	900	917	974	966	970	1020	991	1000
7	843	836	840	919	902	908	974	967	971	1010	981	996
8	851	842	846	933	914	921	982	955	970	1010	990	999
9	853	841	847	933	920	927	980	958	968	1010	986	998
10	855	848	851	935	923	931	996	969	984	1020	996	1010
11	858	849	853	941	925	930	1000	951	984	1000	967	988
12	866	851	860	950	936	946	985	947	966	1010	981	1000
13	870	855	863	947	920	938	1000	982	992	1020	949	997
14	870	856	865	941	920	930	983	970	978	964	942	952
15	875	858	866	942	923	932	968	954	963	962	922	947
16	879	860	873	948	920	931	980	963	972	977	938	955
17	899	880	888	949	942	945	972	964	969	981	959	971
18	908	879	902	950	922	941	987	961	975	987	958	977
19	891	855	877	955	925	936	971	963	968	980	954	969
20	858	843	850	965	940	951	982	971	975	985	965	976
21	858	843	851	980	957	970	990	984	986	983	966	976
22	864	847	856	984	956	970	996	982	988	981	947	964
23	856	839	850	990	960	980	1000	987	996	974	954	962
24	854	839	849	992	958	971	1010	987	1000	976	965	970
25	852	840	847	998	972	987	1010	986	997	967	949	956
26	855	848	851	988	973	982	1010	986	1000	961	948	954
27	855	846	850	998	965	984	1000	973	987	973	958	965
28	869	858	862	981	940	966	1030	988	1010	968	952	959
29	---	---	---	973	961	968	1040	982	1010	967	955	962
30	---	---	---	973	955	962	1040	1010	1030	972	955	964
31	---	---	---	953	924	940	---	---	---	964	947	958
MONTH	---	---	---	998	865	938	1040	944	981	1030	922	977

09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	964	941	950	932	920	924	914	898	907	915	897	909
2	986	955	972	928	904	919	918	888	900	910	902	906
3	960	937	951	936	912	923	910	884	898	923	907	912
4	961	937	951	932	912	924	912	886	899	928	916	923
5	970	951	961	928	902	916	908	886	902	927	907	915
6	978	957	967	932	904	920	912	882	901	914	878	900
7	968	945	960	936	914	926	910	886	897	910	896	903
8	978	949	968	940	906	924	918	898	909	914	898	906
9	967	937	957	934	898	923	913	897	906	914	902	908
10	962	931	947	934	899	912	919	906	910	910	894	902
11	971	945	959	909	890	901	919	909	913	902	890	896
12	969	935	953	911	888	902	916	900	910	914	900	906
13	962	933	952	890	886	888	918	903	908	914	894	904
14	960	931	952	898	888	892	923	912	918	911	901	905
15	953	935	947	908	892	898	923	911	916	915	895	905
16	963	928	950	912	896	907	920	902	911	897	869	887
17	966	937	950	912	880	899	914	887	903	896	878	892
18	971	944	957	912	880	896	914	897	907	902	890	898
19	960	924	943	912	890	902	914	905	910	902	881	893
20	933	898	920	908	884	899	921	904	912	893	879	886
21	944	896	923	914	876	900	921	909	916	893	871	885
22	942	912	932	912	888	904	918	905	911	884	868	877
23	926	906	918	916	898	908	920	902	911	886	872	882
24	938	918	932	914	892	903	912	901	906	886	868	877
25	938	924	931	934	878	910	914	900	909	873	851	866
26	942	914	931	928	894	911	915	909	911	871	857	864
27	928	912	922	902	888	895	920	902	912	881	861	869
28	926	896	916	904	894	901	925	905	912	888	872	880
29	916	900	909	922	894	902	914	902	910	886	868	881
30	918	898	906	920	894	908	915	905	912	884	861	871
31	---	---	---	920	894	908	916	908	912	---	---	---
MONTH	986	896	943	940	876	908	925	882	908	928	851	894

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.4	8.9	9.2	8.9	8.5	8.7	8.4	8.1	8.3	8.0	7.4	7.8
2	9.3	8.7	9.0	8.6	8.1	8.4	8.4	7.9	8.2	8.0	7.5	7.7
3	9.3	8.6	9.0	8.5	8.1	8.4	8.7	8.0	8.4	8.0	7.6	7.8
4	9.2	8.5	8.9	8.4	8.1	8.3	8.6	8.2	8.4	8.1	7.7	7.9
5	9.1	8.5	8.9	8.7	8.0	8.4	8.6	8.3	8.5	8.1	7.9	8.0
6	9.0	8.5	8.8	8.5	8.3	8.4	8.7	8.2	8.5	8.1	7.9	8.0
7	9.2	8.5	8.9	8.6	8.2	8.4	8.8	8.4	8.6	7.9	7.8	7.9
8	8.9	8.3	8.6	8.9	8.2	8.5	8.7	8.3	8.6	7.9	7.8	7.8
9	8.9	8.1	8.5	8.9	8.5	8.7	8.6	8.2	8.4	7.8	7.7	7.8
10	9.0	8.4	8.8	8.9	8.5	8.7	8.9	8.2	8.6	7.9	7.7	7.8
11	9.1	8.5	8.8	8.7	8.3	8.6	9.1	8.6	8.8	7.7	7.6	7.7
12	9.1	8.4	8.8	8.7	8.3	8.5	9.2	8.9	9.0	7.6	7.3	7.5
13	9.1	8.7	8.9	8.7	8.3	8.5	9.1	8.8	8.9	7.4	7.3	7.4
14	9.2	8.8	9.0	8.7	8.3	8.6	8.9	8.1	8.6	7.7	7.4	7.6
15	9.0	8.7	8.9	8.8	8.3	8.6	8.1	7.8	7.9	7.6	7.2	7.5
16	8.9	8.4	8.7	8.7	8.4	8.6	8.2	7.8	8.1	7.6	7.3	7.5
17	8.9	8.4	8.7	8.6	8.3	8.5	8.6	8.1	8.3	7.5	7.2	7.4
18	8.7	8.2	8.5	8.6	8.3	8.5	8.7	8.2	8.4	7.5	7.1	7.4
19	8.9	8.4	8.7	8.7	8.4	8.6	8.8	8.4	8.7	7.5	7.2	7.4
20	8.9	8.4	8.7	8.7	8.5	8.6	8.7	7.9	8.3	7.4	7.1	7.3
21	8.7	8.2	8.5	8.4	8.2	8.3	7.8	7.5	7.7	7.4	7.1	7.3
22	8.8	8.2	8.6	8.4	8.0	8.2	7.7	7.4	7.5	7.4	7.0	7.2
23	9.1	8.5	8.8	8.4	8.0	8.2	7.7	7.2	7.4	7.4	7.0	7.2
24	9.1	8.5	8.9	8.4	8.1	8.3	7.9	7.3	7.7	7.5	7.0	7.3
25	9.0	8.5	8.8	8.4	8.1	8.2	8.1	7.6	7.9	7.4	7.0	7.2
26	9.0	8.5	8.8	8.4	8.1	8.3	8.4	7.9	8.2	7.2	6.9	7.1
27	9.0	8.6	8.8	8.1	7.6	7.9	8.2	7.9	8.1	7.2	6.9	7.0
28	8.9	8.6	8.8	8.2	7.8	8.0	8.1	7.7	7.9	7.3	6.8	7.0
29	8.9	8.6	8.7	8.2	7.8	8.0	8.0	7.5	7.8	7.2	6.6	6.9
30	8.9	8.6	8.7	8.4	8.0	8.2	7.5	7.2	7.4	7.2	6.7	7.0
31	8.7	8.5	8.6	---	---	---	8.1	7.1	7.6	7.2	6.8	7.0
MONTH	9.4	8.1	8.8	8.9	7.6	8.4	9.2	7.1	8.2	8.1	6.6	7.5

COLORADO RIVER MAIN STEM

09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	7.2	6.8	7.1	7.5	7.3	7.4	8.5	7.8	8.1	8.9	7.4	8.1
2	7.2	6.8	7.0	7.7	7.1	7.5	8.5	7.4	8.0	8.5	7.7	8.2
3	7.3	6.9	7.1	7.9	7.2	7.6	8.6	7.5	8.0	8.4	7.6	8.0
4	7.3	6.9	7.1	7.9	7.6	7.7	8.6	7.5	8.1	8.9	8.3	8.6
5	---	---	---	7.9	7.5	7.7	8.4	7.6	8.1	9.0	8.7	8.9
6	7.2	6.8	7.1	7.8	7.2	7.5	8.4	7.8	8.1	8.9	7.9	8.5
7	7.2	6.8	7.0	7.7	7.0	7.4	8.7	7.7	8.2	8.7	7.7	8.1
8	7.3	6.9	7.1	7.8	7.0	7.5	8.6	7.8	8.3	8.6	7.7	8.1
9	7.2	6.9	7.1	7.8	7.1	7.6	8.5	7.4	8.0	8.8	7.8	8.3
10	7.2	6.8	7.0	8.0	7.4	7.8	8.4	7.4	7.9	8.1	7.7	7.9
11	7.2	6.8	7.0	7.9	7.4	7.7	8.2	7.0	7.6	8.4	7.6	7.9
12	7.2	6.8	7.0	8.0	7.1	7.6	8.0	7.2	7.6	8.6	7.5	8.0
13	7.3	6.8	7.1	8.0	7.2	7.6	8.3	7.3	7.8	8.4	7.5	7.9
14	7.3	6.9	7.1	7.9	7.4	7.7	8.6	7.6	8.1	8.4	7.6	8.0
15	7.4	6.9	7.1	7.7	7.4	7.5	8.6	7.9	8.3	8.6	7.6	8.0
16	7.3	7.1	7.2	8.1	7.4	7.7	8.8	7.6	8.2	8.5	7.7	8.1
17	7.4	7.1	7.3	8.1	7.2	7.7	8.7	7.7	8.3	9.3	7.6	8.4
18	7.4	6.8	7.1	8.2	7.6	7.9	8.7	7.6	8.1	9.4	9.0	9.2
19	7.5	6.9	7.2	7.8	7.4	7.6	8.7	7.6	8.2	9.2	8.8	9.1
20	7.6	7.0	7.3	8.0	7.3	7.7	8.9	8.5	8.7	9.1	7.8	8.6
21	7.6	7.0	7.3	7.8	7.4	7.6	8.9	8.6	8.7	9.0	7.5	8.3
22	7.5	7.1	7.3	8.2	7.2	7.7	8.8	8.3	8.6	8.5	7.5	8.0
23	7.5	7.1	7.3	8.2	7.3	7.8	8.7	7.9	8.3	9.0	7.6	8.3
24	7.6	7.1	7.3	8.2	7.4	7.9	8.7	7.6	8.2	8.9	7.6	8.2
25	7.5	7.0	7.3	8.2	7.6	8.0	8.5	7.9	8.2	8.9	7.7	8.3
26	7.5	6.9	7.3	7.6	7.3	7.5	8.6	7.5	8.1	9.2	7.8	8.5
27	7.4	7.0	7.3	7.6	7.2	7.4	8.5	7.6	8.1	9.1	7.7	8.4
28	7.6	7.5	7.6	8.3	7.3	7.8	8.5	7.9	8.2	9.0	7.6	8.3
29	---	---	---	8.2	7.4	7.8	8.8	8.1	8.5	9.0	7.6	8.3
30	---	---	---	8.2	7.5	7.9	8.6	7.3	7.9	9.1	7.6	8.3
31	---	---	---	8.4	8.0	8.3	---	---	---	8.9	7.9	8.5
MONTH	---	---	---	8.4	7.0	7.7	8.9	7.0	8.1	9.4	7.4	8.3
JUNE			JULY			AUGUST			SEPTEMBER			
1	9.0	8.6	8.9	9.8	8.5	9.1	9.7	8.7	9.2	9.6	9.2	9.4
2	9.1	8.4	8.7	9.4	8.3	8.8	9.7	9.0	9.4	10.2	9.1	9.7
3	9.4	8.3	9.1	9.5	8.4	8.9	9.6	9.1	9.3	9.8	8.8	9.3
4	9.2	8.0	8.6	9.5	8.4	8.9	9.5	8.3	8.9	9.5	8.5	9.1
5	9.4	8.1	8.7	9.5	8.5	8.9	9.3	8.3	8.8	9.6	8.9	9.2
6	9.2	8.0	8.6	9.4	8.6	8.9	9.8	8.4	9.0	10.2	9.2	9.6
7	9.1	7.8	8.4	9.4	8.5	8.9	10.1	8.4	9.2	9.8	9.2	9.5
8	9.5	7.7	8.4	9.5	8.3	8.8	10.0	8.5	9.3	10.1	9.2	9.6
9	9.6	7.8	8.6	9.1	8.3	8.7	9.9	8.9	9.4	9.9	8.8	9.4
10	9.1	8.0	8.5	9.3	8.3	8.8	9.7	8.7	9.2	9.8	9.0	9.4
11	9.0	7.9	8.4	9.5	8.5	9.0	9.2	9.0	9.1	9.7	8.8	9.2
12	9.1	8.2	8.5	10.5	8.5	9.4	9.6	8.7	9.1	9.9	8.5	9.2
13	9.1	8.1	8.5	10.6	10.1	10.4	9.9	8.8	9.2	9.9	9.0	9.5
14	9.3	8.0	8.4	10.4	9.7	10.1	9.5	8.6	9.1	9.9	8.9	9.4
15	9.5	7.9	8.7	10.1	8.8	9.6	9.5	8.5	9.0	10.2	9.1	9.6
16	9.6	7.9	8.6	9.4	8.5	8.9	9.6	8.4	9.0	10.1	8.9	9.6
17	9.0	8.0	8.4	9.5	8.6	9.0	9.2	8.5	8.9	10.3	9.2	9.8
18	8.9	7.8	8.3	9.4	8.5	9.0	9.2	8.5	8.9	10.2	9.4	9.8
19	9.2	8.1	8.6	9.1	8.4	8.8	9.8	8.7	9.2	9.9	9.2	9.5
20	9.0	8.0	8.4	8.8	8.5	8.7	9.7	8.6	9.1	10.2	9.0	9.6
21	9.2	8.0	8.5	9.5	8.1	8.8	9.7	8.6	9.1	10.3	9.6	9.9
22	9.7	7.9	8.6	9.6	8.7	9.1	9.5	8.7	9.1	10.2	9.6	9.9
23	10.0	8.2	9.0	9.4	8.8	9.1	9.8	8.8	9.3	10.0	9.2	9.7
24	9.3	8.2	8.7	9.6	8.7	9.1	10.1	9.0	9.6	9.8	9.0	9.4
25	9.2	8.0	8.6	9.6	8.7	9.1	10.0	9.1	9.6	10.0	9.3	9.7
26	9.0	8.0	8.4	10.6	8.8	9.6	9.8	9.2	9.5	10.1	9.3	9.7
27	8.6	8.0	8.3	10.5	10.1	10.4	9.5	8.8	9.1	9.9	9.4	9.7
28	10.1	8.2	9.0	10.4	9.6	10.1	9.7	9.0	9.3	9.9	9.5	9.7
29	10.1	9.5	9.9	10.4	8.8	9.8	9.9	9.0	9.4	10.0	9.3	9.7
30	10.1	9.7	10.0	10.0	8.6	9.1	9.8	8.7	9.3	10.0	9.0	9.6
31	---	---	---	9.5	8.6	9.0	9.6	9.1	9.4	---	---	---
MONTH	10.1	7.7	8.7	10.6	8.1	9.2	10.1	8.3	9.2	10.3	8.5	9.5

COLORADO RIVER MAIN STEM

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09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.0	7.9	7.9	8.1	8.0	8.1	7.8	7.7	7.7	8.1	7.9	8.0
2	8.0	7.8	7.9	8.1	7.9	8.0	7.8	7.7	7.7	8.0	7.9	8.0
3	7.9	7.8	7.9	8.0	8.0	8.0	7.8	7.6	7.8	8.0	7.9	8.0
4	8.0	7.8	7.9	8.0	7.9	8.0	7.8	7.6	7.7	8.2	8.0	8.1
5	8.0	7.9	7.9	8.0	8.0	8.0	7.8	7.6	7.7	8.0	7.9	8.0
6	8.0	7.9	7.9	8.0	7.9	8.0	7.8	7.6	7.7	8.0	7.9	8.0
7	8.0	7.9	8.0	8.1	7.9	8.0	7.8	7.6	7.8	8.0	7.9	8.0
8	8.0	7.9	7.9	8.0	8.0	8.0	7.8	7.6	7.7	8.0	7.9	8.0
9	8.0	7.8	7.9	8.0	8.0	8.0	7.8	7.7	7.8	8.0	7.9	8.0
10	7.9	7.8	7.9	8.1	8.0	8.0	7.9	7.7	7.8	8.0	7.9	8.0
11	7.9	7.8	7.9	8.1	8.0	8.0	8.0	7.8	7.9	8.0	7.9	7.9
12	7.9	7.8	7.8	8.1	8.0	8.1	8.0	7.8	7.9	8.0	7.9	8.0
13	7.9	7.8	7.8	8.0	8.0	8.0	8.0	7.8	7.9	8.0	7.9	8.0
14	7.9	7.8	7.8	8.0	8.0	8.0	8.1	7.8	8.0	8.1	7.9	8.1
15	7.9	7.8	7.8	8.1	8.0	8.0	8.1	8.1	8.1	8.1	8.0	8.0
16	8.0	7.9	7.9	8.1	8.0	8.0	8.1	8.1	8.1	8.1	8.0	8.1
17	8.0	7.9	7.9	8.0	8.0	8.0	8.1	8.0	8.1	8.1	8.0	8.0
18	8.0	7.9	7.9	8.1	8.0	8.1	8.1	8.0	8.0	8.1	8.0	8.0
19	8.2	7.9	8.0	8.1	8.1	8.1	8.2	8.0	8.1	8.1	7.9	8.0
20	8.1	7.9	7.9	8.1	8.0	8.1	8.2	8.0	8.1	8.1	8.0	8.0
21	8.0	7.9	7.9	8.1	7.9	8.0	8.2	8.1	8.1	8.1	8.0	8.0
22	8.0	7.9	7.9	8.0	7.9	7.9	8.2	8.1	8.1	8.1	8.0	8.0
23	8.0	7.9	7.9	7.9	7.8	7.9	8.2	8.1	8.2	8.1	8.0	8.0
24	8.0	7.9	7.9	7.9	7.7	7.8	8.2	8.1	8.2	8.1	8.0	8.0
25	7.9	7.9	7.9	7.8	7.7	7.7	8.2	8.2	8.2	8.0	8.0	8.0
26	7.9	7.9	7.9	7.9	7.7	7.8	8.2	8.2	8.2	8.2	8.0	8.1
27	8.0	7.9	8.0	7.8	7.7	7.7	8.2	8.1	8.2	8.2	8.1	8.1
28	8.1	8.0	8.0	7.8	7.6	7.7	8.1	8.0	8.1	8.2	8.1	8.2
29	8.1	8.0	8.0	7.8	7.7	7.8	8.1	8.0	8.1	8.2	8.1	8.1
30	8.1	8.0	8.1	7.8	7.7	7.7	8.1	7.9	8.0	8.3	8.0	8.1
31	8.1	8.0	8.0	---	---	---	8.0	7.9	8.0	8.2	8.0	8.1
MONTH	8.2	7.8	7.9	8.1	7.6	7.9	8.2	7.6	8.0	8.3	7.9	8.0
	FEBRUARY			MARCH			APRIL			MAY		
1	8.3	8.0	8.2	8.1	7.9	8.0	8.3	8.1	8.2	8.1	7.9	8.0
2	8.3	8.2	8.3	8.1	7.8	8.0	8.2	8.0	8.1	8.1	8.0	8.0
3	8.3	8.2	8.3	8.0	7.8	7.9	8.3	8.0	8.1	8.1	8.0	8.0
4	8.3	8.2	8.3	8.1	7.8	8.0	8.3	8.1	8.2	8.2	8.1	8.1
5	---	---	---	8.1	7.8	8.0	8.3	8.1	8.2	8.2	8.1	8.1
6	8.2	8.1	8.2	8.1	7.7	7.9	8.3	8.1	8.2	8.2	8.0	8.1
7	8.2	8.1	8.2	7.9	7.7	7.9	8.3	8.1	8.2	8.0	7.9	8.0
8	8.2	8.1	8.2	8.0	7.7	7.8	8.3	8.1	8.2	8.0	7.9	8.0
9	8.2	8.2	8.2	8.0	7.7	7.9	8.3	8.1	8.2	8.1	7.9	8.0
10	8.2	8.2	8.2	8.0	7.8	7.9	8.3	8.1	8.2	8.0	7.9	8.0
11	8.3	8.2	8.2	8.1	7.9	8.0	8.2	8.0	8.1	8.0	7.9	8.0
12	8.3	8.2	8.3	8.0	7.7	7.9	8.2	8.0	8.1	8.0	7.9	8.0
13	8.3	8.2	8.2	8.0	7.7	7.9	8.1	8.0	8.1	8.0	7.9	8.0
14	8.3	8.2	8.2	8.0	7.7	7.9	8.1	7.9	8.0	8.0	7.9	8.0
15	8.3	8.2	8.2	8.0	7.7	7.9	8.1	7.9	8.1	8.0	7.9	8.0
16	8.3	8.2	8.2	8.0	7.7	7.8	8.1	7.9	8.0	8.0	7.9	8.0
17	8.2	8.1	8.2	7.9	7.6	7.7	8.2	7.9	8.0	8.0	7.9	8.0
18	8.1	8.1	8.1	8.0	7.7	7.9	8.2	7.9	8.1	8.2	8.0	8.1
19	8.1	8.0	8.1	7.9	7.7	7.8	8.1	7.9	8.0	8.1	8.0	8.1
20	8.1	8.0	8.1	7.9	7.6	7.8	8.1	7.9	8.0	8.2	7.9	8.1
21	8.1	8.0	8.0	8.0	7.7	7.9	8.1	7.9	8.0	8.1	7.9	8.0
22	8.1	7.9	8.0	8.0	7.7	7.9	8.1	7.9	8.0	8.1	8.0	8.0
23	8.1	7.9	8.0	8.0	7.7	7.9	8.1	7.9	8.0	8.1	8.0	8.0
24	8.2	7.9	8.0	7.9	7.7	7.8	8.2	7.8	8.0	8.1	8.0	8.0
25	8.2	8.0	8.1	8.1	7.8	7.9	8.2	8.0	8.1	8.1	8.0	8.1
26	8.1	7.9	8.0	7.9	7.7	7.9	8.3	8.0	8.1	8.2	8.0	8.1
27	8.1	7.9	8.0	8.1	7.8	7.9	8.3	8.1	8.2	8.2	8.0	8.1
28	8.1	8.0	8.0	8.2	8.0	8.1	8.3	8.2	8.2	8.2	8.0	8.1
29	---	---	---	8.2	8.0	8.1	8.3	8.0	8.1	8.1	8.0	8.1
30	---	---	---	8.2	8.0	8.1	8.0	7.9	8.0	8.2	8.0	8.1
31	---	---	---	8.3	8.1	8.2	---	---	---	8.2	8.0	8.1
MONTH	---	---	---	8.3	7.6	7.9	8.3	7.8	8.1	8.2	7.9	8.0

COLORADO RIVER MAIN STEM

09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.3	8.1	8.2	8.0	7.8	7.9	7.9	7.8	7.9	8.1	8.0	8.0
2	8.3	8.1	8.2	7.9	7.8	7.9	7.9	7.8	7.9	8.1	8.0	8.1
3	8.3	8.1	8.2	7.9	7.8	7.9	7.9	7.8	7.9	8.1	8.0	8.0
4	8.2	8.0	8.1	7.9	7.8	7.9	7.9	7.8	7.9	8.1	8.0	8.0
5	8.1	7.9	8.0	7.9	7.8	7.9	7.9	7.8	7.9	8.1	8.0	8.0
6	8.0	7.9	8.0	7.9	7.8	7.8	7.9	7.8	7.9	8.1	8.0	8.0
7	8.1	7.9	8.0	7.9	7.8	7.9	7.9	7.8	7.9	8.1	7.9	8.0
8	8.2	7.9	8.0	8.0	7.8	7.9	7.9	7.7	7.8	8.0	7.9	8.0
9	8.1	7.9	8.0	8.0	7.8	7.9	7.8	7.7	7.7	8.0	7.9	8.0
10	8.0	7.9	8.0	8.0	7.9	8.0	7.8	7.7	7.7	8.0	7.9	8.0
11	8.0	7.9	8.0	8.0	8.0	8.0	7.8	7.7	7.7	7.9	7.8	7.9
12	8.0	7.9	8.0	8.0	7.9	8.0	7.8	7.7	7.7	8.0	7.8	7.9
13	8.0	7.9	8.0	8.2	8.0	8.1	7.8	7.7	7.7	8.0	7.8	7.9
14	8.0	7.9	7.9	8.2	8.0	8.1	7.8	7.7	7.7	8.0	7.9	7.9
15	8.0	7.9	8.0	8.1	8.0	8.0	7.9	7.7	7.8	8.0	7.9	7.9
16	8.1	7.9	8.0	8.0	8.0	8.0	7.9	7.8	7.8	8.0	7.9	7.9
17	8.0	7.9	7.9	7.9	7.9	7.9	7.9	7.8	7.8	7.9	7.8	7.9
18	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.8	7.9	7.9	7.8	7.9
19	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.8	7.9	7.9	7.8	7.9
20	8.0	7.9	7.9	7.9	7.9	7.9	7.9	7.8	7.8	7.9	7.8	7.9
21	8.0	7.9	7.9	8.0	7.9	7.9	7.9	7.8	7.8	7.9	7.8	7.9
22	8.0	7.9	7.9	8.0	7.9	7.9	7.9	7.8	7.8	7.9	7.8	7.9
23	8.1	7.9	8.0	8.0	7.9	7.9	8.0	7.8	7.9	7.9	7.8	7.9
24	8.0	7.9	7.9	8.0	7.9	8.0	8.0	7.9	7.9	7.9	7.8	7.9
25	8.0	7.9	7.9	8.0	7.9	8.0	8.0	7.9	7.9	7.9	7.8	7.9
26	7.9	7.9	7.9	8.0	7.9	8.0	8.0	7.9	7.9	7.9	7.9	7.9
27	7.9	7.9	7.9	8.1	8.0	8.0	8.0	7.9	7.9	8.0	7.9	7.9
28	8.0	7.9	7.9	8.1	8.0	8.0	8.0	7.9	7.9	8.0	7.9	7.9
29	8.0	7.9	8.0	8.1	7.9	8.0	8.0	7.9	7.9	8.0	7.9	7.9
30	8.0	7.9	8.0	8.0	7.9	8.0	8.1	7.9	8.0	8.0	7.9	7.9
31	---	---	---	8.0	7.8	7.9	8.1	8.0	8.0	---	---	---
MONTH	8.3	7.9	8.0	8.2	7.8	7.9	8.1	7.7	7.8	8.1	7.8	7.9

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

[illegible]

COLORADO RIVER MAIN STEM

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09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	8.3	6.7	7.5	---	---	---	8.0	7.1	7.6
2	---	---	---	7.3	6.7	6.9	---	---	---	8.3	7.3	7.8
3	---	---	---	7.4	6.6	7.0	---	---	---	8.0	7.2	7.6
4	---	---	---	7.5	7.0	7.3	---	---	---	8.1	7.1	7.6
5	---	---	---	7.7	7.1	7.3	---	---	---	8.0	7.2	7.6
6	---	---	---	7.5	7.0	7.2	---	---	---	7.8	7.2	7.5
7	---	---	---	7.5	6.8	7.1	---	---	---	7.9	7.2	7.5
8	---	---	---	7.5	6.9	7.2	---	---	---	8.3	7.1	7.7
9	---	---	---	8.2	7.0	7.5	7.9	7.0	7.5	8.1	7.4	7.8
10	---	---	---	8.0	7.4	7.7	8.2	7.1	7.6	8.1	7.3	7.7
11	---	---	---	8.0	7.3	7.6	7.9	7.1	7.5	8.1	7.2	7.6
12	---	---	---	9.7	7.1	8.1	8.0	7.1	7.5	7.9	7.1	7.5
13	---	---	---	10.1	9.8	10.0	7.9	7.1	7.5	7.7	6.8	7.2
14	---	---	---	10.1	9.6	9.9	7.8	7.0	7.4	7.6	6.8	7.2
15	---	---	---	10.0	7.5	8.9	7.9	7.1	7.5	7.9	6.8	7.4
16	---	---	---	8.5	7.5	7.8	8.0	7.1	7.5	7.8	7.0	7.4
17	---	---	---	8.8	7.5	7.9	7.8	7.1	7.4	7.5	6.7	7.0
18	---	---	---	9.0	7.6	7.9	8.0	7.0	7.5	7.2	6.4	6.8
19	---	---	---	8.3	7.4	7.8	7.9	7.2	7.6	7.6	6.5	7.0
20	---	---	---	8.2	7.5	7.8	7.9	7.0	7.5	7.5	6.7	7.0
21	8.0	6.9	7.2	8.8	7.5	8.0	7.9	7.0	7.4	7.6	6.6	7.1
22	8.9	6.8	7.3	8.9	7.6	8.0	7.8	7.0	7.4	7.9	6.6	7.2
23	10.0	7.0	7.7	8.6	7.6	8.0	7.9	7.1	7.5	7.6	6.9	7.2
24	8.2	6.9	7.3	8.9	7.6	8.1	8.1	7.2	7.6	7.6	6.7	7.1
25	7.7	6.8	7.1	8.9	7.6	8.0	8.2	7.1	7.7	7.4	6.7	7.1
26	7.7	6.8	7.1	---	---	---	7.9	7.2	7.5	7.5	6.7	7.1
27	7.6	6.9	7.1	---	---	---	8.0	7.1	7.5	7.5	6.8	7.1
28	8.1	6.9	7.4	---	---	---	8.0	7.2	7.5	7.4	6.7	7.1
29	8.8	8.1	8.3	---	---	---	8.0	7.1	7.5	7.9	6.8	7.4
30	8.9	8.0	8.3	---	---	---	7.9	7.1	7.4	7.7	7.0	7.4
31	---	---	---	---	---	---	7.9	7.0	7.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	8.3	6.4	7.3

09382000 PARIA RIVER AT LEES FERRY, AZ

LOCATION.--Lat 36°52'20", long 111°35'38", in NW¼NE¼ sec.13, T.40 N., R.7 E., Coconino County, Hydrologic Unit 14070007, on left bank 0.6 mi northwest of Lees Ferry, and 1.1 mi upstream from mouth.

DRAINAGE AREA.--1,410 mi².

PERIOD OF RECORD.--October 1923 to current year.

REVISED RECORDS.--WSP 1925: 1958(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,123.68 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 5, 1925 nonrecording gage at site 2,000 ft upstream at different datum. Oct. 13, 1925, to Sept. 11, 1929, nonrecording gage at present site and datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions above station for irrigation of about 3,300 acres, mostly in southern Utah.

AVERAGE DISCHARGE.--68 years, 28.9 ft³/s, 20,940 acre-ft/yr; median of yearly mean discharges, 26 ft³/s, 18,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft³/s Oct. 5, 1925, gage height, 16.3 ft, from floodmark, from rating curve extended above 2,000 ft³/s on basis of float-area measurement of peak flow; maximum gage height, 16.65 ft Sept. 9, 1980; minimum daily discharge, 1 ft³/s in most years prior to 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 7	1445	*763	*8.01

Minimum daily discharge, 3.0 ft³/s July 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	7.7	11	e6.5	14	32	19	4.2	5.3	3.4	3.5	12
2	11	7.8	11	e6.5	15	123	20	4.1	13	3.4	3.6	11
3	39	8.6	12	e6.5	18	39	18	4.1	11	3.3	4.3	47
4	25	9.0	9.8	e7.0	23	31	15	4.6	8.9	3.3	4.3	14
5	12	9.7	8.4	e7.5	26	29	13	4.7	7.3	3.3	28	9.3
6	8.2	11	8.0	e15	27	32	14	4.7	5.0	3.3	19	128
7	7.3	12	7.8	e20	27	28	15	4.8	3.9	3.3	10	248
8	6.6	12	9.6	e20	27	19	14	4.6	3.7	3.3	8.8	162
9	8.3	11	8.5	19	29	17	13	4.1	3.7	4.8	6.5	26
10	6.5	12	11	16	27	16	13	3.8	3.7	7.0	5.0	13
11	6.5	11	11	21	26	16	10	4.4	3.7	4.0	4.8	9.1
12	6.6	10	12	25	24	16	9.9	4.7	3.7	3.5	4.8	7.4
13	6.6	9.5	23	19	25	16	9.8	4.4	3.8	3.4	4.6	6.4
14	5.8	9.6	23	15	24	16	10	4.3	3.8	3.3	8.3	6.6
15	5.3	9.7	17	14	27	16	8.5	4.2	3.4	3.3	56	5.5
16	5.3	9.2	11	18	27	20	7.2	4.1	3.5	3.1	39	5.2
17	5.1	9.0	14	20	26	19	6.0	4.1	3.3	3.0	e9.0	4.9
18	5.2	9.2	14	17	23	19	5.3	3.8	3.3	3.1	e6.0	4.9
19	6.9	9.7	e7.5	17	18	19	5.8	3.7	3.3	3.4	e6.0	4.8
20	169	11	9.4	21	15	21	e5.3	3.8	3.1	5.0	e6.0	4.6
21	35	10	e6.4	20	19	25	e5.0	3.7	3.2	6.1	5.2	4.6
22	16	12	e6.5	14	17	25	e5.0	3.8	3.3	4.6	4.7	4.5
23	13	11	e6.5	10	17	22	e4.9	4.2	3.4	4.1	4.5	4.6
24	12	11	e6.5	e11	17	21	5.4	4.2	3.2	3.7	4.4	4.5
25	11	11	e6.5	16	16	20	5.4	4.2	3.2	4.5	8.5	4.5
26	11	12	e6.5	e16	14	24	5.9	4.0	3.2	3.6	16	4.5
27	11	13	e6.5	e19	15	51	5.0	3.7	3.3	3.8	10	4.5
28	9.2	12	e6.5	21	16	28	5.4	3.7	3.5	3.5	12	4.5
29	8.1	6.9	e6.5	21	---	22	4.5	3.7	3.4	3.2	13	4.6
30	7.9	6.7	e6.5	e10	---	26	4.2	3.7	3.3	3.3	12	4.5
31	8.0	---	e6.5	12	---	20	---	4.4	---	3.4	12	---
TOTAL	503.4	304.3	310.4	481.0	599	828	282.5	128.5	133.4	117.3	378.5	775.0
MEAN	16.2	10.1	10.0	15.5	21.4	26.7	9.42	4.15	4.45	3.78	12.2	25.8
MAX	169	13	23	25	29	123	20	4.8	13	7.0	56	248
MIN	5.1	6.7	6.4	6.5	14	16	4.2	3.7	3.1	3.0	3.5	4.5
AC-FT	998	604	616	954	1190	1640	560	255	265	233	751	1540
CAL YR 1990	TOTAL	5489.9	MEAN	15.0	MAX	378	MIN	3.2	AC-FT	10890		
WTR YR 1991	TOTAL	4841.3	MEAN	13.3	MAX	248	MIN	3.0	AC-FT	9600		

e Estimated

09383000 COLORADO RIVER AT COMPACT POINT, NEAR LEES FERRY, AZ

LOCATION.--Lat 36°51'05", long 111°36'21", in NE¼SE¼ sec.23, T.40 N., R.7 E., Coconino County, Hydrologic Units 14070006, 15010001, (see REMARKS), 1.0 mi downstream from Paria River, 1.4 mi downstream from gage on Colorado River at Lees Ferry, and 29 mi downstream from Utah-Arizona State line.

DRAINAGE AREA.--112,000 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing.

PERIOD OF RECORD.--October 1913 to current year (monthly discharge only). Prior to October 1950, published in WSP 1313.

DETERMINATION OF DISCHARGE.--There is no gage. Monthly and yearly discharge computed as the sum of flow at stations on Colorado River and Paria River at Lees Ferry.

REMARKS.--This location on the Colorado River is the dividing point between the Upper Basin and Lower Basin, as defined in the Colorado River Compact of 1922. Flow substantially regulated by Lake Powell beginning Mar. 13, 1963. (See elsewhere in this report.)

AVERAGE DISCHARGE.--49 years (water years 1914-62), 17,760 ft³/s, 12,870,000 acre-ft/yr; 27 years (water years 1965-91), 14,260 ft³/s, 10,330,000 acre-ft/yr.

MONTHLY DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Month	Mean ₃ in ft ³ /s	Runoff in acre-feet
October	7,404	455,300
November	8,358	497,300
December	9,480	582,900
CAL YR 1990	10,920	7,908,000
January	11,010	676,800
February	10,630	590,300
March	9,618	591,400
April	9,338	555,700
May	12,510	769,000
June	13,430	799,100
July	15,100	928,600
August	14,450	888,800
September	13,300	791,300
WTR YR 1991	11,220	8,126,000

NOTE.--Record shown is sum of flow at stations on Colorado River and Paria River at Lees Ferry.

09384000 LITTLE COLORADO RIVER ABOVE LYMAN LAKE, NEAR ST. JOHNS, AZ

LOCATION.--Lat 34°18'52", long 109°21'42", in SW¼SE¼ sec.27, T.11 N., R.28 E., Apache County, Hydrologic Unit 15020001, on left bank 0.75 mi downstream from Coyote Creek, 6 mi upstream from Lyman Dam, and 15 mi south of St. Johns.

DRAINAGE AREA.--706 mi², of which 2.5 mi² is noncontributing.

PERIOD OF RECORD.--April 1940 to current year. Prior to October 1975 published as "above Lyman Reservoir."

REVISED RECORDS.--WDR AZ-88-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 6,010 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 7, 1976, water-stage recorder at site 0.4 mi downstream at datum approximately 20 ft lower, used as supplemental gage Mar. 21, 1980, to Apr. 21, 1987. See WSP 1313 for history of changes prior to 1950.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by many small reservoirs - combined capacity, about 15,500 acre-ft. Diversions for irrigation of about 6,700 acres above station.

AVERAGE DISCHARGE.--51 years, 23.2 ft³/s, 16,810 acre-ft/yr; median of yearly mean discharges, 16 ft³/s, 11,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s July 25, 1940, gage height, 17.1 ft, datum then in use, from floodmarks, by slope-area measurement of peak flow and reservoir inflow studies; maximum gage height, 18.6 ft, Sept. 12, 1975, at previous site (from graph recorded to 18.4 ft); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 11	0530	*299	*4.38

Minimum daily discharge, 1.1 ft³/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.8	7.3	5.1	4.7	11	19	32	12	2.8	9.9	4.2
2	3.3	3.9	7.1	5.0	6.6	12	20	25	12	3.1	11	3.6
3	3.2	4.2	7.0	4.7	4.6	12	22	25	10	3.5	15	5.9
4	2.5	4.9	6.7	5.3	4.3	11	28	21	6.5	2.8	9.6	8.5
5	2.3	5.5	6.8	5.8	3.7	11	44	17	5.3	2.7	7.8	9.5
6	2.7	5.2	6.6	6.5	3.5	10	70	21	5.3	3.5	6.7	11
7	2.7	5.7	6.4	5.7	3.5	13	115	21	5.2	4.4	8.1	9.4
8	2.8	6.6	6.3	5.1	4.2	9.8	156	21	3.4	5.0	5.5	8.2
9	2.6	6.8	5.7	5.2	4.6	7.8	174	26	2.6	6.1	5.8	7.9
10	2.5	7.0	5.7	5.6	4.6	5.5	209	25	3.6	6.8	6.1	8.3
11	2.8	6.6	5.8	6.0	5.3	4.8	230	19	6.5	5.4	7.0	8.0
12	4.2	6.3	6.1	5.4	6.5	5.2	199	e17	14	4.9	8.7	7.7
13	3.2	6.5	6.2	5.0	6.5	5.5	160	16	11	4.5	8.3	7.6
14	3.3	6.3	6.5	5.0	6.7	5.5	137	18	9.9	4.0	7.7	6.9
15	4.0	6.0	6.3	4.5	6.9	5.7	121	21	11	4.1	8.6	6.0
16	3.9	5.9	7.6	4.7	7.4	5.8	119	19	10	4.4	7.6	5.1
17	3.6	6.0	6.8	4.2	8.1	9.8	134	14	10	4.9	7.7	4.1
18	3.4	6.0	6.0	4.1	8.5	9.2	161	11	8.5	5.0	8.4	4.0
19	3.6	6.4	5.7	4.1	8.8	8.5	179	12	7.2	4.4	9.6	3.7
20	3.3	6.0	5.9	4.5	8.5	9.1	186	10	7.2	3.9	8.2	3.4
21	3.0	6.4	5.3	5.2	8.3	11	191	20	7.2	3.9	7.2	3.2
22	3.1	6.2	4.5	4.6	8.3	10	164	27	6.2	4.1	6.5	2.5
23	2.9	6.7	e4.1	3.8	8.4	11	143	25	7.3	6.9	6.5	2.3
24	3.0	6.7	e3.8	3.6	8.7	9.9	115	26	7.0	7.0	6.2	2.3
25	2.8	7.1	e3.6	3.9	8.7	13	100	21	6.4	12	6.0	1.7
26	2.8	6.9	e3.7	4.0	8.9	15	97	22	6.2	7.8	6.5	1.6
27	2.8	6.9	e3.6	4.2	8.9	16	79	19	5.2	12	6.7	1.6
28	2.8	6.5	4.3	4.0	9.6	13	e64	18	3.9	10	7.7	1.5
29	3.0	6.5	6.0	3.3	---	15	51	11	3.2	9.6	7.7	1.2
30	2.7	6.8	6.3	e3.0	---	14	37	7.5	3.0	9.1	6.0	1.1
31	2.5	---	5.7	3.2	---	16	---	7.5	---	8.9	4.4	---
TOTAL	94.0	181.3	179.4	144.3	187.3	316.1	3524	595.0	216.8	177.5	238.7	152.0
MEAN	3.03	6.04	5.79	4.65	6.69	10.2	117	19.2	7.23	5.73	7.70	5.07
MAX	4.2	7.1	7.6	6.5	9.6	16	230	32	14	12	15	11
MIN	2.3	2.8	3.6	3.0	3.5	4.8	19	7.5	2.6	2.7	4.4	1.1
AC-FT	186	360	356	286	372	627	6990	1180	430	352	473	301

CAL YR	1990	TOTAL	1455.82	MEAN	3.99	MAX	134	MIN	.03	AC-FT	2890
WTR YR	1991	TOTAL	6006.4	MEAN	16.5	MAX	230	MIN	1.1	AC-FT	11910

e Estimated

LITTLE COLORADO RIVER BASIN

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09386030 LITTLE COLORADO RIVER ABOVE ZION RESERVOIR, NEAR ST. JOHNS, AZ

LOCATION.--Lat 34°35'01", long 109°24'23", in SE¼SE¼ sec.30, T.14 N., R.28 E., Apache County, Hydrologic Unit 15020002, on downstream side of center pier of bridge on private road, 1.5 mi upstream from Carrizo Creek, 4 mi upstream from Zion Reservoir, and 5.8 mi northwest of St. Johns.

DRAINAGE AREA.--1,007 mi², of which 2.5 mi² is noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR AZ-88-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions above station for irrigation of about 10,200 acres, including 1,500 acres served by Lyman Canal. Regulation by many reservoirs above station (combined capacity, 46,900 acre-ft), the largest of which is Lyman Lake. Records do not include flow bypassing the station through an abandoned irrigation ditch during higher stages.

AVERAGE DISCHARGE.--16 years, 11.0 ft³/s, 7,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 582 ft³/s Aug. 4, 1983, gage height, 3.66 ft; minimum daily, 0.04 ft³/s Aug. 2, Sept. 7, Oct. 16-20, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 62 ft³/s July 9, gage height, 2.11 ft; minimum daily, 0.07 ft³/s May 14, 24, Aug. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	3.9	6.4	e7.0	16	8.7	.82	.18	.08	.20	e.33	.11
2	42	5.7	6.7	e7.3	11	9.8	5.1	.17	.09	.20	.46	.11
3	39	13	5.8	e7.6	6.5	9.7	5.3	.19	.15	.20	.17	.13
4	37	10	7.5	e8.0	6.5	8.3	5.4	.20	.14	.22	.11	.15
5	37	7.5	7.9	10	6.4	7.5	5.6	.20	.15	.25	.09	.14
6	37	6.0	8.2	30	6.3	7.3	5.8	.21	.15	.27	.09	.14
7	38	6.0	9.1	23	6.4	7.5	5.3	.21	.15	.27	2.9	.15
8	40	8.7	8.7	15	6.6	7.7	.63	.20	e.15	.27	.08	.15
9	41	11	8.2	12	6.8	7.8	1.2	.19	e.15	31	.08	.15
10	42	8.0	8.1	11	6.9	8.2	5.1	.14	e.13	.80	.08	.15
11	41	6.3	8.2	9.7	6.7	7.8	4.7	.11	e.13	.09	.08	.15
12	49	5.8	7.2	8.6	6.8	7.5	4.8	.09	e.13	.14	.08	.15
13	54	5.6	10	7.8	7.4	8.0	5.2	.09	e.13	e.45	.08	.15
14	52	5.2	11	7.6	7.3	4.6	5.5	.07	e.13	e.40	.08	.15
15	18	4.8	9.1	7.6	7.2	.74	5.7	.08	e.13	e.39	.07	.15
16	6.7	5.3	12	8.7	7.3	1.2	5.2	.35	e.13	e.38	.08	.15
17	5.1	5.4	25	7.8	7.4	1.6	2.3	.43	.14	e.37	.08	.15
18	4.4	5.2	12	7.4	7.7	2.2	.43	.47	e.15	e.37	.08	.15
19	3.9	5.1	10	6.9	6.8	2.4	.35	.44	e.15	e.37	.09	.15
20	7.6	4.9	14	6.4	6.6	2.3	.27	.53	e.15	e.37	.09	.15
21	6.9	5.5	e7.9	6.7	6.9	2.6	.33	.19	e.15	e.37	.09	.16
22	5.5	5.9	e7.6	7.5	7.3	2.0	.40	.09	e.15	e.37	.09	.20
23	4.5	5.8	e7.3	7.4	7.4	.80	.40	.09	e.15	e.37	.09	.20
24	3.1	5.8	e7.0	6.5	7.4	.50	.41	.07	e.15	e.37	.08	.20
25	4.1	6.1	e6.7	6.4	7.2	.36	.31	.08	e.15	e.37	.09	.20
26	4.1	6.6	e6.4	6.3	7.1	3.0	.20	.10	e.15	7.6	1.1	.20
27	3.4	7.0	e6.1	6.3	7.4	6.1	.19	.11	e.15	.19	.09	.18
28	3.5	5.6	e6.0	6.1	7.8	6.1	.20	.11	e.17	e.40	.09	.14
29	3.0	5.6	e6.1	8.8	---	5.7	.19	.11	.20	e.35	.10	.15
30	3.9	8.5	e6.4	21	---	4.8	.17	.10	.20	e.33	.10	.20
31	4.0	---	e6.7	20	---	.42	---	.10	---	e.33	.11	---
TOTAL	681.7	195.8	269.3	312.4	209.1	153.22	77.50	5.70	4.33	48.06	7.23	4.71
MEAN	22.0	6.53	8.69	10.1	7.47	4.94	2.58	.18	.14	1.55	.23	.16
MAX	54	13	25	30	16	9.8	5.8	.53	.20	31	2.9	.20
MIN	3.0	3.9	5.8	6.1	6.3	.36	.17	.07	.08	.09	.07	.11
AC-FT	1350	388	534	620	415	304	154	11	8.6	95	14	9.3

CAL YR 1990 TOTAL 2260.91 MEAN 6.19 MAX 91 MIN .07 AC-FT 4480
WTR YR 1991 TOTAL 1969.05 MEAN 5.39 MAX 54 MIN .07 AC-FT 3910

e Estimated

LITTLE COLORADO RIVER BASIN

09386030 LITTLE COLORADO RIVER ABOVE ZION RESERVOIR, NEAR ST. JOHNS, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1975 to current year (partial-record station).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
JAN 29...	1655	9.0	3380	8.2	-2.5	-0.5	623	11.3	95	750	370
AUG 01...	1140	0.28	3260	8.2	25.0	23.5	626	8.6	125	920	660
DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
JAN 29...	180	74	420	7	19	466	0	382	820	420	1.7
AUG 01...	240	79	400	6	11	320	0	262	960	460	1.1
DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
JAN 29...	17	2180	2.97	<0.010	0.120	0.020	0.010	0.03	760	10	40
AUG 01...	15	2320	3.16	<0.010	<0.050	0.010	<0.010	--	500	<10	*780

* Value verified.

< Actual value is known to be less than value shown.

LITTLE COLORADO RIVER BASIN

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09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM

LOCATION.--Lat 35°06'03", long 108°45'03", in NE¼ sec.17, T.10 N., R.18 W., McKinley County, Hydrologic Unit 15020004, on Zuni Indian Reservation, on left bank downstream from highway bridge on State Highway 36, 0.8 mi upstream from flow line of Black Rock Reservoir, 2.3 mi northeast of Black Rock, and 5.9 mi northeast of Zuni Pueblo.

DRAINAGE AREA.--848 mi², of which 13 mi² is non-contributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year. Prior to October 1974 published as "above Zuni Reservoir."

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 6,480 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--22 years, 12.1 ft³/s, 8,770 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,200 ft³/s, Aug. 4, 1974, gage height, 6.61 ft, from rating curve extended above 670 ft³/s on basis of slope-area measurements at gage heights 4.05 ft, 3.94 ft, 5.16 ft, and 6.61 ft; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 160 ft³/s, April 5 ; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.21	.27	.56	.82	3.1	2.5	1.1	.00	.00	.00	.00
2	.04	.35	.36	.67	.89	4.5	2.3	.95	.00	.00	.00	.00
3	.01	.60	.37	1.0	1.1	4.1	2.1	.83	.00	.00	.00	.00
4	.00	.64	.31	1.1	1.4	2.8	33	.70	.00	.00	.00	.14
5	.00	.59	.29	e1.5	1.6	2.4	e160	.65	.00	.00	.00	38
6	.00	.48	.38	e1.3	1.9	3.3	e120	.64	.00	.00	.00	19
7	.00	.47	.34	e1.6	2.9	2.6	e90	.64	.00	.00	.00	9.6
8	.00	.53	.34	e1.9	4.5	2.0	e64	.60	.00	.00	.00	3.2
9	.00	.60	.34	e1.5	4.5	2.0	e51	.60	.00	.00	.00	1.5
10	.00	.59	.41	e1.4	5.3	1.9	e36	.58	.00	.00	.00	1.1
11	.00	.45	.48	e1.1	6.0	1.8	e22	.58	.00	.00	.00	.93
12	.00	.28	.57	e1.1	5.3	1.7	e17	.50	.00	.00	.00	.88
13	.04	.18	.98	e1.2	4.7	1.8	e14	.52	.00	.00	.00	.99
14	.18	.16	1.3	1.4	4.0	1.8	e13	.47	.00	.00	.00	.96
15	.20	.16	1.0	1.5	3.2	1.9	e12	.25	.00	.00	.00	.95
16	.15	.16	1.0	1.3	2.7	2.4	e11	.06	.00	.00	.00	.89
17	.07	.17	1.4	1.4	2.4	2.7	e10	.00	.00	.00	.00	.75
18	.00	.17	1.4	1.2	2.2	3.1	5.7	.00	.00	.00	.00	.69
19	.01	.14	1.0	1.1	1.6	2.6	4.7	.00	.00	.00	.00	.57
20	1.2	.36	.90	1.0	1.5	2.4	4.2	.00	.00	.00	.00	.32
21	2.2	.50	.70	1.1	1.5	2.8	3.3	.00	.00	.00	.00	.33
22	1.1	.54	.73	1.2	1.4	3.1	2.6	.00	.00	.00	.00	.25
23	.45	.53	.61	1.2	1.4	3.1	2.1	.00	.00	.00	.00	.06
24	.34	.48	.57	1.0	1.4	3.0	1.7	.00	.00	.00	.00	.00
25	.24	.49	.75	.99	1.4	2.6	1.6	.00	.00	.00	.00	.00
26	.18	.60	.85	.98	1.3	2.6	1.8	.00	.00	.00	.00	.00
27	e.18	.58	.63	.98	1.3	3.2	1.4	.00	.00	.00	.00	.00
28	e.18	.47	.59	.95	1.5	3.7	1.4	.00	.00	.00	.71	.00
29	e.18	.30	.72	.95	---	4.7	1.3	.00	.00	.00	1.3	.00
30	.18	.21	.77	.87	---	3.3	1.2	.00	.00	.00	.34	.00
31	.20	---	.58	.81	---	2.8	---	.00	---	.00	.02	---
TOTAL	7.33	11.99	20.94	35.86	69.71	85.8	692.9	9.67	0.00	0.00	2.37	81.11
MEAN	.24	.40	.68	1.16	2.49	2.77	23.1	.31	.000	.000	.076	2.70
MAX	2.2	.64	1.4	1.9	6.0	4.7	160	1.1	.00	.00	1.3	.38
MIN	.00	.14	.27	.56	.82	1.7	1.2	.00	.00	.00	.00	.00
AC-FT	15	24	42	71	138	170	1370	19	.00	.00	4.7	161

CAL YR 1990 TOTAL 208.26 MEAN .57 MAX 8.1 MIN .00 AC-FT 413
WTR YR 1991 TOTAL 1017.68 MEAN 2.79 MAX 160 MIN .00 AC-FT 2020

e Estimated

LITTLE COLORADO RIVER BASIN

09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM -- Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	
DEC 05...	1030	--	0.21	810	8.3	6.5	1.0	--	11.8	300	0	
FEB 26...	1500	--	1.3	710	8.6	13.0	6.0	--	11.6	240		
APR 04...	1520	--	59	780	8.7	--	--	--	--	--	--	
APR 04-05	1520	101	--	--	--	--	--	--	--	--	--	
04...	1720	--	74	790	8.2	--	--	--	--	--	--	
04...	1930	--	82	575	8.5	--	--	--	--	--	--	
04...	2120	--	90	550	8.5	--	--	--	--	--	--	
04...	2320	--	103	510	8.3	--	--	--	--	--	--	
05...	0120	--	110	505	8.5	--	--	--	--	--	--	
05...	0320	--	114	500	8.5	--	--	--	--	--	--	
05...	0520	--	119	480	8.6	--	--	--	--	--	--	
05...	0720	--	119	480	8.6	--	--	--	--	--	--	
05...	0920	--	119	490	8.6	--	--	--	--	--	--	
05...	1120	--	119	420	8.5	--	--	--	--	--	--	
05...	1403	--	142	490	8.3	--	--	--	--	170	--	
05...	1430	--	146	491	8.0	--	15.5	--	7.8	170	--	
MAY 14...	1030	--	0.53	710	8.0	21.0	12.5	--	8.5	200	0	
SEP 06...	0915	--	14	340	7.9	19.0	16.0	930	6.8	120	--	
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
DEC 05...	72	30	110	3	4.4	432	14	378	--	355	130	
FEB 26...	63	20	72	2	4.0	305	19	282	--	275	99	
APR 05...	42	15	40	1	6.3	--	--	--	--	147	100	
05...	42	15	40	1	6.2	--	--	--	--	148	100	
MAY 14...	38	25	94	3	3.9	349	0	286	--	277	96	
SEP 06...	36	6.6	28	1	7.1	--	--	--	101	--	71	
DATE		CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)
DEC 05...	29	0.20	--	15	--	617	<1	1	--	--	--	120
FEB 26...	23	0.30	--	--	--	450	<1	<1	--	--	--	70
APR 05...	14	0.30	0.070	7.6	312	314	--	1	77	<0.5	60	
05...	13	0.30	0.080	7.7	311	314	--	1	76	<0.5	60	
MAY 14...	25	0.40	--	4.0	--	458	<1	<1	--	--	--	120
SEP 06...	11	0.40	0.030	8.6	240	230	--	<1	70	<0.5	70	

< Actual value is known to be less than value shown.

LITTLE COLORADO RIVER BASIN

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09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM -- Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
DEC 05...	<1	<1.0	<1	<1	--	5	3	8	2	<1	--
FEB 26...	<1	<1.0	3	<1	--	3	1	12	<1	1	--
APR 05...	--	<1.0	--	<5	<3	--	<10	10	--	<10	5
APR 05...	--	<1.0	--	<5	<3	--	<10	10	--	<10	6
MAY 14...	2	<1.0	<1	<1	--	9	<1	11	7	1	--
SEP 06...	--	<1.0	--	<5	<3	--	<10	74	--	<10	5

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
DEC 05...	--	0.40	0.1	--	--	<1	<1	--	--	--
FEB 26...	--	<0.10	<0.1	--	--	<1	<1	--	--	--
APR 05...	<1	--	--	<10	<10	--	<1	<1.0	370	<6
APR 05...	1	--	--	<10	<10	--	<1	<1.0	370	<6
MAY 14...	--	<0.10	0.1	--	--	<1	<1	--	--	--
SEP 06...	<1	--	--	<10	<10	--	<1	<1.0	300	<6

DATE	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90) (80050)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	GROSS ALPHA SEDI- MENT (PCI/G) (01507)
DEC 05...	<10	4	--	--	--	215	0.12	49	--	--
FEB 26...	<10	3	--	--	--	--	--	--	--	--
APR 04...	--	--	--	--	--	821	131	--	--	--
APR 04-05	--	--	--	--	--	--	--	--	--	<6
APR 04...	--	--	--	--	--	418	84	--	--	--
APR 04...	--	--	--	--	--	266	59	--	--	--
APR 04...	--	--	--	--	--	255	62	--	--	--
APR 04...	--	--	--	--	--	218	61	--	--	--
APR 05...	--	--	--	--	--	221	66	--	--	--
APR 05...	--	--	--	--	--	202	62	--	--	--
APR 05...	--	--	--	--	--	173	56	--	--	--
APR 05...	--	--	--	--	--	156	50	--	--	--
APR 05...	--	--	--	--	--	164	53	--	--	--
APR 05...	--	--	--	--	--	206	66	--	--	--
APR 05...	--	<3	3.8	9.3	7.0	210	81	98	--	--
APR 05...	--	<3	2.8	8.8	6.2	186	73	98	--	--
MAY 14...	<10	5	--	--	--	47	0.07	82	--	--
SEP 06...	--	8	1.0	8.5	7.0	1210	47	99	100	--

< Actual value is known to be less than value shown.

LITTLE COLORADO RIVER BASIN

09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM -- Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	URANIUM -238 WATER DISSOLV (PCI/L) (22603)	URANIUM -234 WATER DISSOLV (PCI/L) (22610)	URANIUM -235 WATER, DISS (PCI/L) (22620)	TH-230 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75939)	U-238 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75940)	U-234 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75942)	RA-226 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75944)	TH-232 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75953)	U-235 SED, SUSP, TOTAL, DRY WGT (PCI/L) (75975)	SAM- PLING METHOD, CODES (82398)
APR										
04...	--	--	--	--	--	--	--	--	--	50
APR										
04-05	--	--	--	1.3	1.1	0.9	1.0	1.2	<0.1	--
04...	--	--	--	--	--	--	--	--	--	50
04...	--	--	--	--	--	--	--	--	--	50
04...	--	--	--	--	--	--	--	--	--	50
04...	--	--	--	--	--	--	--	--	--	50
05...	--	--	--	--	--	--	--	--	--	50
05...	--	--	--	--	--	--	--	--	--	50
05...	--	--	--	--	--	--	--	--	--	50
05...	--	--	--	--	--	--	--	--	--	50
05...	--	--	--	--	--	--	--	--	--	50
05...	--	--	--	--	1.3	1.3	--	--	<0.1	50
05...	--	--	--	--	1.2	1.1	--	--	<0.1	10
SEP										
06...	0.30	0.40	<0.1	1.2	1.0	1.3	--	1.4	<0.1	10

< Actual value is known to be less than value shown.

09390500 SHOW LOW CREEK NEAR LAKESIDE, AZ

LOCATION.--Lat 34°10'46", long 109°59'14", in SW¼NW¼ sec.14, T.9 N., R.22 E., Navajo County, Hydrologic Unit 15020005, on left bank 1 mi upstream from pumping plant on Show Low Lake, 1.9 mi northwest of Lakeside, 2.2 mi upstream from Jaques Dam, and 6 mi southeast of Show Low.

DRAINAGE AREA.--68.6 mi².

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

REVISED RECORDS.--WSP 1513: 1954-56. WSP 1926: Drainage area. WRD Ariz. 1971: 1970(M).

GAGE.--Water-stage recorder and concrete-dam control with V-notch sharp-crested weir. Elevation of gage is 6,610 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Record shows inflow to Show Low Lake. Flow partly regulated by several small reservoirs, largest of which are Rainbow Lake and Scott Reservoir, combined capacity, 2,400 acre-ft. Diversions for irrigation of about 250 acres above station.

AVERAGE DISCHARGE.--38 years, 14.4 ft³/s, 10,430 acre-ft/yr; median of yearly mean discharges, 10 ft³/s, 7,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,550 ft³/s Dec. 18, 1978, gage height, 9.16 ft, from rating curve extended above 2,500 ft³/s; maximum gage height, 9.53 ft Dec. 26, 1971; no flow Oct. 5, 6, Dec. 10-19, 1964, Jan. 4-15, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 6	0145	*582	*4.33

Minimum daily discharge, 0.50 ft³/s, Nov. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	.92	1.3	e1.5	3.2	339	63	3.1	9.5	7.9	4.9	6.8
2	4.4	1.7	1.2	e.60	3.2	257	66	2.4	10	8.0	6.0	7.9
3	4.6	1.3	e.90	e1.0	3.2	221	34	2.1	10	7.9	5.3	7.4
4	3.8	1.0	e.80	e30	3.1	225	28	2.1	9.7	7.8	4.3	7.4
5	1.7	.74	e.80	e92	3.0	318	26	2.0	9.3	7.7	4.2	7.8
6	1.1	.66	e.80	e121	3.0	377	25	1.8	9.7	7.4	4.2	7.3
7	.83	.70	e.80	e55	3.0	131	23	1.8	9.6	7.2	4.0	3.9
8	.62	1.1	e.80	e31	3.1	60	21	2.0	9.3	7.1	4.0	3.3
9	1.9	1.2	e.80	e18	3.8	44	19	1.8	9.3	7.0	4.1	3.1
10	3.8	1.0	e.80	e14	4.9	41	17	1.5	9.7	7.0	4.1	2.6
11	3.7	1.0	e.80	e8.0	5.2	42	16	1.4	9.5	7.0	5.4	2.6
12	3.6	.98	e.90	e5.0	11	36	13	1.5	9.8	6.9	3.9	2.5
13	3.7	.87	1.9	e3.8	22	31	10	1.4	9.4	7.0	3.5	2.5
14	3.9	.64	1.9	e2.8	18	25	8.9	1.4	9.3	6.9	3.4	2.4
15	3.8	.56	1.6	e3.3	14	21	8.2	1.3	9.4	6.9	3.0	3.7
16	3.7	.50	6.4	e2.8	15	21	7.0	1.4	9.5	6.8	2.7	4.2
17	3.3	.61	4.6	e1.8	40	19	6.3	1.3	9.9	6.8	3.3	4.0
18	3.1	.92	e2.7	e2.8	43	21	8.1	1.4	10	6.7	4.6	3.8
19	4.0	.93	e.60	e2.8	35	31	7.7	1.4	9.8	6.6	3.8	3.8
20	4.2	.99	e7.2	e2.8	28	33	7.1	1.4	9.6	6.6	3.1	4.0
21	4.4	1.9	e2.2	e4.8	26	44	6.2	1.3	9.6	6.6	3.0	4.1
22	5.3	1.4	e2.6	e3.8	27	40	5.8	1.3	9.4	7.1	2.9	4.6
23	5.1	1.5	e1.1	e5.3	27	51	5.3	1.4	8.7	7.7	3.2	4.9
24	5.6	1.4	e1.1	e4.3	29	123	4.9	1.3	8.2	6.9	5.0	3.7
25	6.1	1.2	e.60	e4.3	27	131	4.6	1.4	8.2	6.7	5.2	3.7
26	6.0	1.7	e.60	e3.8	23	100	4.2	1.4	8.1	6.9	5.4	5.1
27	5.9	2.8	e2.2	e3.8	20	46	3.7	1.3	8.3	6.8	5.5	4.9
28	6.5	2.2	e4.3	e3.8	133	44	3.3	1.2	8.1	6.6	5.6	4.3
29	5.7	1.8	e24	e3.3	---	38	3.4	1.1	7.7	6.7	6.3	e2.6
30	2.3	1.6	e6.0	e4.8	---	45	3.4	1.5	7.8	6.3	6.4	e2.2
31	1.2	---	e18	e4.8	---	45	---	9.5	---	5.7	6.8	---
TOTAL	117.95	35.82	100.30	446.80	576.7	3000	459.1	57.2	276.4	217.2	137.1	131.1
MEAN	3.80	1.19	3.24	14.4	20.6	96.8	15.3	1.85	9.21	7.01	4.42	4.37
MAX	6.5	2.8	24	121	133	377	66	9.5	10	8.0	6.8	7.9
MIN	.62	.50	.60	.60	3.0	19	3.3	1.1	7.7	5.7	2.7	2.2
AC-FT	234	71	199	886	1140	5950	911	113	548	431	272	260

CAL YR	1990	TOTAL	751.21	MEAN	2.06	MAX	24	MIN	.28	AC-FT	1490
WTR YR	1991	TOTAL	5555.67	MEAN	15.2	MAX	377	MIN	.50	AC-FT	11020

e Estimated

LITTLE COLORADO RIVER BASIN

09391000 SHOW LOW LAKE NEAR SHOW LOW, AZ

LOCATION.--Lat 34°11'35", long 110°00'15", in NW¼ sec.10, T.9 N., R.22 E., Navajo County, Hydrologic Unit 15020005, on upstream side of right end of Jaques Dam on Show Low Creek, 3.4 mi northwest of Lakeside, and 4.5 mi southeast of Show Low.

DRAINAGE AREA.--73.0 mi².

PERIOD OF RECORD.--June 1953 to current year. Periodic readings of elevation and contents only, 1953-1985, published with record of Show Low Creek below Jaques Dam near Show Low, AZ (09392000).

GAGE.--Water-stage recorder, with periodic supplemental lake elevation readings. Elevation of gage is 6500.0 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by an earthen-rock dam; storage began in spring of 1953. The spillway is a concrete, broad-crested Ogee weir. Total capacity to spillway, 6,176 acre-ft, consisting of 1,070 acre-ft dead storage below elevation 6,535.0 ft (sill of outlet structure) and 5,106 acre-ft usable storage between elevation 6,535.0 ft and 6,570.0 ft (sill of overflow spillway). Capacity table prepared by Leeds, Hill, and Jewett, consulting engineers, from surveys by the firm. Water cannot be pumped when lake elevation is below 6,538.5 ft (sill of intake to pumping plant), but can be released to stream channel down to elevation 6,535.0 ft. Figures given herein represent total contents.

COOPERATION.--Periodic observations of lake elevation furnished by Navapache Electric Company.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 6,920 acre-ft Dec. 18, 1978 and Dec. 27, 1984; maximum elevation, 6,573.72 ft Dec. 27, 1984; minimum contents, not determined.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 6,340 acre-ft Mar. 6, elevation 6,570.82 ft; minimum contents, 1,160 acre-ft Oct. 25-28; minimum elevation 6,535.92 ft Oct. 28.

Capacity table (elevation, in feet, and contents, in acre-feet)

6,535	1,070	6,565	5,240
6,545	2,160	6,575	7,180
6,555	3,560		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200	1170	1220	1380	2220	3990	6250	6080	4900	4310	3480	3420
2	1210	1180	1220	1360	2220	4590	6240	6030	4880	4290	3490	3430
3	1220	1190	1220	1370	2220	5080	6220	5990	4870	4270	3490	3430
4	1220	1190	1220	1430	2230	5580	6220	5950	4860	4240	3480	3440
5	1230	1190	1220	1610	2230	6210	6220	5920	4840	4220	3480	3450
6	1230	1190	1220	1850	2230	6280	6220	5880	4820	4200	3480	3460
7	1230	1190	1220	1960	2230	---	6210	5850	4800	4190	3480	3460
8	1220	1190	1220	2020	2230	---	6200	5820	4780	4170	3480	3470
9	1210	1200	1220	2060	2240	6210	6200	5770	4760	4140	3470	3470
10	1210	---	1220	2080	2240	6210	6200	5730	4740	4100	3470	3480
11	1210	1200	1230	2090	2240	6200	6180	5680	4730	4070	3470	3490
12	1200	1200	1230	2100	2250	6190	6180	5650	4710	4040	3470	3480
13	1200	1200	1230	2110	2280	6190	6180	5610	4690	4010	3460	3480
14	1200	1200	1230	2110	2310	6180	6180	5560	4670	3980	3460	3470
15	1200	1200	1230	2120	2330	6180	6180	5530	4650	3950	3450	3460
16	1190	1200	1250	2120	2350	6180	6170	5490	4630	3920	3440	3450
17	1190	1200	1250	2120	2430	6180	6160	5450	4610	3890	3440	3450
18	1190	1200	1260	2130	2510	6190	6160	5410	4600	3860	3440	3450
19	1190	1200	1250	2130	2580	6200	6170	5370	4570	3830	3440	3440
20	1180	1200	1270	2140	2620	6200	6170	5330	4550	3800	3430	3440
21	1180	1210	1270	2140	2660	6200	6160	5290	4540	3770	3430	3440
22	1170	1210	1270	2150	2710	6200	6160	5250	4510	3740	3420	3440
23	1170	1210	1280	2160	2750	6220	6160	5210	4490	3710	3410	3440
24	1160	1210	1280	2170	2790	6300	6150	5170	4470	3680	3410	3440
25	1160	1210	1280	2170	2830	6290	6140	5130	4450	3660	3410	3430
26	1160	1210	1270	2180	2860	6250	6130	5090	4420	3620	3410	3430
27	1160	1220	1280	2190	2900	6250	6110	5060	4400	3590	3420	3430
28	1160	1220	1280	2190	3200	6240	6110	5010	4380	3570	3410	3430
29	1170	1220	1330	2200	---	6240	6110	4970	4350	3530	3410	3430
30	1170	1220	1340	2200	---	6230	6100	4930	4330	3510	3410	3420
31	1170	---	1370	2210	---	6250	---	4910	---	3480	3420	---
MAX	1230	---	1370	2210	3200	---	6250	6080	4900	4310	3490	3490
MIN	1160	---	1220	1360	2220	---	6100	4910	4330	3480	3410	3420
(*)	6536.09	6536.56	6538.11	6545.41	6552.66	6570.36	6569.61	6563.20	6559.82	6554.51	6554.10	6554.11
(**)	-20	+50	+150	+840	+990	+3050	-150	-1190	-580	-850	-60	0
CAL YR	1990	MAX	2510	MIN	1070	**	-1110					
WTR YR	1991	MAX	6340	MIN	1160	**	+2230					

* Elevation, in feet, at end of month.

** Change in contents, in acre-feet.

09392000 SHOW LOW CREEK BELOW JAKUES DAM, NEAR SHOW LOW, AZ

LOCATION.--Lat 34°11'47", long 110°00'13", in NW¼ sec.10, T.9 N., R.22 E., Navajo County, Hydrologic Unit 15020005, on right bank just downstream from Jaques Dam, 3.5 mi northwest of Lakeside, and 4.5 mi southeast of Show Low.

DRAINAGE AREA.--73.0 mi².

PERIOD OF RECORD.--November 1941 to January 1945, June 1953 to September 1955 (monthly discharge only), October 1955 to current year. Monthly discharge only November 1941 to January 1945, published in WSP 1313. Published as "at Jaques damsite, near Lakeside" 1941-45.

REVISED RECORDS.--WSP 1926: Drainage area. WDR AZ-81-1: 1979 (M).

GAGE.--Water-stage recorder and sharp-crested weir, with supplementary water-stage recorder on lake for recording flow over concrete spillway. Elevation of gage is 6,530 ft above National Geodetic Vertical Datum of 1929, from topographic map. November 1941 to January 1945 nonrecording gage at site 100 ft upstream at different datum.

REMARKS.--Records good. Record since 1953 shows release from Show Low Lake. Flow regulated by several reservoirs, largest of which are Show Low Lake, completed in 1953; Rainbow Lake, completed prior to 1941; and Scott Reservoir, completed in 1946 (combined capacity, 8,800 acre-ft). Diversions for irrigation of about 250 acres above Show Low Lake and diversion by pumping of floodwater stored in Show Low Lake to Forestdale Creek in Salt River basin (see record for Forestdale Creek diversion from Show Low Creek, near Show Low, elsewhere in this report). Flow occurred over the spillway from Mar. 5 to Apr. 16, 19, 20, during the current year.

AVERAGE DISCHARGE.--38 years (water years 1954-91), 8.59 ft³/s, 6,220 acre-ft/yr; median of yearly mean discharges, 3.9 ft³/s, 2,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,800 ft³/s, spillway flow entering 0.2 mi downstream from station, Dec. 27, 1984, lake elevation, 6,573.72 ft, from rating curve extended above 270 ft³/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 18, 1952, discharge, 6,250 ft³/s at site 5 mi downstream at Show Low, is the largest since at least 1940.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 310 ft³/s Mar. 6; no flow Oct. 29 to Dec. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.00	.00	1.0	.83	3.5	153	6.2	5.4	5.3	5.0	5.0
2	.08	.00	.00	1.0	2.0	3.6	160	6.2	5.4	5.4	5.0	5.0
3	.08	.00	.00	1.0	2.6	3.8	95	6.2	5.2	5.4	5.0	5.0
4	.08	.00	.00	1.0	2.6	3.9	72	6.2	5.2	5.4	5.0	5.0
5	.08	.00	.00	1.0	2.6	5.1	70	6.2	5.3	5.4	5.0	5.0
6	.08	.00	.00	1.1	2.6	310	68	6.0	5.4	5.4	5.0	3.4
7	.06	.00	.00	1.1	2.6	120	56	5.8	5.4	5.4	5.0	.17
8	2.5	.00	.00	1.1	2.6	e55	42	5.8	5.4	5.4	5.0	.17
9	3.8	.00	.00	1.1	2.6	e50	28	5.8	5.4	5.4	5.0	.17
10	3.8	.00	.00	1.1	2.8	33	21	5.8	5.4	5.4	5.0	.17
11	3.8	.00	.00	1.0	2.9	26	12	5.8	5.4	5.4	5.0	.17
12	3.8	.00	.51	.96	2.9	22	9.6	5.8	5.4	5.4	5.0	.17
13	3.8	.00	.74	.83	2.9	12	8.1	5.8	5.4	5.4	5.0	1.7
14	3.8	.00	.74	.83	2.9	10	8.7	5.8	5.4	5.4	5.0	4.9
15	3.8	.00	.74	.83	2.9	8.8	8.6	5.8	5.4	5.4	5.0	4.9
16	3.8	.00	.74	.83	2.9	7.7	6.7	5.8	5.4	5.3	5.0	4.9
17	3.8	.00	.74	.83	2.9	9.4	5.8	5.8	5.4	5.2	5.0	4.9
18	3.8	.00	.74	.83	3.0	12	5.8	5.8	5.4	5.2	5.0	4.9
19	3.8	.00	.74	.83	3.1	14	7.3	5.8	5.3	5.2	5.0	4.9
20	3.8	.00	.74	.83	3.1	16	8.0	5.8	5.3	5.2	5.0	4.9
21	3.7	.00	.68	.83	3.1	24	6.2	5.8	5.3	5.2	5.0	4.9
22	3.7	.00	.65	.83	3.1	21	6.2	5.8	5.3	5.2	5.0	4.9
23	3.6	.00	.65	.83	3.1	34	6.2	5.8	5.2	5.2	5.0	4.9
24	3.6	.00	.65	.83	3.2	131	6.2	5.8	5.2	5.2	5.0	4.9
25	3.6	.00	.65	.83	3.3	230	6.2	5.8	5.2	5.2	4.9	4.9
26	3.6	.00	.66	.83	3.3	191	6.2	5.8	5.2	5.2	4.9	4.9
27	3.6	.00	.69	.83	3.3	96	6.2	5.7	5.2	5.1	5.0	4.9
28	1.2	.00	.83	.83	3.3	106	6.2	5.6	5.2	5.1	4.9	4.9
29	.00	.00	1.1	.83	---	86	6.2	5.6	5.2	5.1	4.9	4.9
30	.00	.00	1.0	.83	---	103	6.2	5.5	5.2	5.1	5.0	4.9
31	.00	---	1.0	.83	---	113	---	5.5	---	5.0	5.0	---
TOTAL	75.24	0.00	14.99	28.23	79.03	1860.8	907.6	180.9	159.5	163.6	154.6	114.42
MEAN	2.43	.0000	.48	.91	2.82	60.0	30.3	5.84	5.32	5.28	4.99	3.81
MAX	3.8	.00	1.1	1.1	3.3	310	160	6.2	5.4	5.4	5.0	5.0
MIN	.00	.00	.00	.83	.83	3.5	5.8	5.5	5.2	5.0	4.9	.17
AC-FT	149	.00	30	56	157	3690	1800	359	316	325	307	227

CAL YR 1990 TOTAL 708.82 MEAN 1.94 MAX 4.9 MIN .00 AC-FT 1410
WTR YR 1991 TOTAL 3738.91 MEAN 10.2 MAX 310 MIN .00 AC-FT 7420

e Estimated

LITTLE COLORADO RIVER BASIN

09393500 SILVER CREEK NEAR SNOWFLAKE, AZ

LOCATION.--Lat 34°40'00", long 110°02'30", in SW¼NW¼ sec.29, T.15 N., R.22 E., Navajo County, Hydrologic Unit 15020005, on left bank 6 mi upstream from mouth and 11 mi north of Snowflake.

DRAINAGE AREA.--925 mi², of which 79 mi² is noncontributing.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WDR AZ-88-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,204.1 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Diversions for irrigation above station of about 6,600 acres. Flow regulated by several reservoirs - combined capacity, about 22,100 acre-ft.

AVERAGE DISCHARGE.--41 years, 17.9 ft³/s, 12,970 acre-ft/yr; median of yearly mean discharges, 12 ft³/s, 8,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s Jan. 19, 1952, gage height, 18.0 ft, from rating curve extended above 4,400 ft³/s on basis of peak discharge for former station near Woodruff; no flow for several days in water years 1971, 1974-78, 1980-82, 1984, 1986, 1990, 1991.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharges (ft ³ /s)	Gage Height (ft)
Mar. 2	unknown	*1,100	*6.13

No flow Nov. 21-Dec. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	.10	.00	e.70	1.5	169	99	4.3	3.7	.63	18	9.3
2	1.9	22	.00	e.70	1.8	e582	76	1.7	4.8	.98	4.5	9.1
3	2.3	18	.00	e.70	2.0	323	54	1.1	5.0	1.6	6.4	10
4	1.8	3.6	.00	e.90	2.1	185	27	1.3	3.6	2.1	5.8	6.6
5	1.5	1.5	.00	e1.5	2.0	210	16	.71	3.4	.96	5.6	49
6	1.8	.60	.00	4.5	1.9	172	8.7	1.2	3.5	1.1	2.7	202
7	1.1	.37	.00	25	1.9	88	5.5	1.3	2.4	1.2	3.2	39
8	.73	.22	.00	35	1.9	41	2.6	2.6	3.3	1.7	2.9	15
9	.70	.14	.00	22	1.9	21	1.3	12	3.2	2.0	3.7	11
10	.53	.08	.00	17	1.9	11	.83	5.9	4.3	1.0	2.2	9.8
11	.35	.05	.20	11	1.8	6.9	.49	2.8	3.8	.53	1.6	5.3
12	.18	.02	.75	8.2	1.4	3.5	.31	3.2	4.1	.41	4.4	5.1
13	.10	.02	.75	4.9	1.0	2.5	.17	4.5	3.5	.17	7.5	4.2
14	.08	.01	.69	3.4	.90	1.4	.12	3.1	1.9	1.3	7.4	4.7
15	.04	.01	1.3	2.3	.96	1.1	.08	2.5	1.7	.92	4.4	4.9
16	.01	.01	1.5	1.8	.99	.87	.05	2.1	1.2	2.7	3.5	3.8
17	.73	.01	2.2	1.5	1.1	.58	.02	1.3	5.7	3.8	2.9	2.1
18	.66	.01	4.2	1.4	1.0	.37	.01	6.4	2.6	2.9	3.8	4.1
19	.42	.01	2.9	1.4	.66	.26	.96	8.0	1.6	2.2	2.9	1.8
20	.64	.01	2.8	1.2	.44	.24	1.1	6.0	4.2	1.9	2.1	2.1
21	.77	.00	2.2	1.6	.27	.29	.57	4.9	3.6	3.9	2.3	2.9
22	.45	.00	e2.0	1.8	.17	.24	1.0	2.5	1.9	4.8	2.0	1.7
23	.25	.00	e1.9	1.7	.12	.10	1.4	1.6	1.5	7.3	9.9	6.3
24	.18	.00	e1.8	1.8	.05	.08	1.9	1.5	1.1	4.1	59	4.6
25	.11	.00	e1.7	1.6	.03	62	1.3	1.7	.72	4.0	117	2.7
26	.06	.00	e1.6	1.8	.02	110	1.9	1.4	.87	6.1	35	1.4
27	.17	.00	e1.4	1.9	.01	93	3.8	1.1	1.4	10	16	1.9
28	.19	.00	e1.3	1.9	.34	80	2.3	.51	1.4	3.0	11	2.7
29	.12	.00	e1.2	1.9	---	83	3.7	.33	.92	3.5	8.4	5.8
30	.08	.00	e1.0	1.9	---	140	2.2	2.2	.74	4.6	9.9	5.4
31	.07	---	e.90	1.8	---	125	---	4.5	---	3.5	8.9	---
TOTAL	19.82	46.77	34.29	164.80	30.16	2513.43	314.31	94.25	81.65	84.90	374.9	434.3
MEAN	.64	1.56	1.11	5.32	1.08	81.1	10.5	3.04	2.72	2.74	12.1	14.5
MAX	2.3	22	4.2	35	2.1	582	99	12	5.7	10	117	202
MIN	.01	.00	.00	.70	.01	.08	.01	.33	.72	.17	1.6	1.4
AC-FT	39	93	68	327	60	4990	623	187	162	168	744	861

CAL YR	1990	TOTAL	1018.35	MEAN	2.79	MAX	162	MIN	.00	AC-FT	2020
WTR YR	1991	TOTAL	4193.58	MEAN	11.5	MAX	582	MIN	.00	AC-FT	8320

e Estimated

09394500 LITTLE COLORADO RIVER AT WOODRUFF, AZ

LOCATION.--Lat 34°46'58", long 110°02'37", in NE¼SW¼ sec.17, T.16 N., R.22 E., Navajo County, Hydrologic Unit 15020002, on left bank at abandoned county road bridge in Woodruff, 3.7 mi downstream from Silver Creek.

DRAINAGE AREA.--8,072 mi², of which 297 mi² is noncontributing.

PERIOD OF RECORD.--March to May 1905; June to July 1905 (gage heights only); August 1905 to May 1907; July 1907 to April 1908, July to October 1908, December 1908, and December 1915 to September 1916 (gage heights only); October 1916 to August 1917 (monthly discharge only); September 1917 to March 1918, December 1918 to December 1919, April 1929 to December 1933, September 1935 to current year. Published as "near Woodruff" 1916-19, 1929-48.

REVISED RECORDS.--WSP 1049: 1917. WSP 1213: 1906, 1919(M). WDR AZ-88-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,130.3 ft above National Geodetic Vertical Datum of 1929. See WSP 1733 for history of changes prior to Sept. 22, 1949.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions above station for irrigation of about 22,000 acres, including a pump installation 1,000 ft upstream installed in spring of 1973. Some regulation by reservoirs above station; combined capacity, about 81,400 acre-ft.

AVERAGE DISCHARGE.--62 years (water years 1906, 1917, 1930-33, 1936-91), 51.3 ft³/s, 37,170 acre-ft/yr; median of yearly mean discharges, 43 ft³/s, 31,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, occurred Jan. 19, 1916; maximum discharge recorded, 25,000 ft³/s Dec. 5, 1919; maximum gage height, 22.9 ft from high-water mark in gage well, Dec. 19, 1978; no flow at times in most years prior to 1960 and in 1974, 1976, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	0740	*1,260	*9.51

Minimum daily discharge, 0.72 ft³/s June 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.7	3.1	2.2	e35	e3.5	77	116	2.9	3.8	1.9	16	18
2	6.0	136	2.3	e18	e3.5	775	94	3.4	3.6	.92	56	11
3	32	346	2.2	e6.6	3.6	405	66	2.5	4.9	.93	11	8.2
4	14	e78	2.1	13	4.1	236	36	2.3	3.9	1.7	8.1	7.1
5	8.3	e43	2.1	32	4.7	247	e22	2.2	3.2	1.9	7.2	38
6	6.2	e27	2.1	636	4.1	225	e16	2.1	2.8	1.9	5.0	244
7	5.8	e13	2.0	367	3.9	129	e9.6	2.5	2.7	13	3.2	116
8	4.6	e7.0	2.1	91	3.8	e54	e5.5	2.3	2.4	2.0	3.8	42
9	4.0	e3.0	2.1	e57	3.7	e39	e3.0	6.3	3.2	2.3	3.9	21
10	4.3	e3.0	2.1	e38	3.6	e24	e2.1	8.3	2.9	2.6	3.7	15
11	4.2	e3.4	2.3	e20	3.5	e15	2.3	3.7	3.4	2.0	2.7	12
12	4.1	e2.3	3.3	16	3.4	9.0	2.3	2.8	3.3	1.5	2.4	4.9
13	4.2	e2.0	4.8	11	3.1	6.9	2.1	3.3	3.5	1.1	7.7	7.0
14	3.9	2.0	3.4	9.0	3.1	5.0	1.5	2.9	3.2	.81	8.1	3.3
15	3.9	2.0	3.7	7.2	3.1	4.2	1.3	2.9	2.4	1.7	7.8	6.5
16	3.1	1.9	33	5.9	3.1	3.9	1.7	2.6	2.5	1.6	4.6	4.0
17	2.3	1.9	188	4.9	3.1	3.7	1.7	2.5	2.3	2.2	4.0	3.6
18	3.0	1.9	e61	4.1	3.1	3.3	1.7	2.3	4.8	3.0	3.8	3.6
19	3.3	1.9	e9.6	4.0	3.0	3.0	1.3	6.7	2.2	2.0	4.2	4.3
20	8.4	1.9	e3.8	3.8	2.9	3.0	1.6	4.8	1.5	1.4	3.4	3.0
21	11	1.7	e5.5	4.3	3.3	3.4	1.9	3.5	4.0	2.1	2.9	2.9
22	13	1.9	e4.4	4.0	2.8	3.9	2.0	3.5	2.6	3.4	3.1	3.6
23	4.2	1.9	e4.6	4.6	2.6	3.8	1.9	2.6	2.1	3.7	2.7	71
24	3.1	1.9	e4.0	4.8	2.5	3.6	2.2	2.3	1.4	5.0	69	46
25	2.5	2.0	e3.5	4.5	2.7	30	2.6	2.0	1.3	2.6	117	7.5
26	1.9	2.2	e3.3	4.2	2.7	127	2.5	2.2	.72	5.8	49	3.4
27	1.6	2.4	e3.3	4.5	2.7	118	2.7	1.8	.77	7.7	22	2.3
28	2.4	2.3	e3.3	4.6	2.9	83	3.6	1.4	1.5	4.6	31	2.7
29	e2.0	2.2	263	4.0	---	86	2.8	1.4	1.2	2.3	16	4.3
30	1.7	2.1	110	e4.0	---	147	3.8	.80	1.2	2.9	8.6	6.4
31	2.6	---	62	e4.0	---	153	---	2.9	---	3.4	21	---
TOTAL	175.3	700.9	801.1	1427.0	92.1	3026.7	413.7	93.70	79.29	89.96	508.9	722.6
MEAN	5.65	23.4	25.8	46.0	3.29	97.6	13.8	3.02	2.64	2.90	16.4	24.1
MAX	32	346	263	636	4.7	775	116	8.3	4.9	13	117	244
MIN	1.6	1.7	2.0	3.8	2.5	3.0	1.3	.80	.72	.81	2.4	2.3
AC-FT	348	1390	1590	2830	183	6000	821	186	157	178	1010	1430

CAL YR 1990 TOTAL 7725.28 MEAN 21.2 MAX 1060 MIN .05 AC-FT 15320
WTR YR 1991 TOTAL 8131.25 MEAN 22.3 MAX 775 MIN .72 AC-FT 16130

e Estimated

LITTLE COLORADO RIVER BASIN

09395350 PUERCO RIVER NEAR CHURCH ROCK, NM

LOCATION--Lat 35°36'04", long 108°35'12" in SE¼NW¼ sec.24, T.16 N., R.17 W., McKinley County, Hydrologic Unit 15020006, on right bank 100 ft downstream from three 5 ft CMC pipe bridge on dirt road 1 mi northwest of State Highway 566, 2.7 mi upstream from Hard Ground Canyon, 7.4 mi upstream from South Fork, and 9.5 mi northeast of Gallup.

DRAINAGE AREA.-- 205 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1982, May 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 6,710 ft, above National Geodetic Vertical Datum of 1929, from topographic map. Prior to December 4, 1980 at site 1.7 mi upstream at different datum.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--7 years (water years 1978-82, 1990-91), 7.16 ft³/s, 5,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,040 ft³/s Aug. 24, 1982, gage height, 4.94 ft from floodmarks, from rating curve extended above 20 ft³/s on basis of slope-area measurements at gage heights 3.80 ft and 4.80 ft; no flow at times.

EXTREMES FOR MAY TO SEPTEMBER 1989.--Maximum discharge, 1,460 ft³/s at 2400 hours Aug. 1, gage height, 4.01 ft; no flow most of time.

EXTREMES FOR 1990 WATER YEAR.--Maximum discharge, 890 ft³/s at 2030 hours July 9, gage height, 3.37 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,020 ft³/s at 2115 hours Aug. 6, gage height, 3.68 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	.00	.00	10	.00
2	---	---	---	---	---	---	---	.00	.00	.00	18	.00
3	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
4	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
5	---	---	---	---	---	---	---	.00	.00	.00	.00	65
6	---	---	---	---	---	---	---	.00	.00	.00	.00	1.4
7	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
8	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
9	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
10	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
11	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
12	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
13	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
14	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
15	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
16	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
17	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
18	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
19	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
20	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
21	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
22	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
23	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
24	---	---	---	---	---	---	---	.00	.00	12	.00	.00
25	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
26	---	---	---	---	---	---	---	.00	.00	46	.00	.00
27	---	---	---	---	---	---	---	.00	.00	9.7	.00	.00
28	---	---	---	---	---	---	---	.00	.00	53	.00	.00
29	---	---	---	---	---	---	---	.00	.00	.35	.00	.00
30	---	---	---	---	---	---	---	.00	.00	1.7	.00	.00
31	---	---	---	---	---	---	---	.00	---	.00	.00	---
TOTAL	---	---	---	---	---	---	---	---	0.00	122.75	28.00	66.40
MEAN	---	---	---	---	---	---	---	---	.000	3.96	.90	2.21
MAX	---	---	---	---	---	---	---	---	.00	53	18	65
MIN	---	---	---	---	---	---	---	---	.00	.00	.00	.00
AC-FT	---	---	---	---	---	---	---	---	.00	243	56	132

LITTLE COLORADO RIVER BASIN

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09395350 PUERCO RIVER NEAR CHURCH ROCK, NM -- Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.7
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	52	11	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	30	4.4	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	32	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	80	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	78	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	22	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	74	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.8	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.9	20	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	47	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	40	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.6
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.6
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.6
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.7
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	381.90	122.40	26.20
MEAN	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	12.3	3.95	.87
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	80	47	6.6
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	757	243	52

WTR YR 1990 TOTAL 530.50 MEAN 1.45 MAX 80 MIN .00 AC-FT 1050

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	.00	.00	.00	e.00	.00	.00	.00	.00	.00	18	.00
2	3.0	.00	.00	.00	e.00	.00	.00	.00	.00	.00	84	.00
3	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	e5.0	.00
4	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	e3.0	.00
5	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	100	.00
7	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	32	.00
8	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	e5.0	.00
9	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	e3.0	.00
10	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	6.5	.00
11	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	9.3	.00
12	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	e1.0	.00
13	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
19	18	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
20	194	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
21	e10	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
22	e5.0	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
27	e.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
28	e.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	e.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	e.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	e.00	---	.00	---	.00	---	.00	.00	---
TOTAL	266.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	266.80	0.00
MEAN	8.58	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	8.61	.0000
MAX	194	.00	.00	.00	.00	.00	.00	.00	.00	.00	100	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	528	.00	.00	.00	.00	.00	.00	.00	.00	.00	529	.00

CAL YR 1990 TOTAL 796.50 MEAN 2.18 MAX 194 MIN .00 AC-FT 1580
WTR YR 1991 TOTAL 532.80 MEAN 1.46 MAX 194 MIN .00 AC-FT 1060

e Estimated

LITTLE COLORADO RIVER BASIN

09395350 PUERCO RIVER NEAR CHURCH ROCK, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979, 1988 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	H-2/ H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18/ O-16 STABLE ISOTOPE RATIO PER MIL (82085)	SEDI- MENT, DIS- CHARGE, SUS- PENDE PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER 0.062 MM (70331)	SED. SUSP. FALL DIAM. % FINER THAN 0.002 MM (70337)
AUG									
01...	1900	294	530	7.5	-64.0	-9.35	73300	58200	-- 41
02...	0120	449	990	7.4	--	--	160000	194000	80 --
02...	0130	271	1120	7.4	--	--	179000	131000	80 --
02...	0210	325	930	7.5	--	--	160000	140000	81 --
02...	0230	486	860	7.5	--	--	155000	203000	81 --
02...	0310	495	820	7.5	-84.5	-12.35	144000	192000	-- 42
02...	0350	349	810	7.3	--	--	141000	133000	74 --
02...	0430	211	800	7.4	--	--	132000	75200	77 --
06...	2100	375	930	7.5	--	--	462000	468000	46 --
06...	2110	1020	830	7.4	-55.5	-9.15	258000	713000	-- 36
06...	2140	993	650	7.4	--	--	168000	450000	55 --
06...	2200	987	630	7.4	--	--	178000	474000	45 --
06...	2240	769	620	7.5	--	--	182000	378000	46 --
06...	2320	598	630	7.4	--	--	199000	321000	42 --
06...	2350	413	640	7.4	--	--	162000	181000	51 --
07...	0010	286	650	7.5	--	--	132000	102000	61 --

[illegible]

LITTLE COLORADO RIVER BASIN

79

09395630 PUERCO RIVER NEAR MANUELITO, NM

LOCATION--Lat 35°27'42", long 108°56'42" in SE¼NW¼ sec.10, T.14 N., R.20 W., McKinley County, Hydrologic Unit 15020006, on right bank on downstream side of Atchison, Topeka and Santa Fe Railway bridge, 200 ft upstream from Interstate Highway 40, 1.2 mi upstream from Hunting Canyon and 12.6 mi west of Gallup.

DRAINAGE AREA.-- 990 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1989 to current year.

GAGE.--Water-stage recorder, crest stage gage and concrete control. Elevation of gage is 6,290 ft, above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,900 ft³/s, July 13, 1990, gage height, 9.26 ft, from rating curve extended above 400 ft³/s on basis of slope-area measurement of peak flow.; minimum 1.6 ft³/s, most of time.

EXTREMES FOR MAY TO SEPTEMBER 1989.--Maximum discharge, 1,400 ft³/s, at 0115 hours, July 27, gage height, 5.75 ft; minimum, 1.6 ft³/s most of time.

EXTREMES FOR 1990 WATER YEAR.--Maximum discharge, 7,900 ft³/s, at 1930 hours, July 13, gage height, 9.26 ft; minimum, 1.6 ft³/s most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,950 ft³/s, at 0230 hours, Oct. 20, gage height, 6.90 ft; minimum, 1.6 ft³/s, most of time each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	e1.6	e1.6	44	e1.6
2	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	104	e1.6
3	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e24	e1.6
4	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
5	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	20
6	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e500
7	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
8	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
9	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
10	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
11	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
12	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
13	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
14	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
15	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
16	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
17	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
18	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	82	e1.6
19	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	149	13
20	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	5.1	e1.6
21	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
22	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
23	---	---	---	---	---	---	---	e1.6	e1.6	e1.6	e1.6	e1.6
24	---	---	---	---	---	---	---	e1.6	e1.6	e20	e1.6	e1.6
25	---	---	---	---	---	---	---	e1.6	e1.6	e15	e1.6	e1.6
26	---	---	---	---	---	---	---	e1.6	e1.6	75	e1.6	e1.6
27	---	---	---	---	---	---	---	e1.6	e1.6	211	e1.6	e1.6
28	---	---	---	---	---	---	---	e1.6	e1.6	89	e1.6	e1.6
29	---	---	---	---	---	---	---	e1.6	e1.6	189	e1.6	e1.6
30	---	---	---	---	---	---	---	e1.6	e1.6	44	e1.6	e1.6
31	---	---	---	---	---	---	---	e1.6	---	192	e1.6	---
TOTAL	---	---	---	---	---	---	---	---	48.0	871.8	448.1	576.2
MEAN	---	---	---	---	---	---	---	---	1.60	28.1	14.5	19.2
MAX	---	---	---	---	---	---	---	---	1.6	211	149	500
MIN	---	---	---	---	---	---	---	---	1.6	1.6	1.6	1.6
AC-FT	---	---	---	---	---	---	---	---	95	1730	889	1140

e Estimated

LITTLE COLORADO RIVER BASIN

09395630 PUERCO RIVER NEAR MANUELITO, NM -- Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
2	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	36
3	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
4	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
5	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	23
6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	23	e1.6	e1.6
7	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	48	77	e1.6
8	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	63	e1.6	e1.6
9	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
10	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	38	e1.6	e1.6
11	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
12	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	32	e1.6	e1.6
13	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	630	e1.6	e1.6
14	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	77	243	e1.6
15	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	171	e1.6
16	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	244	16
17	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	46	105	e1.6
18	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	10	e1.6	e1.6
19	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	9.7	e1.6	e1.6
20	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	20	88	18
21	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	85	15
22	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	13
23	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	34	e1.6	165
24	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	52	e1.6	80
25	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	35
26	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
27	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
28	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
29	e1.6	e1.6	e1.6	e1.6	---	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
30	e1.6	e1.6	e1.6	e1.6	---	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
31	20	---	e1.6	e1.6	---	e1.6	---	e1.6	---	e1.6	e1.6	---
TOTAL	68.0	48.0	49.6	49.6	44.8	49.6	48.0	49.6	48.0	1111.5	1051.4	434.6
MEAN	2.19	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	35.9	33.9	14.5
MAX	20	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	630	244	165
MIN	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
AC-FT	135	95	98	98	89	98	95	98	95	2200	2090	862

WTR YR 1990 TOTAL 3052.7 MEAN 8.36 MAX 630 MIN 1.6 AC-FT 6060

e Estimated

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	72	e1.6
2	29	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	190	e1.6
3	18	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	28	e1.6
4	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	35	33
5	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	43	e1.6	e1.6	e1.6	4.7	11
6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	92	e1.6	e1.6	e1.6	106	e1.6
7	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	122	e1.6
8	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	59	e1.6	e1.6	e1.6	e1.6	e1.6
9	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
10	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
11	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	64	e1.6	20	e1.6
12	9.3	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	59	e1.6	e1.6	e1.6
13	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	45	e1.6	e1.6	e1.6
14	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	44	e1.6	e1.6	e1.6
15	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
16	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
17	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
18	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
19	54	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	2.8
20	707	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	6.3
21	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
22	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
23	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
24	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
25	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
26	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	47	258	e1.6
27	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	62	145	e1.6
28	e1.6	e1.6	e1.6	e1.6	e1.6	42	e1.6	e1.6	e1.6	e1.6	23	e1.6
29	e1.6	e1.6	e1.6	e1.6	---	32	e1.6	e1.6	e1.6	37	7.3	e1.6
30	e1.6	e1.6	e1.6	e1.6	---	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6	e1.6
31	e1.6	---	e1.6	e1.6	---	e1.6	---	e1.6	---	e1.6	e1.6	---
TOTAL	863.2	48.0	49.6	49.6	44.8	120.4	237.2	49.6	253.6	190.8	1041.4	94.7
MEAN	27.8	1.60	1.60	1.60	1.60	3.88	7.91	1.60	8.45	6.15	33.6	3.16
MAX	707	1.6	1.6	1.6	1.6	42	92	1.6	64	62	258	33
MIN	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
AC-FT	1710	95	98	98	89	239	470	98	503	378	2070	188

CAL YR 1990 TOTAL 3847.9 MEAN 10.5 MAX 707 MIN 1.6 AC-FT 7630
WTR YR 1991 TOTAL 3042.9 MEAN 8.34 MAX 707 MIN 1.6 AC-FT 6040

e Estimated

LITTLE COLORADO RIVER BASIN

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09395630 PUERCO RIVER NEAR MANUELITO, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)
OCT 20...	0030	--	1140	269	7.8	--	--	--	--	--	--
OCT 20-20	0030	1190	--	--	--	--	98	31	4.9	52	2
20...	0100	--	1260	492	7.6	--	--	--	--	--	--
20...	0200	--	2800	341	7.7	--	77	24	4.1	44	2
20...	0200	--	--	--	--	--	--	--	--	--	--
20...	0330	--	1890	412	7.8	--	--	--	--	--	--
OCT 20-20	0330	1770	--	--	--	--	120	37	6.4	43	2
20...	0410	--	1660	489	7.7	--	--	--	--	--	--
JUN 11...	1200	--	--	--	--	--	--	--	--	--	--
13...	2120	--	1270	890	7.5	--	--	--	--	--	--
AUG 02...	1445	--	93	--	--	--	--	--	--	--	--
06...	0030	--	1470	1050	7.4	--	--	--	--	--	--
15...	0800	--	--	--	--	14.5	--	--	--	--	--
26...	2240	--	2000	420	7.4	--	--	--	--	--	--

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
OCT 20-20	3.6	160	64	10	0.40	0.020	8.6	271	1	50
20...	3.5	92	56	9.3	0.30	0.030	6.6	204	<1	35
OCT 20-20	4.3	144	100	9.6	0.50	0.030	8.4	296	1	54
DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 20-20	<0.5	90	<1.0	<5	<3	<10	72	<10	8	3
20...	<0.5	60	1.0	<5	<3	<10	99	<10	7	4
OCT 20-20	<0.5	90	<1.0	<5	<3	<10	62	<10	9	3

< Actual value is known to be less than value shown.

LITTLE COLORADO RIVER BASIN

09395630 PUERCO RIVER NEAR MANUELITO, NM -- Continued

WATER-QUALITY RECORDS

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	H-2/ H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18/ O-16 STABLE ISOTOPE RATIO PER MIL (82085)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 20...	--	--	--	--	--	--	--	--	--	80200
OCT 20-20	<10	<10	<1	<1.0	400	<6	12	--	--	102000
20...	--	--	--	--	--	--	--	--	--	119000
20...	<10	<10	<1	<1.0	310	<6	<3	--	--	92500
20...	--	--	--	--	--	--	--	--	--	69600
20...	--	--	--	--	--	--	--	--	--	69200
OCT 20-20	<10	<10	<1	<1.0	490	<6	4	--	--	77200
20...	--	--	--	--	--	--	--	--	--	57300
JUN 11...	--	--	--	--	--	--	--	-93.5	-11.60	--
13...	--	--	--	--	--	--	--	-54.5	-7.25	96600
AUG 02...	--	--	--	--	--	--	--	--	--	E130000
06...	--	--	--	--	--	--	--	--	--	264000
15...	--	--	--	--	--	--	--	--	--	66500
26...	--	--	--	--	--	--	--	-31.0	-5.60	102000
DATE	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .031 MM (70341)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)
OCT 20...	248000	55	--	--	--	--	--	--	--	--
OCT 20-20	328000	--	33	36	40	45	54	--	--	--
20...	403000	50	--	--	--	--	--	--	--	--
20...	698000	--	29	36	39	45	54	--	--	--
20...	--	--	17	22	30	44	54	70	90	100
20...	353000	66	--	--	--	--	--	--	--	--
OCT 20-20	369000	--	13	17	23	33	40	--	--	--
20...	256000	83	--	--	--	--	--	--	--	--
JUN 13...	330000	--	37	46	49	55	70	81	95	99
AUG 02...	--	--	58	66	71	81	90	93	98	99
06...	1050000	68	--	--	--	--	--	--	--	--
15...	--	--	44	54	63	73	83	92	97	100
26...	549000	--	46	48	53	59	70	78	93	99
DATE	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	GROSS ALPHA SEDI- MENT (PCI/G) (01507)	TH-230 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75939)	U-238 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75940)	U-234 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75942)	RA-226 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75944)	TH-232 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75953)	U-235 SED, SUSP, TOTAL, DRY WGT (PCI/L) (75975)	SAM- PLING METHOD, CODES (82398)
OCT 20...	--	--	--	--	--	--	--	--	--	50
OCT 20-20	--	--	9	1.6	1.2	1.3	--	1.7	<0.1	50
20...	--	--	--	--	--	--	--	--	--	50
20...	--	--	<6	1.5	1.3	1.1	--	1.6	<0.1	50
20...	100	100	--	--	--	--	--	--	--	30
20...	--	--	--	--	--	--	--	--	--	50
OCT 20-20	--	--	--	1.2	1.4	1.0	--	1.3	<0.1	50
20...	--	--	--	--	--	--	--	--	--	50
JUN 13...	100	--	--	1.1	1.2	1.2	--	0.9	<0.1	50
AUG 02...	100	--	--	--	--	--	--	--	--	10
06...	--	--	--	--	--	--	--	--	--	50
15...	--	--	--	--	--	--	--	--	--	30
26...	100	--	11	1.1	1.5	1.4	1.5	1.0	<0.1	50

< Actual value is known to be less than value shown.

LITTLE COLORADO RIVER BASIN

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09395990 BLACK CREEK BELOW WEST FORK BLACK CREEK, NEAR HOUCK, AZ

LOCATION.--Lat 35°20'00", long 109°12'13", Apache County, Hydrologic Unit 15020006, in Navajo Indian Reservation, on right bank 3.5 mi north of Houck, and 5.8 mi downstream from West Fork Black Creek.

DRAINAGE AREA.--628 mi².

PERIOD OF RECORD.--March 1989 to current year. August 1986 to March 1989, station operated by the Navajo Nation (records unpublished).

GAGE.--Water-stage recorder. Elevation of gage is 6,100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR CURRENT PERIOD.--March to September 1989: Maximum discharge during period, 1,020 ft³/s, Aug. 1, gage height, 4.95 ft, from rating curve extended above 140 ft³/s; no flow for many days.

Water Year 1990: Maximum discharge, 1,100 ft³/s, Aug. 14, gage height, 5.08 ft, from rating curve extended above 140 ft³/s; no flow for many days.

Water year 1991: Maximum discharge, 719 ft³/s, Aug. 7, gage height, 4.43 ft, from rating curve extended above 140 ft³/s; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	6.8	.00	.00	.00	59	.00
2	---	---	---	---	---	---	5.5	.00	.00	.00	13	.00
3	---	---	---	---	---	---	4.8	.00	.00	.00	3.5	.00
4	---	---	---	---	---	---	4.0	.00	.00	.00	1.2	.00
5	---	---	---	---	---	---	2.9	.00	.00	.00	.16	18
6	---	---	---	---	---	---	2.6	.00	.00	.00	.00	41
7	---	---	---	---	---	---	2.2	.00	.00	.00	.00	2.9
8	---	---	---	---	---	---	1.0	.00	.00	.00	34	.70
9	---	---	---	---	---	---	.50	.00	.00	.00	7.7	.08
10	---	---	---	---	---	---	.00	.00	.00	.00	8.2	.00
11	---	---	---	---	---	---	.00	.00	.00	.00	2.5	.00
12	---	---	---	---	---	---	.00	.00	.00	.00	.55	.00
13	---	---	---	---	---	---	.00	.00	.00	.00	.01	.00
14	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
15	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
16	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
17	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
18	---	---	---	---	---	---	.00	.00	.00	.00	2.3	.00
19	---	---	---	---	---	---	.00	.00	.00	.00	165	.00
20	---	---	---	---	---	---	.00	.00	.00	.00	9.3	.00
21	---	---	---	---	---	---	.00	.00	.00	.00	2.0	.00
22	---	---	---	---	---	---	.00	.00	.00	.00	.76	.00
23	---	---	---	---	---	11	.00	.00	.00	.00	.00	.00
24	---	---	---	---	---	10	.00	.00	.00	.00	.00	.00
25	---	---	---	---	---	10	.00	.00	.00	.00	.00	.00
26	---	---	---	---	---	15	.00	.00	.00	14	.00	.00
27	---	---	---	---	---	25	.00	.00	.00	2.3	.00	.00
28	---	---	---	---	---	15	.00	.00	.00	1.4	.00	.00
29	---	---	---	---	---	15	.00	.00	.00	66	.00	.00
30	---	---	---	---	---	15	.00	.00	.00	17	.00	.00
31	---	---	---	---	---	8.5	---	.00	---	45	.00	---
TOTAL	---	---	---	---	---	---	30.30	0.00	0.00	145.70	309.18	62.68
MEAN	---	---	---	---	---	---	1.01	.000	.000	4.70	9.97	2.09
MAX	---	---	---	---	---	---	6.8	.00	.00	66	165	41
MIN	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
AC-FT	---	---	---	---	---	---	60	.00	.00	289	613	124

LITTLE COLORADO RIVER BASIN

09395990 BLACK CREEK BELOW WEST FORK BLACK CREEK, NEAR HOUCK, AZ--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	e.00	13	.00	.01	.00	.00	3.2	.00
2	.00	.00	.00	.00	e.00	8.8	.02	.00	.00	.00	5.1	.00
3	.00	.00	.00	.00	e.00	6.8	.23	.00	.00	.00	2.4	.00
4	.00	.00	.00	.00	e.00	4.4	.07	.01	.00	.00	.51	.00
5	.00	.00	.00	.00	e.00	4.4	.22	.00	.00	.00	.01	.47
6	.00	.00	.00	.00	e.00	2.4	.39	.00	.00	.00	.00	49
7	.00	.00	.00	.00	e.00	1.8	.44	.00	.00	1.4	.00	33
8	.00	.00	.00	.00	e.00	1.7	.40	.00	.00	10	.00	10
9	.00	.00	.00	.00	e.00	1.2	.24	.00	.00	7.9	.00	119
10	.00	.00	.00	.00	e.00	1.2	.01	.00	.00	2.0	.00	7.5
11	.00	.00	.00	.00	.00	2.3	.00	.00	.00	.30	.00	1.4
12	.00	.00	.00	.00	.61	2.0	.00	.00	.00	31	.00	.09
13	.00	.00	.00	.00	3.0	1.8	.00	.00	.00	7.9	.00	.00
14	.00	.00	.00	.00	4.3	2.5	.00	.00	.00	40	117	.00
15	.00	.00	.00	.00	3.5	2.1	.00	.00	.00	32	196	.00
16	.00	.00	.00	.19	3.8	1.7	.00	.00	.00	6.2	22	.00
17	.00	.00	.00	.47	3.8	1.3	.00	.00	.00	46	10	.00
18	.00	.00	.00	.83	3.3	1.2	.00	.00	.00	84	2.5	.68
19	.00	.00	.00	1.9	2.9	.87	.00	.00	.00	16	1.0	13
20	.00	.00	.00	4.1	2.4	.61	.00	.00	.00	9.3	.03	13
21	.00	.00	.00	1.9	2.1	.43	.00	.00	.00	6.5	17	34
22	.00	.00	.00	.58	1.5	.14	.00	.00	.00	3.2	6.3	5.7
23	.00	.00	.00	.14	1.8	.01	.00	.00	.00	.29	1.9	14
24	.00	.00	.00	e.00	4.6	.00	.00	.00	.00	.00	.65	9.5
25	.00	.00	.00	e.00	7.9	.00	.00	.00	.00	.00	.00	2.5
26	.00	.00	.00	e.08	13	.00	.00	.00	.00	.00	.00	1.0
27	.00	.00	.00	e.08	9.5	.00	.00	.00	.00	.00	.00	.23
28	.00	.00	.00	e.08	15	.00	.00	.00	.00	.00	.00	.46
29	.00	.00	.00	e.00	---	.00	.00	.00	.00	.00	.00	.05
30	.00	.00	.00	e.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	e.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	10.35	83.01	62.66	2.02	0.02	0.00	303.99	385.60	314.58
MEAN	.0000	.0000	.0000	.33	2.96	2.02	.067	.001	.0000	9.81	12.4	10.5
MAX	.00	.00	.00	4.1	15	13	.44	.01	.00	.84	196	119
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	21	165	124	4.0	.04	.00	603	765	624

WTR YR 1990 TOTAL 1162.23 MEAN 3 18 MAX 196 MIN .00 AC-FT 2310

e Estimated

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.10	e.00	e.00	13	48	.49	.00	.00	2.8	.00
2	.00	.01	.50	e.00	e.00	40	31	.44	.00	.00	3.9	.00
3	.00	2.0	.54	e.00	e.00	43	20	.34	.00	.00	.62	.00
4	.00	2.3	.00	e5.0	.00	27	13	.28	.00	.00	2.8	.00
5	.00	.74	.00	e50	.00	44	8.6	.28	.00	.00	.00	12
6	.00	.38	.01	e40	.68	143	6.3	.25	.00	.00	1.7	60
7	.00	.69	.03	e25	6.3	92	4.2	.18	.00	.00	251	11
8	.00	.77	.00	e20	15	24	2.6	.06	.00	.00	20	2.1
9	.00	1.8	.00	e11	8.7	14	1.7	.00	.00	.00	6.3	.26
10	.00	.95	.00	e5.0	10	10	1.2	.00	.00	.00	2.6	.00
11	.00	.60	.00	e3.0	10	7.0	14	.00	.00	.00	1.6	.00
12	.00	.45	.01	e2.0	10	4.1	26	.00	.06	.09	.65	.00
13	.00	.37	3.3	e1.0	10	3.2	15	.00	1.1	.00	.22	.00
14	.00	.27	2.9	e.50	8.4	3.2	7.3	.00	.33	.00	.00	.00
15	.00	.24	1.7	e.00	11	3.9	3.4	.00	1.3	.00	17	.00
16	.00	.20	2.7	e.00	11	4.3	6.6	.00	.92	.00	56	.00
17	.00	.17	e2.0	e.00	21	3.9	19	.00	.00	.00	5.3	.00
18	.00	.12	e1.0	e.00	14	3.4	19	.00	.00	.00	1.4	.00
19	1.5	.16	e.50	e.00	6.6	2.8	22	.00	.00	.00	.30	.00
20	24	.09	e.00	e.00	4.6	2.2	18	.00	.00	.00	.00	.00
21	3.9	.38	e.00	e.00	2.8	3.0	11	.00	.00	.00	.00	.00
22	1.4	.47	e.00	e.00	1.8	3.9	10	.00	.00	.00	.00	.00
23	.49	.27	e.00	e.00	1.2	3.8	8.0	.00	.00	.00	.00	.00
24	.16	.19	e.00	e.00	1.1	2.7	7.0	.00	.00	4.6	.00	.00
25	.00	.03	e.00	e.00	1.2	2.1	5.1	.00	.00	77	.00	.00
26	.00	.30	e.00	e.00	1.1	1.9	4.6	.00	.00	35	.00	.00
27	.00	.97	e.00	e.00	.83	2.2	2.8	.00	.00	15	.00	.00
28	.00	.84	e.00	e.00	1.4	4.6	1.3	.00	.00	2.6	.00	.00
29	.00	1.2	e.00	e.00	---	18	.89	.00	.00	.44	.00	.00
30	.00	2.1	e.00	e.00	---	30	.60	.00	.00	.00	.00	.00
31	.00	---	e.00	e.00	---	57	---	.00	---	.00	.00	---
TOTAL	31.45	19.06	15.29	162.50	158.71	617.2	338.19	2.32	3.71	134.73	374.19	85.36
MEAN	1.01	.64	.49	5.24	5.67	19.9	11.3	.075	.12	4.35	12.1	2.85
MAX	24	2.3	3.3	50	21	143	48	.49	1.3	77	251	60
MIN	.00	.00	.00	.00	.00	1.9	.60	.00	.00	.00	.00	.00
AC-FT	62	38	30	322	315	1220	671	4.6	7.4	267	742	169

CAL YR 1990 TOTAL 1228.03 MEAN 3.36 MAX 196 MIN .00 AC-FT 2440
WTR YR 1991 TOTAL 1942.71 MEAN 5.32 MAX 251 MIN .00 AC-FT 3850

e Estimated

85

LOCATION.--Lat 35°10'56", long 109°26'47", in NW¼NE¼ sec.35, T.21 N., R.27 E., Apache County, Hydrologic Unit 15020007, on right bank 0.5 mi upstream from Atchison, Topeka, and Santa Fe Railway Co. bridge, and 1.0 mi southwest of Chambers.

PERIOD OF RECORD.--Water years 1971-72 (annual maximums only), January 1973 to current year (daily mean discharge above 500 ft³/s only).

GAGE.--Water-stage recorder. Elevation of gage is 5,720 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 7, 1989, water stage recorder at site 0.5 mi downstream at different datum, now used as supplementary gage.

REMARKS.--Records poor. Only daily mean discharges above 500 ft³/s are published. Small diversions above station for irrigation and livestock. Red Lake, near the headwaters of Black Creek, was built in 1954; the capacity was 9,700 acre-ft, but capacity may have been reduced by silting.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,800 ft³/s Sept. 30, 1971, gage height, 9.65 ft, site and datum then in use; no flow observed on many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 20	0800	4,400	5.23
Aug. 27	0630	*4,700	*5.45

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

[illegible]

LITTLE COLORADO RIVER BASIN

09397300 LITTLE COLORADO RIVER NEAR JOSEPH CITY, AZ

LOCATION.--Lat 34°54'04", long 110°15'17", in NE¼SE¼ sec.6, T.17 N., R.20 E., Navajo County, Hydrologic Unit 15020008, on right bank just upstream from diversion dam, 5.4 mi west of Holbrook, 5.7 mi southeast of Joseph City, and 8.5 mi downstream from Puerco River.

DRAINAGE AREA.--12,384 mi², of which 347 mi² are noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1973 to current year (daily discharge only for those days on which instantaneous discharge exceeds 500 ft³/s).

REVISED RECORDS.--WDR AZ-88-1: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete diversion dam. Datum of gage is 5,031.10 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). From Jan. 9, 1980, to Sept. 30, 1990, on left bank at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Published record includes only those days when instantaneous discharge over the crest of the dam exceeds 500 ft³/s. Diversions above station for irrigation of about 23,000 acres, diversions at dam on right bank of most low flows for irrigation of about 1,500 acres in vicinity of Joseph City. Some regulation by reservoirs; combined capacity of principal reservoirs, about 91,400 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,400 ft³/s Dec. 19, 1978, gage height, 7.64 ft, from rating curve extended above 7,400 ft³/s on basis of slope-area measurement at gage height 6.82 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 60,000 ft³/s was determined for peak of Sept. 19, 1923, at Holbrook (see prior records for sta 09397000, Little Colorado River at Holbrook, for this peak and other peaks 1905-6, 1949-73).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 6	1500	*5,960	*4.70

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	62	---
2	---	---	---	---	---	1020	---	---	---	---	---	---
3	---	e786	---	---	---	1290	---	---	---	---	---	---
4	---	---	---	e366	---	483	---	---	---	---	---	---
5	---	---	---	1010	---	---	---	---	---	---	---	---
6	---	---	---	2600	---	---	---	---	---	---	---	430
7	---	---	---	1080	---	444	---	---	---	---	---	---
8	---	---	---	428	---	---	---	---	---	---	165	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	e244	---	---	---	---	---	---	---
16	---	---	1110	---	---	---	---	---	---	---	---	---
17	---	---	557	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	e363	---	---	---	---	---	---	---	---	---	---	---
21	732	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	294	---
29	---	---	e364	---	---	---	---	---	---	---	---	---
30	---	---	e355	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

09397300 LITTLE COLORADO RIVER NEAR JOSEPH CITY, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler since October 1981.

REMARKS.--Suspended-sediment load computed from load-discharge relation curves. Published record includes only those days on which instantaneous discharge exceeds 500 ft³/s. See remarks for water-discharge records.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Record not available at time of publication

09398300 BLUE RIDGE RESERVOIR NEAR PINE, AZ

LOCATION.--Lat 34°33'19", long 111°11'00", in NE&SE& sec.33, T.14 N., R.11 E., Coconino County, Hydrologic Unit 15020008, in Coconino National Forest, on upstream side of left end of spillway structure of Blue Ridge Dam on East Clear Creek, at mouth of General Springs Canyon, 7.3 mi east of Clints Well, and 20 mi northeast of Pine.

DRAINAGE AREA.--71.1 mi².

PERIOD OF RECORD.--December 1964 to March 1965 (periodic elevations only), April 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,620 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD. Prior to Apr. 2, 1965, nonrecording-gage readings (at intervals of 3 to 8 days) at NGVD.

REMARKS.--Reservoir is formed by a concrete arch dam. Dam completed and storage began in December 1964. Total capacity is 19,500 acre-ft at elevation 6,735 ft, of which 15,000 acre-ft is usable storage below 6,720 ft, the spillway crest. Drawdown below 6,646.3 ft, 2,620 acre-ft restricted by sill at mouth of diversion tunnel since November 1981. Reservoir serves as a basin from which water is pumped to the East Verde River. (See records for East Verde River diversion from East Clear Creek, near Pine.) Release is possible through valve in base of dam. Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 16,200 acre-ft Feb. 19, 1980, elevation, 6,724.12 ft; minimum contents since reservoir filled (April 1965), 1,450 acre-ft Nov. 18-27, 1981; minimum elevation, 6,630.75 ft Nov. 26, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum observed contents, 15,190 acre-ft Apr. 18, elevation, 6,720.75 ft, of which 190 acre-ft was uncontrolled storage; minimum daily contents, 2,510 acre-ft Jan. 1-3; minimum elevation 6,644.82 ft Jan. 3.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on surveys by Leeds, Hill, and Jewett, Inc., January 1962)

6,642	2,260	6,690	8,280
6,658	3,720	6,706	11,540
6,674	5,740	6,722	15,560

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2670	2600	2550	2510	3100	4940	---	15070	14010	13320	12780	12290
2	2670	2610	2550	2510	3090	5300	---	15060	13970	13310	12750	12280
3	2660	2610	2540	2510	3090	5600	---	15060	13950	13290	12740	12270
4	2660	2600	2540	2540	3090	5890	---	15050	13930	13270	12720	12250
5	2660	2600	2540	2670	3080	6430	---	15050	13890	13240	12710	12240
6	2660	2600	2540	2790	3080	7140	---	15050	13860	13220	12680	12220
7	2660	2600	2540	2860	3080	7550	---	15050	13840	13220	12670	12210
8	2650	2600	2530	2910	3090	7830	---	15030	13820	13210	12660	12200
9	2650	2590	2530	2950	3090	8080	---	15000	13800	13180	12630	12180
10	2650	2590	2530	2980	3100	8320	---	14950	13760	13160	12620	12160
11	2640	2590	2530	3010	3110	8540	---	14940	13740	13130	12610	12140
12	2640	2580	2530	3030	3130	8720	---	14930	13720	13130	12610	12120
13	2640	2580	2530	3040	3180	8880	---	14900	13720	13110	12600	12100
14	2640	2580	2530	3060	3240	9000	---	14840	13690	13090	12580	12090
15	2640	2580	2530	3070	3310	9110	---	14800	13670	13070	12560	12080
16	2640	2580	2530	3080	3390	9180	---	14770	13650	13050	12560	12060
17	2630	2570	2530	3090	3480	9250	---	14730	13630	13030	12530	12040
18	2630	2570	2520	3100	3540	---	15160	14690	13610	13010	12510	12030
19	2630	2560	2520	3100	3580	9460	15150	14640	13580	12990	12500	12010
20	2630	2560	2530	3100	3610	9590	---	14580	13550	12970	12490	11990
21	2630	2560	2530	3110	3630	---	---	14520	13530	12950	12480	11970
22	2620	2560	2530	3110	3650	---	---	14460	13500	12940	12460	11960
23	2620	2560	2520	3110	3670	---	---	14430	13480	12930	12440	11950
24	2620	2560	2520	3110	3700	---	---	14400	13460	12910	12410	11940
25	2620	2560	2520	3110	3730	---	---	14350	13440	12890	12400	11920
26	2620	2560	2520	3110	3750	---	---	14310	13420	12870	12380	11890
27	2610	2560	2520	3110	3770	---	---	14260	13390	12860	12370	11880
28	2620	2550	2520	3100	4470	---	---	14220	13370	12850	12360	11870
29	2610	2550	2520	3100	---	---	---	14190	13350	12830	12340	11850
30	2610	2550	2520	3100	---	---	15060	14140	13340	12810	12320	11850
31	2610	---	2520	3100	---	e11200	---	14060	---	12790	12310	---
MAX	2670	2610	2550	3110	4470	---	---	15070	14010	13320	12780	12290
MIN	2610	2550	2520	2510	3080	---	---	14060	13340	12790	12310	11850
(*)	6646.09	6645.37	6644.96	6651.78	6664.58	---	6720.22	6716.39	6713.50	6711.22	6709.21	6707.28
(**)	-70	-50	-30	+580	+1370	+6730	+3860	-1000	-720	-550	-480	-460
CAL YR	1990	MAX	5890	MIN	2520	(**)	-590					
WTR YR	1991				(**)	+9180						

e Estimated
(*) Elevation, in feet, at end of month.
(**) Change in contents, in acre-feet.

LITTLE COLORADO RIVER BASIN

89

09398500 CLEAR CREEK BELOW WILLOW CREEK, NEAR WINSLOW, AZ

LOCATION.--Lat 34°40'03", long 111°00'25", in SW¼SE¼ sec.19, T.15 N., R.13 E., Coconino County, Hydrologic Unit 15020008, in Apache-Sitgreaves National Forest, on right bank 2 mi downstream from Willow Creek and 30 mi southwest of Winslow.

DRAINAGE AREA.--317 mi².

PERIOD OF RECORD.--June 1947 to September 1991 (discontinued).

REVISED RECORDS.--WDR AZ-88-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,957 ft above National Geodetic Vertical Datum of 1929, from Topographic Division by photogrammetry.

REMARKS.--No estimated daily discharges. Records good. Flow is partially controlled by Blue Ridge Reservoir (usable capacity, 15,000 acre-ft) about 20 mi upstream. (See sta 09398300.) Diversion to East Verde River from Blue Ridge Reservoir. (See sta 09507580.)

AVERAGE DISCHARGE (unadjusted for diversion or storage).--44 years, 82.0 ft³/s, 59,410 acre-ft/yr; median of yearly mean discharges, 56 ft³/s, 40,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft³/s Dec. 18, 1978, gage height, 22.32 ft, from rating curve extended above 6,000 ft³/s; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 8	0430	*2,770	*11.01

No flow Oct. 1 to Jan. 5 and June 22 to Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.63	659	199	177	.73	.00	.00	.00
2	.00	.00	.00	.00	.61	386	370	180	.66	.00	.00	.00
3	.00	.00	.00	.00	.61	281	520	158	.72	.00	.00	.00
4	.00	.00	.00	.00	.59	230	725	130	.84	.00	.00	.00
5	.00	.00	.00	.00	.56	279	935	114	1.0	.00	.00	.00
6	.00	.00	.00	3.7	.50	549	1220	106	.80	.00	.00	.00
7	.00	.00	.00	23	.50	434	2000	100	.62	.00	.00	.00
8	.00	.00	.00	17	.70	256	2240	99	.44	.00	.00	.00
9	.00	.00	.00	17	1.0	211	1620	98	.33	.00	.00	.00
10	.00	.00	.00	25	1.2	193	1360	90	.26	.00	.00	.00
11	.00	.00	.00	18	1.6	183	1320	77	.23	.00	.00	.00
12	.00	.00	.00	13	3.4	156	869	59	.21	.00	.00	.00
13	.00	.00	.00	11	8.7	138	612	45	.18	.00	.00	.00
14	.00	.00	.00	9.6	22	126	452	35	.25	.00	.00	.00
15	.00	.00	.00	8.1	62	106	502	29	.36	.00	.00	.00
16	.00	.00	.00	9.1	81	96	692	24	.30	.00	.00	.00
17	.00	.00	.00	7.5	96	75	785	19	.23	.00	.00	.00
18	.00	.00	.00	6.1	99	74	750	16	.17	.00	.00	.00
19	.00	.00	.00	5.6	69	91	682	13	.12	.00	.00	.00
20	.00	.00	.00	5.4	48	98	649	11	.07	.00	.00	.00
21	.00	.00	.00	5.1	38	118	690	9.0	.03	.00	.00	.00
22	.00	.00	.00	4.7	32	87	623	7.4	.00	.00	.00	.00
23	.00	.00	.00	3.5	32	90	554	6.0	.00	.00	.00	.00
24	.00	.00	.00	2.4	46	82	462	5.0	.00	.00	.00	.00
25	.00	.00	.00	2.0	64	100	456	4.1	.00	.00	.00	.00
26	.00	.00	.00	1.7	69	133	424	3.2	.00	.00	.00	.00
27	.00	.00	.00	1.6	65	88	316	2.4	.00	.00	.00	.00
28	.00	.00	.00	1.3	82	118	242	1.7	.00	.00	.00	.00
29	.00	.00	.00	1.1	---	108	197	1.3	.00	.00	.00	.00
30	.00	.00	.00	.84	---	112	175	1.0	.00	.00	.00	.00
31	.00	---	.00	.73	---	129	---	.85	---	.00	.00	---
TOTAL	0.00	0.00	0.00	204.07	925.60	5786	22641	1621.95	8.55	0.00	0.00	0.00
MEAN	.000	.000	.000	6.58	33.1	187	755	52.3	.28	.000	.000	.000
MAX	.00	.00	.00	25	99	659	2240	180	1.0	.00	.00	.00
MIN	.00	.00	.00	.00	.50	74	175	.85	.00	.00	.00	.00
AC-FT	.00	.00	.00	405	1840	11480	44910	3220	17	.00	.00	.00
CAL YR 1990	TOTAL	2079.62	MEAN	5.70	MAX	156	MIN	.00	AC-FT	4120		
WTR YR 1991	TOTAL	31187.17	MEAN	85.4	MAX	2240	MIN	.00	AC-FT	61860		

LITTLE COLORADO RIVER BASIN

09401000 LITTLE COLORADO RIVER AT GRAND FALLS, AZ

LOCATION.--Lat 35°26'45", long 111°12'12", in T.24 N., R.11 E. (unsurveyed), Coconino County, Hydrologic Unit 15020016, in Navajo Indian Reservation, on left bank 1,000 ft downstream from Grand Falls, 4.5 mi upstream from Dinnebito Wash, 30 mi northeast of Flagstaff, and 96 mi upstream from mouth.

DRAINAGE AREA.--21,068 mi², of which 368 mi² are noncontributing.

PERIOD OF RECORD.--October 1925 to September 1951, October 1951 to September 1953 (peak discharges only), October 1953 to June 1960, October 1989 to current year.

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,438.9 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions above station for irrigation of about 29,000 acres. Some regulation by reservoirs above station (combined capacity, about 71,000 acre-feet in 1950, not including Long Pine Reservoir or Lake Mary).

AVERAGE DISCHARGE.--32 years (water years 1928-51, 1954-59, 1990-91), 235 ft³/s, 170,300 acre-ft/yr; median of yearly mean discharges, 200 ft³/s, 145,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,500 ft³/s Apr. 5, 1929, gage height 30.0 ft, no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of about 120,000 ft³/s, gage height 47.0 ft, from floodmarks, occurred on Sept. 19, 1923, and is the highest since 1870.

EXTREMES FOR CURRENT PERIOD.--October 1989 to September 1991: peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
8-17-90	0245	*1,920	*9.22
4-11-91	1445	*3,320	*10.59

No flow on many days in each water year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.0
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.5
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	188
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	307
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	189
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	120
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	111
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	57
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	548	.00	139
10	.00	.00	.00	.00	.00	.00	77	.00	.00	283	.00	76
11	.00	.00	.00	.00	.00	.00	91	.00	.00	193	.00	23
12	.00	.00	.00	.00	.00	.00	63	.00	.00	86	.00	13
13	.00	.00	.00	.00	.00	.00	41	.00	.00	45	.00	12
14	.00	.00	.00	.00	.00	.00	29	.00	.00	78	.00	8.9
15	.00	.00	.00	.00	.00	.00	16	.00	.00	54	.03	6.5
16	.00	.00	.00	.00	.00	.00	7.4	.00	.00	263	359	7.2
17	.00	.00	.00	.00	.00	.00	1.4	.00	.00	651	1450	5.2
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	151	641	11
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	163	477	47
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	102	220	240
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	72	93	129
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	123	37	978
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	46	18	890
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	22	11	259
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	47	207
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.0	19	158
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.3	9.8	98
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.4	7.2	45
29	.00	.00	.00	.00	---	.00	.00	.00	.00	1.8	7.0	30
30	.00	.00	.00	.00	---	.00	.00	.00	.00	1.2	5.5	18
31	.00	---	.00	.00	---	.00	---	.00	---	.35	4.8	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	325.80	0.00	0.00	2906.05	3406.33	4382.3
MEAN	.000	.000	.000	.000	.000	.000	10.9	.000	.000	93.7	110	146
MAX	.00	.00	.00	.00	.00	.00	91	.00	.00	651	1450	978
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.5
AC-FT	.00	.00	.00	.00	.00	.00	646	.00	.00	5760	6760	8690

WTR YR 1990 TOTAL 11020.48 MEAN 30.2 MAX 1450 MIN .00 AC-FT 21860

LITTLE COLORADO RIVER BASIN

91

09401000 LITTLE COLORADO RIVER AT GRAND FALLS, AZ--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	2.0	.00	390	.21	112	481	235	.00	.00	.82	e2.2
2	11	1.1	.00	329	.26	107	652	169	.00	.00	.49	e6.0
3	9.5	.94	.00	226	.21	1290	652	152	.00	.00	.00	e6.8
4	6.6	285	.00	170	.22	2120	935	135	.00	.00	.00	10
5	3.9	208	.00	208	.17	1290	1380	135	.00	.00	.00	7.1
6	3.3	86	.00	799	.18	906	1680	118	.00	.00	1.0	6.2
7	2.6	55	.00	2710	e.12	1590	1950	95	.00	.00	.00	3.9
8	.82	19	.00	1980	e.12	1910	2010	86	.00	.00	.00	225
9	.11	10	.00	585	e.06	1420	2170	64	.00	.00	.00	175
10	.00	5.6	.00	257	e.00	807	2480	59	.00	.00	.00	90
11	.00	1.3	.00	193	e.00	513	2980	49	.00	.00	.00	48
12	.00	.79	.00	117	e.00	397	3010	43	.00	.00	27	24
13	.00	e.30	.00	103	e.00	365	2520	39	.00	.00	15	13
14	.00	e.20	.00	73	.00	328	1430	35	.00	.00	12	9.8
15	.00	e.10	.00	50	110	251	946	29	.00	.00	9.8	e9.0
16	.00	e.05	.00	35	323	263	677	24	.00	.00	7.0	e5.0
17	.00	e.01	598	26	300	240	680	16	.00	.00	5.6	e1.0
18	.00	.00	726	21	247	190	977	10	.00	.00	3.6	e.00
19	.00	.00	189	15	230	159	1050	5.6	.00	.00	2.4	e.00
20	.00	.00	113	12	294	120	953	2.1	e.00	.00	1.2	e.00
21	.00	.00	30	10	198	101	884	.36	e.00	.00	.49	e.00
22	338	.00	28	7.6	139	114	809	.05	e.00	.00	.02	e.00
23	140	.00	28	3.8	103	167	806	.00	e.00	.00	.00	e.00
24	45	.00	33	3.2	78	182	721	.00	.00	.00	.00	e.00
25	18	.00	15	1.8	60	135	613	.00	.00	.00	.00	e.00
26	9.1	.09	3.8	1.5	45	114	521	.00	.00	.00	.00	e.00
27	7.1	.00	1.8	.80	43	110	477	.00	.00	.00	.00	e.00
28	6.3	.01	2.4	.58	110	322	471	.00	.00	.00	.00	e.00
29	7.6	.00	3.3	.30	---	361	432	.00	.00	.00	.00	.00
30	5.3	.00	14	.26	---	251	271	.00	.00	.00	.00	.00
31	3.9	---	521	.21	---	271	---	.00	---	.00	.14	---
TOTAL	631.13	675.49	2306.30	8329.05	2281.55	16506	35618	1501.11	0.00	0.00	86.56	642.00
MEAN	20.4	22.5	74.4	269	81.5	532	1187	48.4	.000	.000	2.79	21.4
MAX	338	285	726	2710	323	2120	3010	235	.00	.00	27	225
MIN	.00	.00	.00	.21	.00	101	271	.00	.00	.00	.00	.00
AC-FT	1250	1340	4570	16520	4530	32740	70650	2980	.00	.00	172	1270
CAL YR 1990	TOTAL	14633.40	MEAN	40.1	MAX	1450	MIN	.00	AC-FT	29030		
WTR YR 1991	TOTAL	68577.19	MEAN	188	MAX	3010	MIN	.00	AC-FT	136000		

e Estimated

LITTLE COLORADO RIVER BASIN

09401260 MOENKOPI WASH AT MOENKOPI, AZ

LOCATION.--Lat 36°06'18", long 111°12'04", in NW¼NE¼ sec.3, T.31 N., R.11 E. (unsurveyed), Coconino County, Hydrologic Unit 15020018, in Hopi Indian Reservation on right bank, 100 ft upstream from bridge on State Highway 264, 1.3 mi southeast of Moenkopi, 2.5 mi downstream from former gaging station 09401250, and 12.5 mi downstream from Begashibito Wash.

DRAINAGE AREA.--1,629 mi².

PERIOD OF RECORD.--July 1976 to current year. Records for October 1973 to July 1976, at site 2.5 mi upstream, not equivalent below 1.5 ft³/s due to channel losses.

REVISED RECORDS.--WDR AZ-88-1: Drainage area.

GAGE.--Water-stage recorder and crest stage gages. Elevation of gage is 4,610 ft above National Geodetic Vertical Datum of 1929, from topographic map.

AVERAGE DISCHARGE.--15 years, 10.1 ft³/s, 7,320 acre-ft/yr.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s Sept. 30, 1983, gage height, 15.10 ft, from rating curve extended above 220 ft³/s on basis of step-backwater computation at gage heights 12.2 ft, 15.0 ft, and 17.8 ft; no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 15,100 ft³/s occurred Aug. 4, 1929, at former gaging station site 3.5 mi downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 2	1015	*1,290	*6.11

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.6	3.4	e3.0	.61	6.4	1.1	1.5	.45	.00	31	.17
2	164	1.6	3.2	e3.0	1.1	7.7	1.2	1.3	1.4	.00	7.4	26
3	60	1.6	2.8	e3.0	1.5	6.0	1.2	1.2	1.4	.00	.73	.57
4	15	1.9	2.5	e3.1	10	4.4	1.2	1.3	.97	.00	7.0	.11
5	5.1	2.1	2.7	e3.1	5.9	4.9	1.1	1.2	.64	.00	4.4	.16
6	2.0	2.1	3.0	e3.0	6.0	4.3	1.1	1.4	.46	.00	12	40
7	1.3	3.0	3.0	3.1	5.5	4.4	1.0	1.6	.36	.00	24	16
8	1.3	2.9	2.9	5.8	4.2	4.6	.91	1.4	.25	.00	4.0	12
9	1.0	2.4	3.0	8.7	3.4	3.5	.80	1.1	.16	.00	.65	.59
10	1.2	2.8	2.9	7.6	3.4	4.4	.90	.84	.01	.00	.17	.37
11	1.0	2.2	3.3	14	3.4	3.4	.80	.75	.00	.00	.01	.16
12	1.0	2.1	4.9	1.1	3.6	3.1	.87	.82	.00	.00	.00	.00
13	.93	2.1	5.5	2.3	3.1	3.4	1.1	1.0	.00	.00	.49	.00
14	1.0	2.3	4.3	4.4	3.3	2.9	1.2	.98	.00	.00	1.0	.00
15	.83	2.1	3.0	8.1	3.4	4.0	1.1	.91	.00	.00	.29	.00
16	.80	2.1	2.9	15	3.3	5.4	1.2	.96	.00	.00	.10	.00
17	.64	2.1	3.8	11	4.0	5.0	1.0	.89	.00	.00	.05	.00
18	1.3	2.4	2.8	1.6	3.3	4.3	1.2	.75	.00	.00	.00	.00
19	1.9	2.8	2.1	2.9	2.8	4.0	1.2	.46	.00	.00	.25	.00
20	1.6	2.7	2.3	3.5	3.0	4.1	.94	.53	.00	.00	.00	.00
21	2.0	2.9	3.3	1.9	3.3	4.6	1.6	.53	.00	.00	.00	.00
22	4.3	2.2	e3.2	1.5	3.6	4.7	1.2	.51	.00	.00	.00	.00
23	2.7	2.6	e3.2	1.5	3.8	3.5	1.2	.55	.00	.00	.00	.00
24	2.3	2.8	e3.1	1.0	3.8	3.0	1.2	.73	.00	.00	.00	.00
25	3.5	3.1	e3.2	1.2	3.7	1.1	1.2	.77	.00	.00	.00	.00
26	2.8	3.8	e3.1	1.2	3.8	1.1	1.0	.57	.00	.00	.00	.00
27	2.4	3.6	e3.0	1.1	4.1	1.9	1.2	.36	.00	.00	56	.00
28	1.3	3.3	e3.0	3.6	5.1	1.8	1.3	.23	.00	.00	5.4	.00
29	1.3	2.1	e3.0	9.3	---	1.9	1.5	.20	.00	.00	.56	.00
30	2.5	2.2	e3.1	2.4	---	1.1	1.6	.21	.00	.00	.12	.00
31	2.2	---	e3.0	.55	---	1.1	---	.17	.00	.00	.12	---
TOTAL	290.90	73.5	98.5	132.55	106.01	116.0	34.12	25.72	6.10	0.00	155.74	96.13
MEAN	9.38	2.45	3.18	4.28	3.79	3.74	1.14	.83	.20	.000	5.02	3.20
MAX	164	3.8	5.5	15	10	7.7	1.6	1.6	1.4	.00	56	.40
MIN	.64	1.6	2.1	.55	.61	1.1	.80	.17	.00	.00	.00	.00
AC-FT	577	146	195	263	210	230	68	51	12	.00	309	191

CAL YR 1990 TOTAL 3839.02 MEAN 10.5 MAX 320 MIN .00 AC-FT 7610
WTR YR 1991 TOTAL 1135.27 MEAN 3.11 MAX 164 MIN .00 AC-FT 2250

e Estimated

09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ

LOCATION.--Lat 35°55'35", long 111°34'00", in NW¼ sec.5, T.29 N., R.8 E. (unsurveyed), Coconino County, Hydrologic Unit 15020016, in Navajo Indian Reservation, on left bank 3 mi downstream from Coconino damsite, 9.5 mi downstream from Moenkopi Wash, 9.5 mi northwest of Cameron, and 45 mi upstream from mouth.

DRAINAGE AREA.--26,459 mi², of which 368 mi² are noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1947 to current year.

REVISED RECORDS.--WDR AZ-88-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,979.2 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Diversions above station for irrigation of about 32,000 acres. Some regulation by reservoirs above station (combined capacity of principal reservoirs, about 135,000 acre-ft).

AVERAGE DISCHARGE.--44 years, 234 ft³/s, 169,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,900 ft³/s Jan. 21, 1952, gage height, 20.7 ft; no flow at times in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of about 120,000 ft³/s occurred on Sept. 19 or 20, 1923, based on discharge at Grand Falls.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 7	2145	*2,690	*7.19

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	3.3	.31	e197	e1.0	e67	e256	266	4.5	.00	.00	2.5
2	53	2.2	.28	e241	e.90	99	578	218	1.1	.00	e12	423
3	152	1.3	.26	e358	e.80	301	681	161	.00	.00	8.3	286
4	89	.76	.22	417	e.70	1640	747	142	.00	.00	e4.1	e92
5	26	365	.08	414	e10	1500	1020	133	.00	.00	e2.2	e23
6	13	150	.03	336	e2.0	962	1300	138	.00	.00	13	285
7	4.5	73	.00	1080	e1.7	1070	1530	128	.00	.00	32	207
8	1.4	53	.00	2110	e1.4	1490	1660	110	.00	.00	e34	e250
9	.52	37	.00	965	e1.4	1520	1730	92	.00	.00	e17	e360
10	.31	23	.00	419	e1.4	1030	1810	72	.00	.00	e12	e246
11	.29	17	.00	172	e1.3	637	2040	55	.00	.00	e9.2	e150
12	.26	12	.00	92	e1.3	439	2140	44	.00	.00	e8.0	e100
13	.23	9.0	.00	54	e1.1	361	2000	36	.00	.00	e18	e50
14	.14	6.9	.00	55	e.90	328	1590	30	.00	.00	e13	e25
15	.03	5.0	.00	48	.92	289	1070	23	.00	.00	e10	e15
16	.00	3.6	.74	48	.96	245	805	16	.00	.00	e8.5	e10
17	.00	2.4	.78	38	257	229	625	13	.00	.00	e4.6	e2.0
18	.00	1.5	699	34	239	e230	769	10	.00	.00	e2.6	e1.0
19	.00	1.1	318	32	174	e210	1010	e5.0	.00	.00	e1.5	e.50
20	.00	.90	141	e27	225	e190	1010	e.50	.00	.00	e.50	e.00
21	.00	.77	e98	e22	225	e150	912	e.00	.00	.00	e.10	e.00
22	.00	.77	e67	e16	148	e100	848	e.00	.00	.00	e.00	e.00
23	178	.86	e44	e13	109	e140	811	e.00	.00	.00	e.00	e.00
24	167	.86	e32	e11	e96	e190	805	e.00	.00	.00	e.00	e.00
25	65	.84	e25	e7.9	e84	e200	700	e.00	.00	.27	e.00	e.00
26	39	.63	e20	e4.0	e73	e180	591	e.00	.00	e.97	e.00	e.00
27	25	.74	e15	e3.0	e58	e160	488	e.00	.00	e.32	81	e.00
28	17	.68	e12	e2.0	e45	e140	469	e.00	.00	e.14	255	e.00
29	11	.59	e10	e1.6	---	409	441	e.00	.00	.00	e36	e.00
30	7.0	.46	e6.4	e1.3	---	321	341	e.00	.00	.00	e7.6	e.00
31	4.7	---	e3.6	e1.2	---	e257	---	e.00	---	.00	4.0	---
TOTAL	868.38	775.16	1493.70	7220.0	1760.78	15084	30777	1692.50	5.60	1.70	594.20	2528.00
MEAN	28.0	25.8	48.2	233	62.9	487	1026	54.6	.19	.055	19.2	84.3
MAX	178	365	699	2110	257	1640	2140	266	4.5	.97	255	423
MIN	.00	.46	.00	1.2	.70	67	256	.00	.00	.00	.00	.00
AC-FT	1720	1540	2960	14320	3490	29920	61050	3360	11	3.4	1180	5010
CAL YR 1990	TOTAL	21277.26	MEAN	58.3	MAX	1660	MIN	.00	AC-FT	42200		
WTR YR 1991	TOTAL	62801.02	MEAN	172	MAX	2140	MIN	.00	AC-FT	124600		

e Estimated

LITTLE COLORADO RIVER BASIN

09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1969 to April 1970, January 1971 to January 1972 (partial-record station),
February 1990 to September 1991 (discontinued).

REMARKS.--Precise concentrations for dissolved carbonate and bicarbonate unavailable for Feb. 22, Apr. 13,
Aug. 19, 1990, Jan. 8, and Mar. 7, 1991 due to insufficient data.

WATER-QUALITY DATA, FEBRUARY 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED OF (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
FEB 1990											
22...	1325	42	540	9.0	10.0	4.0	4500	668	11.4	99	160
APR											
13...	1240	16	1750	8.4	31.0	13.0	10000	665	8.9	98	270
JUL											
12...	1230	100	1210	8.1	34.5	27.5	31000	647	8.6	129	580
AUG											
19...	1245	657	878	8.4	28.5	20.5	29000	663	7.0	90	2100
21...	1330	167	965	7.2	27.0	20.0	44000	667	7.4	93	1400
23...	1330	36	1000	7.5	26.0	19.0	60000	665	7.2	90	2100
JAN 1991											
08...	1530	2210	709	8.6	7.0	2.0	33000	642	12.2	105	570
MAR											
07...	1400	1180	520	8.5	12.0	6.5	6600	665	10.1	95	430
MAY											
02...	1320	213	354	8.0	15.0	14.0	1300	657	8.8	99	63
SEP											
05...	1300	20	1240	7.5	--	21.0	60000	664	6.9	90	5400

DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD HCO3 (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD CO3 (MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD CACO3 (MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
FEB 1990											
22...	14	0	4.4	0.85	120	14	1.8	<176	M0	144	77
APR											
13...	110	0	32	5.9	290	12	5.0	<166	M0	136	56
JUL											
12...	57	0	17	3.4	230	13	3.8	173	0	142	110
AUG											
19...	47	0	15	2.2	170	11	2.6	<189	M0	155	130
21...	67	0	21	3.6	180	10	3.4	172	0	141	220
23...	96	0	30	5.1	190	8	4.2	166	0	136	230
JAN 1991											
08...	19	0	5.6	1.1	140	14	2.1	<195	M0	160	67
MAR											
07...	21	0	6.4	1.2	100	10	1.5	<126	M0	103	55
MAY											
02...	55	0	16	3.7	50	3	1.7	88	0	72	17
SEP											
05...	490	400	150	27	86	2	9.8	101	0	83	540

M Presence of material verified but not quantified.
< Actual value is known to be less than value shown.

09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ--Continued

WATER-QUALITY DATA, FEBRUARY 1990 TO SEPTEMBER 1991

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)
FEB 1990											
22...	31	0.60	374	356	0.51	12900	--	--	0.700	0.070	8.4
APR											
13...	400	0.30	907	895	1.23	24700	--	--	0.300	0.040	1.2
JUL											
12...	190	0.70	676	672	0.92	13300	--	--	--	0.140	29
AUG											
19...	72	0.60	548	559	0.75	79200	--	--	<0.100	--	--
21...	61	0.90	646	575	0.88	101000	--	--	2.70	0.030	74
23...	79	1.1	672	621	0.91	78400	--	--	3.00	0.040	67
JAN 1991											
08...	68	0.70	445	443	0.61	46000	1.09	0.010	1.10	<0.010	--
MAR											
07...	51	0.50	297	289	0.40	1610	0.440	0.020	0.460	0.040	7.5
MAY											
02...	58	0.10	252	196	0.34	2180	--	0.020	<0.050	0.180	0.72
SEP											
05...	23	0.70	918	939	1.25	1550	8.39	0.010	8.40	0.070	4.0

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)
FEB 1990										
22...	8.5	8.90	--	--	10	5	8	--	140	<1
APR										
13...	1.2	9.90	--	--	11	2	150	--	120	120
JUL										
12...	29	33.0	--	--	10	5	240	--	490	<1
AUG										
19...	48	36.0	--	--	5	4	130	--	290	3
21...	74	12.0	--	--	4	2	60	--	240	2
23...	67	0.020	--	--	2	2	84	--	250	2
JAN 1991										
08...	16	20.0	0.15	0.050	12	5	16	20	260	<1
MAR										
07...	7.5	5.20	0.21	0.070	11	2	25	--	110	<1
MAY										
02...	0.90	0.960	0.71	0.230	5	1	77	<10	130	<1
SEP										
05...	4.1	29.0	0.03	0.010	110	2	160	70	140	29

DATE	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
FEB 1990										
22...	<1.0	140	<5	160	20	140000	90	20	<10	4400
APR										
13...	1.0	240	1	270	14	250000	34	7	<1	7100
JUL										
12...	2.0	160	2	220	7	140000	610	440	3	14000
AUG										
19...	<1.0	210	<5	380	<10	230000	100	520	<10	18000
21...	<1.0	230	2	360	<1	280000	74	3	4	18000
23...	1.0	110	3	280	32	140000	33	280	4	15000
JAN 1991										
08...	<1.0	170	<5	250	20	160000	130	350	<10	16000
MAR										
07...	<1.0	160	<5	220	10	230000	160	5	<10	100
MAY										
02...	<1.0	27	<1	23	2	22000	10	32	<1	1200
SEP										
05...	<1.0	380	<1	990	11	300000	18	820	<1	27000

< Actual value is known to be less than value shown.

LITTLE COLORADO RIVER BASIN

09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ--Continued

WATER-QUALITY DATA, FEBRUARY 1990 TO SEPTEMBER 1991

DATE	MANGANESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SELENIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)
FEB 1990										
22...	4	0.40	--	6	4	<1.0	710	7	--	--
APR										
13...	<1	11	--	4	1	2.0	1100	<3	--	--
JUL										
12...	25	1.1	--	<3	1	<1.0	720	72	67000	18100
AUG										
19...	7	1.9	--	11	2	<2.0	1300	8	78000	138000
21...	2	3.0	--	<3	2	<1.0	1600	5	88200	39800
23...	1	3.8	--	29	2	<1.0	1300	7	89500	8630
JAN 1991										
08...	5	0.90	280	<10	<3	<1.0	870	3	85500	510000
MAR										
07...	2	0.80	--	4	<1	<1.0	900	<3	46100	147000
MAY										
02...	2	0.10	32	<2	<1	<1.0	90	<3	4000	2300
SEP										
05...	1	6.3	960	3	2	<1.0	3300	3	139000	7510

< Actual value is known to be less than value shown.

09402500 COLORADO RIVER NEAR GRAND CANYON, AZ

LOCATION.--Lat 36°06'05", long 112°05'08", in sec.5, T.31 N., R.3 E. (unsurveyed), Coconino County, Hydrologic Unit 15010001, in Grand Canyon National Park, on left bank 0.2 mi upstream from Kaibab Bridge, 0.4 mi upstream from Bright Angel Creek, 4.5 mi northeast of village of Grand Canyon, 26 mi downstream from Little Colorado River, and 267 mi upstream from Hoover Dam.

DRAINAGE AREA.--141,600 mi² approximately, including 3,959 mi² in Great Divide basin in southern Wyoming which is noncontributing.

PERIOD OF RECORD.--October 1922 to current year. Prior to 1944, published as "Colorado River at Bright Angel Creek, near Grand Canyon." Gage-height records collected 1.5 mi downstream 1908-13, published in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder with supplementary water-stage recorder on right bank 700 ft downstream (prior to Oct. 1, 1934, supplementary gage was the only gage). Datum of both gages is 2,418.7 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by Lake Powell, 104 mi upstream, since Mar. 13, 1963. (See elsewhere in this report.) Many diversions above station for irrigation, municipal, and industrial uses.

AVERAGE DISCHARGE (unadjusted for storage in Lake Powell).--40 years (water years 1923-62), 16,930 ft³/s, 12,270,000 acre-ft/yr; 27 years (water years 1965-91) 14,740 ft³/s, 10,680,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--1922-62: Maximum discharge, 127,000 ft³/s July 2, 1927, gage height, 29.25 ft; minimum, 700 ft³/s Dec. 28, 1924, gage height, -0.70 ft.
1963-91: Maximum discharge, 96,200 ft³/s June 29, 1983, gage height, 26.26 ft; minimum, 850 ft³/s Jan. 26, 1963, gage height, -0.55 ft, result of closing coffer dam at Glen Canyon Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1884, 300,000 ft³/s about July 8, 1884 (computed on basis of flood studies at Lees Ferry). Crest discharge of flood of June 19, 1921, was 220,000 ft³/s, gage height, 37.5 ft from floodmarks, from rating curve extended above 120,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,000 ft³/s June 18, gage height, 13.89 ft; minimum daily, 4,450 ft³/s Nov. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5450	6420	8310	14000	10800	8480	5300	13600	6250	5460	18600	14800
2	8850	8760	8640	14700	10800	11100	10900	10100	5350	17900	14900	10100
3	9060	6940	6690	14700	10800	9430	13200	9790	5410	18500	14800	10700
4	9060	7220	11600	14800	10800	6450	11400	6050	12400	18600	14800	15000
5	9020	4450	11200	14900	10800	12000	11900	5490	10300	18600	14600	15100
6	8950	8090	10500	14900	10800	11600	9870	5660	12800	18600	15000	15000
7	8940	8100	11400	14900	10800	11500	11500	14700	12800	18600	14900	15700
8	8900	8940	11700	16300	10800	12100	9160	15500	15700	18400	15000	14100
9	8910	10700	9070	16400	5900	11100	11500	15400	12100	18700	15200	10200
10	8910	5950	7400	15500	5370	9870	13000	15400	10900	18700	15000	15000
11	8890	5400	11900	15000	5370	5610	13300	15500	17100	18700	14500	15000
12	8920	5370	11900	6410	11100	11500	15700	15400	17000	18500	14500	14600
13	5570	7960	12300	5570	13500	12600	15000	15400	17500	6210	15000	14700
14	5350	10400	12200	5480	12500	11100	11900	15400	17000	5520	15400	14700
15	4670	10300	6150	11200	12600	13200	8940	15500	17700	5500	15400	13600
16	8070	11000	5420	11400	13200	12500	12000	16000	11700	16900	15400	9950
17	8430	11700	5480	11500	12600	10600	9690	15500	12900	17500	15400	14900
18	8460	8950	10900	12000	11400	7080	10600	5750	20300	17500	15000	14900
19	8500	5740	12000	13500	15500	12200	11300	5410	19600	17500	13000	14600
20	8560	11800	11700	9280	16700	11500	6850	5870	19700	17500	15400	14700
21	8600	11000	11600	9160	15700	11800	6330	15100	19100	17500	15400	14900
22	8480	12900	11400	11400	14000	12400	6210	15300	17500	17500	15500	14100
23	8480	8830	11500	12000	14100	11900	9900	15300	14600	17500	15400	10600
24	8590	8960	11500	14800	12500	11400	11400	15400	9140	17600	15300	15200
25	8650	8070	11400	15700	8280	7090	9760	15300	15300	17500	15100	15500
26	8460	6870	11400	6250	12600	13300	12500	15300	17700	17400	11100	15400
27	5820	10600	11500	5380	9990	14000	9060	15300	17600	6190	15500	15200
28	5370	11700	11200	5350	7540	12200	6600	15400	17300	5500	15500	15400
29	5360	9940	6150	10200	---	10900	5060	15300	6230	5470	15500	14700
30	6520	9550	5370	10800	---	7980	10600	15300	5460	15500	15400	10600
31	7720	---	5360	10800	---	5810	---	14400	---	18600	15400	---
TOTAL	243520	262610	304840	364280	316850	330300	310430	404820	414440	469650	466900	418950
MEAN	7855	8754	9834	11750	11320	10650	10350	13060	13810	15150	15060	13960
MAX	9060	12900	12300	16400	16700	14000	15700	16000	20300	18700	18600	15700
MIN	4670	4450	5360	5350	5370	5610	5060	5410	5350	5460	11100	9950
AC-FT	483000	520900	604700	722500	628500	655100	615700	803000	822000	931600	926100	831000
CAL YR 1990	TOTAL	4127370	MEAN	11310	MAX	19800	MIN	4350	AC-FT	8187000		
WTR YR 1991	TOTAL	4307590	MEAN	11800	MAX	20300	MIN	4450	AC-FT	8544000		

09403600 KANAB CREEK NEAR KANAB, UT

LOCATION.--Lat 37°06'02", long 112°32'50", in NE¼NE¼SW¼ sec. 5, T. 43 S., R. 6 W., Kane County, Hydrologic Unit 15010003, on left bank at upstream side of bridge on U.S. Highway 89, 300 ft upstream from Tiny Canyon and 3.5 mi north of Kanab.

DRAINAGE AREA.--198 mi².

PERIOD OF RECORD.--July 1959 to September 1968 (peaks only). January 1979 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 5,060 ft above NGVD of 1929, from topographic map. A crest-stage gage was in operation at this site from July 22, 1959 to Sept. 30, 1968 at different datum.

REMARKS.--Records poor. No diversion above station for irrigation.

AVERAGE DISCHARGE.--12 years, 13.9 ft³/s, 10,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,130 ft³/s Aug. 20, 1984, maximum gage height, 8.50 ft Aug. 20, 1984; minimum recorded, 0.90 ft³/s June 23, 26, 29, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge recorded by crest-stage gage, 3,030 ft³/s Sept. 8, 1961, gage height, 15.70 ft (revised) at different datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 18	1800	*40	*4.35

Minimum daily discharge, 3.2 ft³/s Aug. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e6.5	9.8	e6.5	e6.0	e8.5	12	14	7.2	6.2	5.9	3.9	e6.5
2	e6.5	10	e6.5	e6.0	e9.0	11	13	7.2	6.4	5.9	4.0	6.4
3	e7.0	12	e6.5	e7.0	e9.0	11	14	6.6	6.9	5.5	4.0	6.8
4	e7.5	11	e6.5	e15	e9.0	11	13	8.0	7.0	5.5	e4.0	8.3
5	e7.0	11	e6.5	e20	e9.0	14	13	6.8	6.1	5.1	3.8	8.1
6	e6.5	12	e6.5	e15	e9.0	13	12	6.8	7.0	5.2	3.2	8.8
7	e6.5	11	e6.5	e12	e9.5	10	12	7.0	6.0	5.5	4.0	8.8
8	e6.5	11	e6.5	e11	e9.5	11	12	7.1	6.4	5.4	3.9	7.3
9	e6.5	10	e6.5	e11	e9.5	11	10	7.3	6.6	6.9	4.4	5.9
10	e7.0	10	e6.5	e11	e9.5	11	10	6.8	6.1	5.9	4.6	e7.0
11	e7.0	10	e7.0	e10	e9.5	11	10	6.9	5.7	5.1	5.2	7.0
12	e7.0	8.1	e8.0	e10	e9.5	e12	9.6	6.9	5.3	4.6	4.8	6.5
13	e7.0	8.0	e9.0	e10	e9.5	12	9.9	6.9	5.0	4.6	5.0	6.1
14	e6.5	8.3	e15	e10	e9.5	12	8.7	6.8	5.7	4.5	6.6	6.3
15	e6.5	8.6	e12	e10	9.1	13	8.9	6.7	5.4	4.6	6.5	6.8
16	e6.5	8.5	e8.0	e10	9.7	12	8.9	6.8	5.5	5.1	7.0	e6.5
17	6.4	8.2	e7.0	e9.5	10	13	8.8	7.4	6.1	4.4	7.3	e6.5
18	6.2	7.7	e6.5	e9.5	10	12	8.6	6.6	5.4	4.2	e10	e5.5
19	7.1	8.0	e6.0	e9.5	9.2	13	7.7	6.7	6.0	4.6	e15	e6.0
20	8.3	8.3	e6.0	e9.5	9.7	13	7.5	5.9	5.8	4.4	e8.0	5.2
21	8.1	7.6	e6.0	e9.5	9.7	14	6.9	6.4	5.8	4.3	e7.5	5.7
22	8.9	7.6	e5.5	e9.0	10	13	6.5	6.6	5.4	4.0	e7.0	e8.0
23	9.3	7.1	e5.0	e9.0	9.7	14	6.9	7.3	6.7	e4.0	e7.0	8.2
24	12	7.6	e5.0	e9.0	9.9	14	6.7	6.1	5.9	e4.0	e7.0	8.1
25	11	7.3	e5.0	e9.0	9.4	15	7.1	6.6	6.8	e4.0	e6.5	e7.0
26	11	7.3	e5.5	e9.0	9.3	16	6.9	6.3	5.5	4.0	e6.5	e7.0
27	9.4	7.1	e5.5	e9.0	10	16	6.7	6.7	5.5	3.3	e7.0	7.4
28	9.6	7.6	e5.5	e9.0	11	e16	6.2	7.4	6.3	3.4	e6.5	6.8
29	9.5	e6.5	e5.5	e9.0	---	e15	6.6	6.5	5.4	3.8	e6.5	6.5
30	8.9	e6.5	e5.5	e8.5	---	14	7.2	6.4	4.8	e4.0	e6.5	8.1
31	9.3	---	e6.0	e8.5	---	15	---	6.1	---	e4.0	e7.0	---
TOTAL	243.0	263.7	209.5	310.5	266.2	400	279.3	210.8	178.7	145.7	190.2	209.1
MEAN	7.84	8.79	6.76	10.0	9.51	12.9	9.31	6.80	5.96	4.70	6.14	6.97
MAX	12	12	15	20	11	16	14	8.0	7.0	6.9	15	8.8
MIN	6.2	6.5	5.0	6.0	8.5	10	6.2	5.9	4.8	3.3	3.2	5.2
AC-FT	482	523	416	616	528	793	554	418	354	289	377	415

CAL YR	1990	TOTAL	3197.2	MEAN	8.76	MAX	49	MIN	3.9	AC-FT	6340
WTR YR	1991	TOTAL	2906.7	MEAN	7.96	MAX	20	MIN	3.2	AC-FT	5770

e Estimated

09415000 VIRGIN RIVER AT LITTLEFIELD, AZ
(National Stream-Quality Accounting Network Station)

LOCATION.--Lat 36°53'30", long 113°55'25", in SW¼SW¼ sec.4, T.40 N., R.15 W., Mohave County, Hydrologic Unit 15010010, on right bank 0.5 mi downstream from Beaver Dam Wash, 0.4 mi upstream from Littlefield, and 36 mi upstream from Lake Mead.

DRAINAGE AREA.--5,090 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 959: 1932. WSP 979: 1930-31, 1933-37. WSP 1313: 1940 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,763.68 ft above National Geodetic Vertical Datum of 1929. Prior to May 28, 1933, nonrecording gage at site 300 ft upstream, and May 28, 1933, to Nov. 7, 1939, at same site, both at datum 2.53 ft higher. Nov. 8, 1939, to Mar. 31, 1942, nonrecording gage at same site at datum 2.00 ft higher. Apr. 1, 1942, to Sept. 30, 1970, water-stage recorder at same site at same datum. Oct. 1, 1970, to Aug. 7, 1979, at site 300 ft upstream at same datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--62 years, 236 ft³/s, 171,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,000 ft³/s, Jan 1, 1989, gage height, 22.37 ft, from rating curve extended above 12,000 ft³/s on basis of slope-area measurement of peak flow, due to failure of Quail Creek Dam; minimum, 38 ft³/s, May 1, 10, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 8	0115	*1,150	*6.18

Minimum daily, 54 ft³/s, July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	92	111	127	120	166	131	79	77	60	58	74
2	111	90	115	123	120	518	135	83	78	62	58	75
3	104	90	116	123	124	227	129	94	75	59	58	76
4	95	89	115	135	129	171	130	95	77	58	58	76
5	94	97	116	145	126	249	132	90	72	57	59	75
6	92	95	117	141	120	264	128	80	73	60	58	127
7	88	94	120	133	118	155	144	85	e72	111	57	468
8	79	99	119	127	116	130	115	86	e69	75	57	466
9	85	96	120	125	115	121	104	94	e69	106	56	161
10	80	97	119	124	115	123	92	122	79	73	58	104
11	80	103	122	120	116	123	90	124	e70	60	116	96
12	77	99	124	118	116	123	96	94	e70	62	75	86
13	81	96	127	116	114	118	94	94	e70	59	74	77
14	81	93	128	115	127	114	102	85	e68	59	70	71
15	83	91	124	115	135	151	96	88	e66	57	65	67
16	81	95	122	119	104	203	90	87	e66	61	82	74
17	82	95	124	118	99	171	92	74	e68	63	65	69
18	79	96	123	120	106	144	90	72	75	60	63	69
19	84	100	122	121	101	128	91	84	e68	57	63	63
20	115	105	122	126	99	137	85	74	e64	59	62	65
21	134	124	125	124	99	142	84	70	e64	61	63	68
22	109	127	116	127	100	143	95	73	e65	59	62	69
23	103	109	96	126	111	130	88	82	e65	56	62	63
24	105	104	93	121	93	128	82	76	e66	54	63	63
25	96	106	107	120	87	127	80	69	e65	55	99	60
26	95	108	118	120	84	134	98	69	62	57	124	59
27	97	110	125	124	92	150	89	73	59	56	97	66
28	95	112	123	124	96	148	77	72	59	56	124	64
29	95	108	130	126	---	146	78	71	70	57	113	63
30	94	107	135	128	---	158	80	70	60	57	81	76
31	94	---	123	119	---	131	---	70	---	58	81	---
TOTAL	2896	3027	3697	3850	3082	5073	3017	2579	2061	1944	2281	3090
MEAN	93.4	101	119	124	110	164	101	83.2	68.7	62.7	73.6	103
MAX	134	127	135	145	135	518	144	124	79	111	124	468
MIN	77	89	93	115	84	114	77	69	59	54	56	59
AC-FT	5740	6000	7330	7640	6110	10060	5980	5120	4090	3860	4520	6130

CAL YR	1990	TOTAL	38367	MEAN	105	MAX	1060	MIN	47	AC-FT	76100
WTR YR	1991	TOTAL	36597	MEAN	100	MAX	518	MIN	54	AC-FT	72590

e Estimated

09415000 VIRGIN RIVER AT LITTLEFIELD, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948 to current year.

PERIOD OF DAILY RECORD.--

CHEMICAL ANALYSES: July 1949 to September 1969.

SPECIFIC CONDUCTANCE: October 1947 to March 1988.

WATER TEMPERATURE: October 1947 to March 1988.

SEDIMENT DATA: October 1947 to September 1968.

REMARKS.--Streamflow is not completely homogenous chemically from bank to bank. Flow adjacent to north (right) bank is generally somewhat more dilute than average, particularly at times of low streamflow; monthly data collected during June 1975-September 1976 indicate that specific conductance off north bank was 93 to 100 percent of streamwide average (range of discharge, 60-230 ft³/s). Water temperature characteristically shows little or no variation from bank to bank. Detailed sampling information for period since June 1975 is available from U.S. Geological Survey, Carson City, Nev.

EXTREMES MEASURED FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 4,650 microsiemens, Aug. 21, 1966; minimum, 615 microsiemens, May 27, 28, 30, 31, 1983.

WATER TEMPERATURE: Maximum, 33.5°C, July 7, 1953; minimum, 2.0°C, Jan. 4, 1949, Jan. 4, 1950, Jan. 4, 5, 1971.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH, FIELD (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CaCO3)
NOV 14...	1200	95	3400	8.1	26.0	15.5	0.70	15.0	162	80	56	1200
JAN 07...	1440	139	2800	8.0	16.5	14.0	12	11.2	116	K15	780	1000
FEB 27...	1345	93	3380	8.2	11.0	15.5	3.0	13.0	141	K30	K40	1200
APR 24...	1100	86	3190	8.0	23.0	21.0	2.5	10.6	128	--	110	1200
JUN 24...	1415	66	3380	7.9	30.5	26.5	1.0	8.7	117	K65	K97	1300
AUG 29...	0900	139	3480	7.9	32.0	23.5	530	7.1	90	460	1500	1400
DATE	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV 14...	320	94	340	4	31	357	293	870	440	1.1	16	2560
JAN 07...	270	82	280	4	25	337	276	870	380	0.30	17	2220
FEB 27...	310	98	300	4	28	310	254	1100	420	0.70	15	2440
APR 24...	300	97	300	4	29	329	270	1200	470	1.1	15	2400
JUN 24...	350	110	290	3	28	325	266	1100	380	0.40	15	2460
AUG 29...	400	90	280	3	27	320	262	1300	410	0.70	16	2640
DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV 14...	2290	3.48	0.010	0.020	0.100	0.100	0.050	0.070	0.30	0.080	0.030	0.040
JAN 07...	2090	3.02	0.030	0.040	0.700	0.700	0.130	0.120	0.30	0.080	0.060	0.070
FEB 27...	2430	3.32	<0.010	0.010	0.160	0.180	0.020	0.030	0.40	0.060	0.040	0.020
APR 24...	2580	3.26	0.010	0.010	0.240	0.140	0.030	0.030	0.20	0.040	0.010	0.020
JUN 24...	2440	3.35	<0.010	<0.010	0.110	0.120	0.040	0.020	<0.20	0.020	<0.010	<0.010
AUG 29...	2690	3.59	0.050	0.040	0.900	0.900	0.220	0.190	0.50	0.210	0.080	0.060

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

09415000 VIRGIN RIVER AT LITTLEFIELD, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
NOV 14...	0.030	<10	9	<100	<10	<1.0	<1	<1	1	<10	<1	460
JAN 07...	0.060	--	--	--	--	--	--	--	--	--	--	--
FEB 27...	0.040	<10	8	100	<10	<1.0	3	2	2	40	<1	440
APR 24...	0.020	10	8	<100	<10	<1.0	1	<1	2	10	<1	440
JUN 24...	0.010	<10	7	28	<2	<3.0	4	<9	1	10	1	480
AUG 29...	0.050	60	9	100	<10	<1.0	<1	<1	3	60	<1	360

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 14...	20	<0.1	13	1	1	<1.0	4200	11	<10	74	19	33
JAN 07...	--	--	--	--	--	--	--	--	--	64	24	--
FEB 27...	20	<0.1	2	2	1	<1.0	4200	10	<10	95	24	24
APR 24...	20	<0.1	3	1	1	<1.0	4100	12	<10	69	16	28
JUN 24...	8	--	<30	<1	1	1.0	4300	<18	18	32	5.7	36
AUG 29...	20	<0.1	2	2	1	<1.0	4300	12	<10	1640	614	95

< Actual value is known to be less than value shown.

09419700 LAS VEGAS WASH NEAR HENDERSON, NV

LOCATION.--Lat 36°05'20", long 114°59'05", in SE&SW¼ sec.30, T.21 S., R.63 E., Clark County, Hydrologic Unit 15010015, on right bank at upstream end of 4.5-ft pipe culvert on road, 3.5 mi north of Henderson, and 6.0 mi upstream from Lake Mead.

DRAINAGE AREA.--2,125 mi², of which 1,518 mi² contribute directly to surface runoff. Prior to Apr. 4, 1961, 2,179 mi², of which 1,571 mi² contributed directly to surface runoff.

PERIOD OF RECORD.--Water years 1957 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1985 to September 1987.

WATER TEMPERATURE: November 1985 to September 1987.

REMARKS.--Discharge includes treated sewage effluent from municipal treatment plants and some wastewater from industrial plants. City and County sewage treatment plants implemented chemical removal of phosphorus from effluent during water year 1981.

COOPERATION.--All water-quality sampling and analyses prior to July 1970, plus nutrient analyses for period July 1970 to September 1972, from U.S. Environmental Protection Agency. Data in addition to those listed under "Period of Record" for January 1964 to June 1970 may exist in files of U.S. Environmental Protection Agency.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,150 microsiemens, Jan. 5, 1987; minimum daily, 1,470 microsiemens, July 23, 1986.

WATER TEMPERATURE: Maximum daily, 29.0°C, Aug. 4, 6, 1987; minimum daily, 11.5°C, Feb. 11, 1986.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH, FIELD (STAND- ARD UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT									
15...	0845	E144	2230	7.3	10.5	16.5	1.00	0.990	2.10
NOV									
23...	1115	E157	2150	7.5	17.0	20.0	0.620	0.620	1.70
DEC									
19...	1015	E151	2250	7.4	11.0	16.0	0.480	0.500	1.60
JAN									
10...	1100	E150	2260	7.5	13.0	15.0	0.370	0.360	1.10
FEB									
22...	0845	E160	2420	7.4	11.0	17.0	0.430	0.410	1.40
MAR									
25...	0945	E147	2500	7.4	18.5	18.0	0.350	0.350	1.10
APR									
05...	0845	E98	2510	7.5	22.5	21.0	0.300	0.300	1.20
12...	0900	E130	2480	7.5	14.5	16.5	0.640	0.630	1.70
19...	0900	E132	2650	7.5	18.0	19.0	0.430	0.410	1.50
26...	0915	E137	2420	7.6	16.0	18.0	0.810	0.750	2.00
MAY									
03...	0800	E126	2500	7.4	15.5	18.0	0.840	0.820	1.70
10...	0830	E130	2530	7.5	15.5	18.0	0.940	0.890	2.10
17...	0930	E130	2460	7.5	20.0	21.0	0.980	0.970	2.10
24...	1100	E142	2300	7.6	33.0	26.0	0.970	0.950	2.30
31...	0915	E129	2330	7.5	14.0	18.5	0.690	0.680	2.10
JUN									
07...	0915	E130	2310	7.7	28.0	25.0	0.810	0.800	2.00
14...	0900	E140	2220	7.5	30.0	23.0	0.980	0.970	1.90
21...	0915	E141	2150	7.4	28.0	25.0	0.830	0.820	1.70
28...	1200	E127	2030	7.4	30.0	25.0	1.00	1.00	2.70
JUL									
05...	0815	E137	2200	7.5	33.0	26.5	0.820	0.800	1.80
11...	1030	E153	2090	7.4	38.0	28.0	0.860	0.850	2.20
19...	0845	E145	2160	7.4	26.0	24.0	0.890	0.860	2.40
26...	0715	E137	2210	7.4	20.0	24.0	0.810	0.800	2.00
AUG									
02...	0745	E175	2140	7.7	24.5	26.0	0.650	0.640	1.80
09...	1030	E147	2080	7.7	29.0	25.0	1.10	1.00	2.20
16...	0930	E145	2180	7.5	34.0	27.0	0.850	0.880	1.80
23...	0800	E144	2150	7.5	31.0	26.0	1.30	1.10	2.20
30...	1200	E156	2090	7.5	24.0	26.0	1.40	1.40	2.90
SEP									
06...	0800	E160	2260	7.4	22.0	25.0	1.10	1.20	2.30
13...	0845	E144	2200	7.6	21.0	23.0	0.890	0.880	2.30
20...	0915	E153	2170	7.5	26.0	25.0	0.940	0.910	2.60
27...	0830	E150	2160	7.4	22.0	24.0	0.960	0.940	2.20

E Estimated

09419700 LAS VEGAS WASH NEAR HENDERSON, NV--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT									
15...	2.00	12.0	11.0	15	14	0.740	0.550	0.460	0.390
NOV									
23...	1.60	16.0	16.0	--	--	0.720	0.400	0.310	0.270
DEC									
19...	1.60	14.0	14.0	16	15	0.730	0.380	0.390	0.310
JAN									
10...	1.10	14.0	14.0	18	15	0.510	0.300	0.310	0.240
FEB									
22...	1.30	15.0	13.0	16	14	0.640	0.510	0.470	0.430
MAR									
25...	1.20	14.0	10.0	15	14	0.770	0.590	0.570	0.510
APR									
05...	0.990	13.0	14.0	32	15	0.400	0.270	0.240	0.210
12...	1.60	13.0	13.0	15	15	0.700	0.460	0.470	0.380
19...	1.40	14.0	13.0	15	13	0.450	0.330	0.270	0.190
26...	1.80	13.0	12.0	17	13	1.00	0.640	0.640	0.560
MAY									
03...	1.70	12.0	11.0	15	14	0.470	0.360	0.310	0.290
10...	2.00	13.0	12.0	15	13	0.700	0.460	0.440	0.370
17...	2.10	13.0	11.0	13	13	0.800	0.500	0.500	0.420
24...	2.30	11.0	12.0	12	15	0.910	0.620	0.630	0.560
31...	2.10	12.0	11.0	12	10	0.430	0.170	0.200	0.110
JUN									
07...	2.00	11.0	11.0	14	13	0.890	0.610	0.580	0.540
14...	1.90	12.0	11.0	15	15	1.40	1.00	1.20	1.00
21...	1.70	12.0	11.0	20	14	0.470	0.290	0.250	0.210
28...	2.70	11.0	11.0	14	14	0.710	0.430	0.400	0.330
JUL									
05...	1.80	11.0	12.0	14	12	0.690	0.460	0.540	0.450
11...	2.20	13.0	12.0	15	14	0.640	0.410	0.430	0.390
19...	2.30	10.0	11.0	15	12	0.510	0.390	0.400	0.320
26...	2.00	12.0	12.0	14	13	0.790	0.530	0.550	0.490
AUG									
02...	1.80	11.0	10.0	12	10	0.480	0.350	0.330	0.290
09...	2.20	12.0	11.0	15	14	0.700	0.450	0.440	0.350
16...	1.70	11.0	11.0	12	13	0.690	0.450	0.430	0.430
23...	2.20	12.0	11.0	15	14	0.570	0.380	0.360	0.290
30...	2.90	10.0	10.0	13	12	0.720	0.550	0.490	0.450
SEP									
06...	2.40	12.0	12.0	13	11	0.660	0.500	0.460	0.400
13...	2.50	11.0	12.0	16	15	0.590	0.400	0.390	0.320
20...	2.40	11.0	12.0	15	15	0.520	0.340	0.330	0.260
27...	2.20	12.0	12.0	15	13	0.560	0.380	0.340	0.290

E: ESTIMATED

LAS VEGAS VALLEY

09419753 LAS VEGAS WASH ABOVE THREE KIDS WASH, BELOW HENDERSON, NV

LOCATION.--Lat 36°05'53", Long 114°56'42", in NW¼NE¼ sec.28, T.21 S., R.63 E., Clark County, Hydrologic Unit 15010015, in Lake Mead National Recreation Area, on left bank, 0.1 mi upstream from Three Kids Wash, 2.7 mi southwest of Northshore Road Bridge, and 3.0 mi northeast of Henderson.

DRAINAGE AREA.--2,180 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,460 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,050 ft³/s, June 10, 1990, gage height, 11.28 ft, from rating curve extended above 200 ft³/s on basis of velocity-area study; minimum daily, 114 ft³/s, June 2, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 366 ft³/s, Feb. 28, gage height, 7.02 ft, from rating curve extended above 200 ft³/s, on basis of velocity-area study; minimum daily, 132 ft³/s, Jan. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	183	167	171	191	241	178	156	180	e152	224	172
2	174	178	172	156	187	210	178	154	159	e158	193	174
3	171	177	174	143	187	185	182	158	159	e164	190	177
4	163	e175	170	153	189	179	177	166	156	e168	184	176
5	165	e175	173	141	189	172	172	160	158	e166	186	179
6	164	e180	172	137	189	159	174	162	159	e164	182	189
7	168	e180	169	134	189	164	173	140	155	e160	172	203
8	168	e180	172	132	189	170	171	165	153	e166	173	177
9	166	e170	173	e156	186	168	168	161	157	e162	174	174
10	166	e170	173	e166	185	167	167	156	158	e164	175	169
11	162	e175	175	e171	185	168	165	155	156	e168	234	169
12	162	e175	177	175	186	169	161	156	156	e164	180	165
13	163	e170	176	176	183	167	161	156	154	163	180	168
14	162	e170	177	177	182	169	162	152	157	160	173	175
15	167	e170	180	179	177	170	162	152	156	162	168	179
16	169	e165	181	178	178	171	160	153	157	162	166	177
17	170	e165	179	178	178	172	161	137	156	163	168	175
18	170	e160	176	178	178	171	160	146	133	164	167	176
19	174	e160	174	179	179	180	160	148	168	162	167	177
20	180	e170	175	179	177	182	159	148	158	162	168	176
21	175	e175	178	181	182	188	159	156	158	162	168	172
22	180	e170	185	180	180	169	161	171	156	168	170	168
23	178	e170	184	180	181	170	160	154	156	139	169	169
24	179	e170	186	184	181	169	161	155	157	170	167	171
25	178	e165	191	184	181	178	161	156	156	167	169	167
26	181	e165	189	185	161	185	161	158	153	163	175	166
27	178	e165	187	186	180	209	162	159	156	162	169	172
28	175	167	185	186	278	199	161	161	153	164	170	174
29	176	172	187	185	---	178	161	159	150	168	169	177
30	175	170	187	188	---	172	161	158	151	136	171	179
31	176	---	185	192	---	177	---	153	---	184	172	---
TOTAL	5308	5137	5529	5290	5208	5528	4959	4821	4691	5037	5493	5242
MEAN	171	171	178	171	186	178	165	156	156	162	177	175
MAX	181	183	191	192	278	241	182	171	180	184	234	203
MIN	162	160	167	132	161	159	159	137	133	136	166	165
AC-FT	10530	10190	10970	10490	10330	10960	9840	9560	9300	9990	10900	10400
CAL YR 1990	TOTAL	63023	MEAN	173	MAX	600	MIN	140	AC-FT	125000		
WTR YR 1991	TOTAL	62243	MEAN	171	MAX	278	MIN	132	AC-FT	123500		

e Estimated

09419753 LAS VEGAS WASH ABOVE THREE KIDS WASH, BELOW HENDERSON, NV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to current year.

REMARKS.--Discharge includes treated sewage effluent and wastewater from municipal and industrial sources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH, FIELD (STAND- ARD UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT									
15...	1000	156	2460	7.5	14.0	16.5	0.800	0.790	1.70
NOV									
23...	1215	E170	2380	7.6	16.0	20.5	0.760	0.740	2.00
DEC									
19...	1105	167	2470	7.4	11.0	14.5	0.600	0.600	1.80
JAN									
10...	1215	166	2470	7.4	11.0	14.5	0.500	0.460	1.40
FEB									
22...	1145	174	2580	7.6	16.0	18.0	0.660	0.640	1.80
MAR									
25...	1100	159	2660	7.6	17.0	17.0	0.410	0.390	1.40
APR									
05...	1000	165	2870	7.7	26.0	21.0	0.350	0.330	1.50
12...	1000	150	2760	7.6	16.5	18.5	0.580	0.550	1.90
19...	1100	149	2870	7.7	22.0	20.0	0.890	0.860	2.10
26...	1015	151	2640	7.6	17.5	21.0	1.00	0.970	2.40
MAY									
03...	0845	140	2730	7.7	17.5	18.5	1.00	1.00	2.10
10...	0930	143	2680	7.6	20.0	21.0	1.20	1.10	2.50
17...	1130	144	2560	7.7	22.0	21.0	1.60	1.20	2.80
24...	1300	157	2420	7.8	33.0	30.0	1.30	1.20	2.90
31...	1000	143	2550	7.7	15.5	19.0	0.790	0.800	2.30
JUN									
07...	1045	144	2510	7.8	30.0	26.0	0.980	0.990	2.30
14...	1030	154	2530	7.8	36.0	25.0	1.30	1.20	2.40
21...	1230	156	2150	7.7	31.0	28.0	1.20	1.20	2.60
28...	1030	143	2390	7.6	28.0	23.0	1.10	1.10	2.50
JUL									
05...	1000	150	2330	7.7	38.0	29.0	1.20	1.30	2.40
11...	1125	E168	2290	7.6	33.0	26.0	1.20	1.20	2.50
19...	1030	154	2400	7.6	29.5	24.5	1.30	1.30	2.90
26...	0830	152	2340	7.6	24.0	24.0	1.20	1.00	2.40
AUG									
02...	0915	194	2400	7.7	33.0	26.5	0.700	0.710	2.00
09...	1030	165	2300	7.6	35.0	26.0	1.20	1.20	2.50
16...	1030	161	2290	7.7	37.0	27.0	0.990	0.980	2.10
23...	0915	161	2340	7.6	36.0	26.0	1.50	1.40	2.70
30...	1435	173	2220	7.6	32.0	27.0	1.70	1.60	3.40
SEP									
06...	0900	173	2370	7.5	23.0	24.5	1.40	1.50	2.70
13...	1030	163	2380	7.6	28.0	24.0	1.20	1.20	--
20...	1030	168	2350	7.6	31.0	25.5	1.30	1.20	2.90
27...	1000	165	2330	7.5	22.0	24.0	1.30	1.30	2.80

E Estimated

09419753 LAS VEGAS WASH ABOVE THREE KIDS WASH, BELOW HENDERSON, NV--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT									
15...	1.70	13.0	13.0	15	16	0.830	0.570	0.510	0.430
NOV									
23...	1.90	15.0	14.0	17	15	0.720	0.370	0.330	0.270
DEC									
19...	1.90	12.0	12.0	15	14	0.670	0.330	0.360	0.280
JAN									
10...	1.40	13.0	12.0	16	12	0.470	0.320	0.320	0.270
FEB									
22...	1.80	14.0	14.0	14	15	0.620	0.440	0.420	0.400
MAR									
25...	1.50	12.0	13.0	14	13	0.670	0.530	0.520	0.460
APR									
05...	1.20	12.0	11.0	14	13	0.350	0.210	0.220	0.180
12...	1.90	13.0	12.0	13	14	0.430	0.230	0.240	0.160
19...	2.10	12.0	12.0	13	12	0.830	0.390	0.440	0.340
26...	2.20	12.0	11.0	14	12	0.880	0.580	0.590	0.500
MAY									
03...	2.00	11.0	10.0	14	14	0.470	0.340	0.300	0.260
10...	2.40	11.0	12.0	13	12	0.670	0.440	0.410	0.350
17...	2.40	11.0	10.0	13	13	0.730	0.460	0.480	0.410
24...	2.90	10.0	10.0	13	10	0.860	0.500	0.540	0.480
31...	2.30	11.0	11.0	15	12	0.430	0.160	0.210	0.130
JUN									
07...	2.30	11.0	9.30	13	12	0.840	0.600	0.540	0.520
14...	2.10	8.70	8.60	14	10	1.20	0.850	1.10	0.810
21...	2.50	9.70	10.0	13	13	0.480	0.280	0.230	0.190
28...	2.50	11.0	11.0	12	13	0.660	0.430	0.400	0.350
JUL									
05...	2.40	10.0	10.0	12	12	0.670	0.420	0.490	0.420
11...	2.50	11.0	11.0	12	12	0.630	0.360	0.400	0.350
19...	2.80	10.0	11.0	14	12	0.480	0.360	0.360	0.300
26...	2.30	12.0	11.0	13	14	0.770	0.500	0.510	0.470
AUG									
02...	2.00	9.50	9.60	14	11	0.430	0.330	0.280	0.250
09...	2.60	11.0	10.0	14	13	0.660	0.410	0.400	0.330
16...	2.10	11.0	10.0	15	11	0.760	0.430	0.440	--
23...	2.80	11.0	10.0	13	11	0.590	0.360	0.340	0.280
30...	3.40	9.60	8.70	13	12	0.790	0.610	0.550	0.510
SEP									
06...	2.70	10.0	11.0	12	10	0.610	0.470	0.440	0.380
13...	3.30	10.0	9.90	14	15	0.560	0.370	0.350	0.300
20...	2.80	10.0	10.0	13	13	0.520	0.310	0.320	0.250
27...	2.80	11.0	12.0	13	12	0.510	0.370	0.330	0.280

09421000 LAKE MEAD AT HOOVER DAM, AZ-NV

LOCATION--Lat 36°00'58", long 114°44'13", in NE¼SW¼ sec.3, T.30 N., R.23 W., Gila and Salt River meridian, Mohave-Clark Counties, Hydrologic Unit 15010005, in center of Hoover Dam on Colorado River.

DRAINAGE AREA.--171,700 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing (previously considered part of the Missouri River basin).

PERIOD OF RECORD.--Contents: February 1935 to current year. Evaporation: March 1952 to current year. Diversions (monthly totals only): to Boulder City area, since October 1935; to Henderson and Las Vegas areas, since April 1942; combined diversions since October 1968. Prior to 1946 published as "at Boulder Dam."

REVISED RECORDS.--WSP 899: 1935-39.

GAGE.--Water-stage indicator read once daily at midnight, with supplementary water-stage recorder. Datum of gage is 0.00 ft to Local Powerhouse datum and is 0.40 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete arch-gravity dam; storage began Feb. 1, 1935; dam completed Mar. 1, 1936. Total capacity (based on 1963-64 resurvey by Coast and Geodetic Survey; capacity table put into use Apr. 1, 1967), 29,755,000 acre-ft, consisting of the following: Dead storage, 2,378,000 acre-ft below gage height 850.0 ft--gage sills in outlet towers; usable contents, 26,159,000 acre-ft between gage heights 895.0 ft and 1,211.4 ft (top of automatic spillway gates in raised position); uncontrolled storage, 1,218,000 acre-ft between gage heights 1,221.4 ft and 1,229.0 ft (maximum water surface). Reservoir is used to store water for flood control, irrigation, municipal water supply, power development and recreation. Figures given herein represent usable contents.

DIVERSIONS FROM LAKE MEAD.--Diversions to Boulder City area at dam; diversions to Henderson and Las Vegas areas from intakes 6 mi upstream. Diversions measured by Venturi meters. Water used for municipal and industrial purposes.

COOPERATION.--Records of gage height and contents furnished by Bureau of Reclamation. Records of diversions from Lake Mead furnished by Bureau of Reclamation and Colorado River Commission of Nevada.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 27,790,000 acre-ft, July 29, 30, 1941 (on basis of original bathymetry), gage height, 1,220.45 ft; maximum gage height, 1,225.85 ft, July 24, 1983 (equivalent to 26,868,000 acre-ft on basis of resurveyed bathymetry of 1963-64); minimum contents (since 1940), 10,695,000 acre-ft, Apr. 26, 1956, gage height, 1,083.21 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 20,166,000 acre-ft, Feb. 24, gage height, 1,180.17 ft; minimum, 19,193,000 acre-ft, Sept. 24, 25, gage height, 1,172.70 ft.

RESERVOIR STORAGE (THOU AC-FT) WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	20144	19994	19955	19856	20065	20145	20042	19830	19620	19425	19272	19226	
2	20137	19984	19955	19851	20070	20141	20038	19824	19626	19402	19278	19230	
3	20124	19980	19945	19857	20083	20135	20024	19819	19603	19385	19284	19220	
4	20116	19982	19940	19878	20079	20128	20029	19815	19579	19386	19288	19219	
5	20112	19976	19929	19895	20082	20123	20029	19809	19577	19384	19284	19212	
6	20112	19967	19929	19913	20083	20108	20022	19792	19549	19394	19279	19214	
7	20114	19954	19927	19927	20082	20102	20032	19771	19535	19410	19276	19226	
8	20106	19952	19928	19945	20088	20102	20025	19751	19535	19412	19270	19234	
9	20100	19953	19932	19958	20092	20106	20019	19746	19539	19417	19260	19231	
10	20096	19958	19932	19975	20099	20103	20011	19743	19531	19422	19266	19226	
11	20091	19965	19925	19994	20090	20096	19996	19749	19523	19421	19267	19221	
12	20081	19961	19917	20012	20078	20083	19988	19758	19513	19419	19257	19220	
13	20083	19954	19920	20022	20066	20067	19994	19750	19506	19421	19248	19216	
14	20083	19948	19919	20020	20063	20063	19997	19749	19500	19413	19244	19217	
15	20073	19945	19924	20013	20071	20069	19994	19741	19500	19388	19239	19226	
16	20057	19948	19994	20008	20081	20061	19983	19730	19500	19363	19237	19224	
17	20041	19953	19912	20015	20094	20055	19974	19725	19488	19344	19243	19217	
18	20037	19957	19900	20017	20103	20050	19965	19723	19473	19344	19246	19203	
19	20025	19953	19874	20030	20108	20044	19955	19716	19473	19340	19244	19201	
20	20028	19958	19875	20042	20111	20028	19953	19695	19471	19352	19238	19198	
21	20032	19948	19864	20046	20127	20020	19948	19664	19469	19357	19228	19205	
22	20030	19949	19868	20054	20143	20016	19945	19643	19474	19356	19226	19212	
23	20033	19953	19864	20055	20149	20020	19955	19634	19479	19350	19216	19205	
24	20030	19962	19865	20062	20166	20024	19929	19624	19474	19347	19226	19193	
25	20026	19965	19873	20070	20164	20020	19895	19624	19460	19345	19221	19193	
26	20025	19958	19875	20083	20161	20013	19887	19624	19440	19343	19229	19198	
27	20028	19957	19870	20091	20152	20004	19886	19630	19439	19349	19220	19201	
28	20037	19946	19873	20084	20149	20012	19881	19624	19437	19344	19215	19216	
29	20024	19949	19877	20073	---	20028	19871	19612	19442	19330	19214	19234	
30	20012	19949	19871	20061	---	20037	19852	19597	19446	19293	19212	19233	
31	19996	---	19864	20061	---	20050	---	19607	---	19269	19221	---	
MAX	20144	19994	19994	20091	20166	20145	20042	19830	19626	19425	19288	19234	
MIN	19996	19945	19864	19851	20063	20004	19852	19597	19437	19269	19212	19193	
*	1178.90	1178.54	1177.89	1179.39	1180.06	1179.31	1177.80	1175.92	1174.67	1173.29	1172.92	1173.01	
°	-148000	-47000	-85000	+197000	+88000	-99000	-198000	-245000	-161000	-177000	-48000	+12000	
**	26130	20880	13990	17220	15710	18790	24130	26550	26570	29100	27310	23110	
**	5.8	7.0	5.8	2.8	e2.0	4.2	2.5	e5.8	9.5	8.4	11.2	9.6	
a	64100	76800	63900	30300	e22500	45800	27800	e62500	102000	89400	119000	102000	
CAL YR	1990	MAX	21754	MIN	19864	°	-1605000	**	268590	**	71.7	a	801000
WTR YR	1991	MAX	20166	MIN	19193	°	-911000	**	269490	**	74.6	a	806100

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

** Change in contents, in acre-feet.

e Diversions, in acre-feet.

** Gross evaporation, in inches, from Lake Mead.

a Gross evaporation, in acre-feet, from Lake Mead.

e Estimated

NOTE: Figures of gross evaporation are based on data obtained on Lake Mead by the U.S. Bureau of Reclamation and at Las Vegas by National Weather Service, and are computed by the Geological Survey. Only the mass-transfer method described in Geological Survey Professional Paper 298 is used. "Gross" denotes the total evaporation from the lake without deduction for precipitation on the lake surface for natural losses that would have occurred in the area now occupied by the lake. Starting February 1976, coefficient of 0.00179.

COLORADO RIVER MAIN STEM

09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-NV
(National Stream-Quality Accounting Network Station)

LOCATION.--Lat 36°00'55", long 114°44'16", in NE¼ SW¼ sec.3, T.30 N., R.23 W., Gila and Salt River meridian, or SW¼NE¼ sec.29, T.22 S., R.65 E., Mount Diablo meridian, Mohave-Clark Counties, Hydrologic Unit 15030101, in powerhouse at downstream side of Hoover Dam.

DRAINAGE AREA.--171,700 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing (previously considered part of the Missouri River basin).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year (prior to April 1934, monthly discharge only, published in WSP 1313). Published as "near Willow Beach" 1933-39 and as "below Boulder Dam" 1939-45.

GAGE.--Acoustical velocity meters on each turbine in Hoover Dam. Prior to Nov. 1, 1939, water-stage recorder at site 9 mi downstream at datum 594.8 ft above National Geodetic Vertical Datum of 1929. Nov. 1, 1939, to June 30, 1958, water-stage recorder at site 0.8 mi downstream at datum 600.35 ft, above National Geodetic Vertical Datum of 1929. July 1, 1958, to Nov. 7, 1979, totalizing flowmeter on each turbine.

REMARKS.--Flow regulated by Hoover Dam on Lake Mead since Feb. 1, 1935. Many diversions above station for irrigation, industrial, and municipal use.

COOPERATION.--Records furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--57 years (water years 1935-91), 14,000 ft³/s, 10,143,000 acre-ft/yr, unadjusted for storage in Lake Mead.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 50,800 ft³/s, July 29, 1983; no flow at Hoover Dam part of Feb. 10, 1935; minimum daily, 152 ft³/s, Feb. 10, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 20,200 ft³/s, May 29; minimum daily, 4,310 ft³/s, Oct. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7750	8070	7200	7570	7700	12400	10100	14300	10100	16900	16800	12200
2	7840	7370	8360	9370	7320	10900	9710	13500	10900	17100	16400	11800
3	9940	6380	11800	9390	5700	12500	9820	14400	17900	18000	12100	17600
4	11400	7570	10500	9710	11300	12500	10300	13100	17800	15700	11300	13900
5	9280	7570	11000	6370	10100	12200	12000	12200	14100	18700	15100	12800
6	6640	9060	11800	6230	9560	14800	10600	15000	16200	13300	15600	14500
7	7410	9280	11500	7980	10100	13500	11400	17000	17600	14000	14900	8590
8	9400	7630	9120	6260	9010	12800	12100	16300	12400	13700	18500	11000
9	8740	7420	9120	8500	7520	9820	15500	16000	12100	17900	17300	13900
10	10800	5570	12200	8100	7880	11900	13900	16900	16000	13800	11700	14400
11	10800	6600	10600	7060	10100	14500	16800	12600	16600	19100	14400	13600
12	12300	7560	10500	6090	11700	15800	16200	10500	15600	20100	18300	14500
13	7060	8840	10800	7140	10900	14400	11100	16800	18600	14700	18700	15500
14	7650	8420	11400	10300	11400	13000	12700	17500	20100	16600	15500	11900
15	10200	7980	8020	8210	10500	14000	15300	19700	16600	17900	16200	10000
16	11800	8490	9780	7530	6810	12100	16300	18200	16300	16000	15800	13600
17	10900	6350	13100	6440	7690	13700	13300	17600	19700	18500	11100	15400
18	11900	8240	12600	8320	8570	15200	15400	16700	17200	16500	12900	15500
19	7980	10300	12300	5620	7720	14600	15700	14900	16600	15800	15400	15500
20	7100	8220	12900	4900	10900	16000	10800	16700	19500	10600	17100	15400
21	6180	11400	16000	8710	8860	16900	13100	19700	20000	13800	17000	11500
22	7410	9880	9850	6810	9010	14000	12900	18800	16100	16700	16900	10200
23	7800	8250	12000	8000	7930	10900	14300	19900	14000	19200	17700	17300
24	8670	8060	7770	7950	8230	9650	15500	19100	15700	18200	9900	16600
25	9350	6420	6850	9210	12400	14400	14300	15100	20100	16500	11600	11900
26	9770	9430	9410	8610	13000	14200	14600	13700	19800	17800	15700	13400
27	5780	9870	11100	8030	16400	13100	9840	12700	18700	14400	14700	12100
28	4310	9960	11200	9150	15400	9680	13600	16400	16800	16300	14800	7590
29	10500	9090	10200	11800	---	8020	14600	20200	13300	17500	15600	6450
30	11100	8330	9610	10400	---	6490	13500	18800	11600	17200	15600	15500
31	10200	---	10600	9480	---	5310	---	14800	---	17400	10400	---
TOTAL	277960	247610	329190	249240	273710	389270	395270	499100	488000	509900	465000	394130
MEAN	8966	8254	10620	8040	9775	12560	13180	16100	16270	16450	15000	13140
MAX	12300	11400	16000	11800	16400	16900	16800	20200	20100	20100	18700	17600
MIN	4310	5570	6850	4900	5700	5310	9710	10500	10100	10600	9900	6450
AC-FT	551300	491100	652900	494400	542900	772100	784000	990000	967900	1011000	922300	781800
CAL YR	1990	TOTAL	4640250	MEAN	12710	MAX	22100	MIN	4310	AC-FT	9204000	
WTR YR	1991	TOTAL	4518380	MEAN	12380	MAX	20200	MIN	4310	AC-FT	8962000	

09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-NV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1940 to current year.

PERIOD OF DAILY RECORD.--

CHEMICAL ANALYSES: October 1939 to September 1944, October 1950 to September 1957, October 1967 to March 1970.

SPECIFIC CONDUCTANCE: October 1939 to July 1957, October 1977 to September 1987.

WATER TEMPERATURE: October 1941 to July 1957, October 1977 to September 1987.

REMARKS.--Samples collected at gaging station 0.3 mi downstream from Hoover Dam. Unpublished chemical analyses for period October 1939 to September 1940 available from the U.S. Geological Survey in Tucson, Ariz.

COOPERATION.--Instantaneous-discharge data provided by U.S. Bureau of Reclamation.

EXTREMES MEASURED FOR PERIOD OF DAILY RECORD SINCE OCTOBER 1977.--

SPECIFIC CONDUCTANCE: Maximum, 1,180 microsiemens, June 10, 1980; minimum, 787 microsiemens, Apr. 20, 1987.

WATER TEMPERATURE: Maximum, 21.5°C, July 23, 1983; minimum, 9.0°C, Jan. 10, 1978.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH, FIELD (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED SATUR-ATION	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CaCO3)
NOV 13...	1130	4580	930	7.8	26.0	13.5	0.40	6.8	67	<1	K4	260
JAN 09...	1100	9020	940	8.1	15.0	12.5	5.0	7.8	75	<1	<1	300
FEB 26...	1200	22200	980	8.7	23.0	11.5	0.40	8.5	101	<1	<1	300
APR 25...	1100	26900	1000	8.2	26.0	12.5	1.2	8.9	86	<1	<1	300
JUN 26...	1200	26900	1010	8.1	34.0	12.5	0.50	8.2	79	K1	K1	310
AUG 27...	1100	23600	900	7.8	38.0	16.0	0.80	8.0	83	<2	K8	300
DATE	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV 13...	66	24	79	2	3.8	147	120	250	63	0.40	8.6	630
JAN 09...	73	28	89	2	4.8	165	135	270	80	0.70	9.1	604
FEB 26...	75	28	93	2	4.2	140	115	280	84	0.30	9.0	642
APR 25...	73	28	89	2	4.4	163	134	270	84	0.30	8.7	639
JUN 26...	75	29	93	2	3.9	166	136	270	82	0.30	9.2	600
AUG 27...	74	27	88	2	4.3	182	149	280	83	0.30	8.6	650
DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV 13...	570	0.86	<0.010	0.020	0.300	0.300	0.040	0.040	<0.20	<0.010	<0.010	<0.010
JAN 09...	637	0.82	<0.010	0.010	0.300	0.300	0.050	0.030	0.30	<0.010	<0.010	<0.010
FEB 26...	645	0.87	<0.010	<0.010	0.350	0.350	0.020	0.020	0.60	<0.010	<0.010	<0.010
APR 25...	640	0.87	<0.010	0.010	0.440	0.350	0.040	0.030	<0.20	0.010	<0.010	<0.010
JUN 26...	647	0.82	<0.010	<0.010	0.370	0.370	0.040	<0.010	<0.20	<0.010	0.010	<0.010
AUG 27...	658	0.88	<0.010	<0.010	0.370	0.390	<0.010	0.020	0.20	<0.010	<0.010	<0.010

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-NV--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
NOV 13...	<0.010	10	3	97	<0.5	<1.0	<1	<3	2	4	<1	40
JAN 09...	<0.010	--	--	--	--	--	--	--	--	--	--	--
FEB 26...	<0.010	<10	2	120	<0.5	1.0	1	<3	3	3	2	44
APR 25...	<0.010	<10	3	78	<0.5	<1.0	<1	<3	<1	7	1	42
JUN 26...	<0.010	<10	3	110	<0.5	<1.0	1	<3	2	7	1	45
AUG 27...	<0.010	<10	2	110	<0.5	2.0	<1	<3	2	13	<1	44
DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 13...	<1	<0.1	<10	<1	2	<1.0	920	<6	6	2	25	56
JAN 09...	--	--	--	--	--	--	--	--	--	7	170	54
FEB 26...	<1	<0.1	<10	1	3	<1.0	1100	<6	<3	--	--	--
APR 25...	<1	<0.1	<10	2	2	<1.0	1100	<6	10	1	73	75
JUN 26...	2	--	<10	<1	2	<1.0	1100	<6	21	1	73	74
AUG 27...	4	<0.1	10	2	3	<1.0	1000	<6	18	1	64	50

< Actual value is known to be less than value shown.

COLORADO RIVER MAIN STEM

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09422500 LAKE MOHAVE AT DAVIS DAM, AZ-NV

LOCATION.--Lat 35°11'50", long 114°34'07", in SW¼SW¼ sec.18, T.21 N., R.21 W., Gila and Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, on forebay structure on Arizona side of Davis Dam on Colorado River, 29 mi west of Kingman, Az., and 67 mi downstream from Hoover Dam.

DRAINAGE AREA.--173,300 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing.

PERIOD OF RECORD.--January 1950 to current year.

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

REMARKS.--Reservoir is formed by earthfill and rockfill dam; dam completed in April 1949 and storage began Jan. 17, 1950. Usable capacity, 1,810,000 acre-ft between elevations 533.39 ft - lowest point of penstock outlet - and 647.0 ft - top of spillway gates. A small amount of additional storage is available through use of splashboards on the spillway gates. Dead storage, 8,530 acre-ft below elevation 533.39 ft. Lake is used for power development, reregulation for irrigation demand, and to satisfy requirements of the Treaty of 1944 with Mexico. Figures given herein represent usable contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,811,000 acre-ft May 24, 1958, May 29, 1963, May 29, 1982; maximum elevation, 647.04 ft May 29, 1963, May 29, 1982; minimum contents (since 1952), 1,168,000 acre-ft Sept. 8, 1953, elevation, 622.15 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,790,000 acre-ft Mar. 21, elevation, 646.28 ft; minimum, 1,383,000 acre-ft Nov. 17, elevation, 630.98 ft.

Capacity table (elevation, in feet, and usable contents, in acre-feet)

630	1,359,000	638	1,564,000
632	1,409,000	641	1,644,000
635	1,486,000	644	1,726,000
647	1,810,000		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1478000	1427000	1441000	1604000	1688000	1720000	1758000	1606000	1628000	1589000	1515000	1481000
2	1474000	1425000	1443000	1610000	1684000	1732000	1757000	1598000	1623000	1586000	1515000	1475000
3	1475000	1419000	1450000	1619000	1680000	1746000	1754000	1594000	1625000	1583000	1509000	1481000
4	1480000	1414000	1452000	1628000	1683000	1755000	1747000	1588000	1624000	1576000	1506000	1477000
5	1479000	1415000	1457000	1633000	1682000	1760000	1742000	1585000	1619000	1578000	1501000	1475000
6	1474000	1417000	1461000	1639000	1681000	1767000	1732000	1583000	1619000	1567000	1497000	1479000
7	1473000	1415000	1465000	1646000	1681000	1767000	1733000	1586000	1618000	1562000	1491000	1478000
8	1468000	1414000	1465000	1651000	1679000	1762000	1729000	1585000	1612000	1554000	1492000	1479000
9	1464000	1408000	1468000	1657000	1676000	1754000	1727000	1587000	1609000	1550000	1492000	1481000
10	1461000	1400000	1475000	1666000	1676000	1759000	1726000	1586000	1606000	1543000	1485000	1484000
11	1463000	1396000	1480000	1674000	1677000	1763000	1721000	1579000	1604000	1545000	1482000	1486000
12	1466000	1395000	1484000	1679000	1681000	1770000	1723000	1574000	1603000	1549000	1490000	1490000
13	1460000	1392000	1488000	1688000	1685000	1772000	1714000	1573000	1604000	1547000	1496000	1493000
14	1458000	1390000	1497000	1699000	1689000	1768000	1708000	1578000	1610000	1548000	1497000	1491000
15	1456000	1388000	1497000	1705000	1690000	1769000	1706000	1584000	1607000	1552000	1498000	1494000
16	1458000	1386000	1504000	1707000	1686000	1769000	1703000	1587000	1608000	1546000	1499000	1494000
17	1464000	1383000	1511000	1708000	1686000	1775000	1696000	1590000	1609000	1546000	1493000	1495000
18	1468000	1385000	1516000	1707000	1683000	1780000	1692000	1590000	1609000	1541000	1487000	1503000
19	1467000	1390000	1526000	1703000	1680000	1780000	1687000	1594000	1606000	1533000	1484000	1512000
20	1463000	1384000	1538000	1703000	1680000	1784000	1673000	1595000	1605000	1522000	1485000	1522000
21	1457000	1404000	1555000	1705000	1676000	1790000	1672000	1604000	1607000	1517000	1486000	1526000
22	1454000	1410000	1562000	1701000	1667000	1787000	1664000	1612000	1601000	1513000	1486000	1530000
23	1449000	1415000	1578000	1700000	1659000	1781000	1654000	1624000	1595000	1514000	1489000	1543000
24	1445000	1416000	1578000	1699000	1658000	1771000	1647000	1635000	1588000	1512000	1474000	1556000
25	1443000	1419000	1573000	1696000	1661000	1776000	1644000	1638000	1593000	1508000	1470000	1559000
26	1442000	1427000	1572000	1689000	1668000	1779000	1640000	1639000	1599000	1510000	1471000	1564000
27	1437000	1436000	1576000	1686000	1684000	1782000	1629000	1634000	1604000	1504000	1470000	1572000
28	1428000	1445000	1581000	1683000	1703000	1783000	1627000	1635000	1604000	1503000	1473000	1566000
29	1429000	1446000	1588000	1689000	---	1776000	1624000	1641000	1599000	1501000	1478000	1562000
30	1429000	1442000	1597000	1689000	---	1766000	1616000	1648000	1617000	1506000	1484000	1569000
31	1428000	---	1601000	1693000	---	1760000	---	1641000	---	1510000	1479000	---
MAX	1480000	1446000	1601000	1708000	1703000	1790000	1758000	1648000	1628000	1589000	1515000	1572000
MIN	1428000	1383000	1441000	1604000	1658000	1720000	1616000	1573000	1588000	1501000	1470000	1475000
(*)	632.75	633.31	639.39	642.79	643.15	645.23	639.93	640.87	639.98	635.95	634.75	638.19
(**)	-57000	+14000	+159000	+92000	+10000	+57000	-144000	+25000	-24000	-107000	-31000	+90000
CAL YR	1990	MAX	1768000	MIN	1383000	(**)	-36000					
WTR YR	1991	MAX	1790000	MIN	1383000	(**)	+84000					

(*) Elevation, in feet, at end of month.

(**) Change in contents, in acre-feet.

09423000 COLORADO RIVER BELOW DAVIS DAM, AZ-NV

LOCATION.--Lat 35°11'30", long 114°34'17", in SE¼NE¼ sec.1, T.32 S., R.66 E., Mount Diablo meridian, in Clark County, Nevada, Hydrologic Unit 15030101, on right bank 0.5 mi downstream from Davis Dam, 29 mi west of Kingman, Az., and 68 mi downstream from Hoover Dam.

DRAINAGE AREA.--173,300 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing.

PERIOD OF RECORD.--June 1905 to September 1907 (published as "at Hardyville"), March 1949 to current year.

REVISED RECORDS.--WDR AZ-86-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 490.00 ft, National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD since Oct. 1, 1967. 1905-7, nonrecording gage at site 4.8 mi downstream at datum about 3.4 ft lower. Mar. 16 to May 3, 1949, water-stage recorder at site 0.5 mi downstream at datum 10.00 ft higher. May 4, 1949, to Feb. 24, 1956, water-stage recorder at site 400 ft upstream at datum 10.00 ft higher. Feb. 25, 1956, to Sept. 30, 1967, water-stage recorder at present site at datum 10.00 ft higher.

REMARKS.--No estimated daily discharge. Records excellent. Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950. Many diversions upstream for irrigation, industrial, and municipal uses.

EXTREMES FOR PERIOD OF RECORD.--1905-7: Maximum daily discharge, 116,000 ft³/s June 20, 1906; minimum daily, 2,850 ft³/s Jan. 5, 1906.
1949-91: Maximum discharge, 46,200 ft³/s July 2, 1983, elevation, 509.48 ft; maximum elevation, 513.91 ft Apr. 22, 1952; no flow at Davis Dam parts of several days July to September 1950 and Dec. 27, 1950, when gates in dam were closed; minimum daily discharge, 285 ft³/s Aug. 3, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25,500 ft³/s Aug. 10, elevation, 505.21 ft; minimum daily, 2,920 ft³/s Jan. 11-13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11100	9200	7900	6020	8660	4130	10300	18100	15900	17200	14200	10600
2	10100	8370	6830	5960	8600	4480	10100	18200	13900	18000	15200	14800
3	9820	8310	8240	5180	8200	4420	10700	15600	16000	18200	15300	14800
4	9040	7970	8200	4380	9430	7150	12700	15500	16800	18300	13100	14900
5	9090	8510	8760	3520	9340	9620	13900	13300	16800	18300	16800	13900
6	9120	8530	8720	3430	9800	11300	14100	15400	16400	18300	17200	12200
7	9110	8640	9050	3600	9860	12600	11700	15400	15700	16600	17800	10300
8	10400	7780	8520	3600	9630	13400	13600	15900	15700	18500	17200	9450
9	11200	9410	7490	4330	9060	13400	15200	15800	14700	18700	16700	12500
10	11000	9220	8060	3260	7620	9970	15700	15800	15600	18500	16500	12500
11	10100	8850	8090	2920	8990	11800	15600	15400	16400	17200	15000	12300
12	10100	8650	8050	2920	9220	12100	14800	13500	16500	16300	14500	12400
13	10100	9350	8030	2920	9160	12500	14800	15900	16300	16100	14700	13000
14	9050	9360	6870	4530	9050	13500	13900	15500	16500	15200	14600	12500
15	10200	9400	6880	4610	9110	13500	15700	15600	16000	15300	14700	9300
16	10100	8760	6110	5780	8950	12200	16900	15600	15200	18600	14700	12400
17	9060	8250	8780	6030	8220	10000	17000	15700	18200	18400	14500	12500
18	9050	6900	8830	6830	9400	11600	17000	15500	15000	18400	14600	12400
19	8990	6840	7580	7280	9350	13500	17100	13200	18600	18100	16300	11000
20	8970	6820	6920	5110	9450	13800	16400	14600	18400	16900	16100	9750
21	7940	6870	6830	7030	11700	13700	13900	14400	18500	16800	16100	9510
22	9470	6330	5730	7910	12300	13700	17100	14400	18500	18600	16100	8440
23	10100	5920	4770	7940	11400	13700	18200	12400	15700	18300	15900	9550
24	10100	5390	6020	8150	9270	13800	18300	12400	18800	19000	16000	9760
25	10100	5070	7930	10700	10500	11900	16500	12900	17800	18200	14600	9680
26	9720	4980	8710	11700	9220	11800	15700	13000	15500	17300	15200	9610
27	9080	5340	7980	8730	7910	11100	15600	14600	15500	16700	15300	9660
28	7850	5450	7250	9900	6000	9720	13500	15600	15600	15400	12900	9600
29	9740	7810	7990	9200	---	10300	16200	15600	15300	17300	12800	8670
30	10700	9050	5170	9110	---	10700	16300	15600	15200	16000	12900	11500
31	10700	---	7930	8600	---	9250	---	16700	---	14400	12900	---
TOTAL	301200	231330	234220	191180	259400	344640	448500	467100	491000	539100	470400	339480
MEAN	9716	7711	7555	6167	9264	11120	14950	15070	16370	17390	15170	11320
MAX	11200	9410	9050	11700	12300	13800	18300	18200	18800	19000	17800	14900
MIN	7850	4980	4770	2920	6000	4130	10100	12400	13900	14400	12800	8440
AC-FT	597400	458800	464600	379200	514500	683600	889600	926500	973900	1069000	933000	673400
CAL YR 1990	TOTAL	4628670	MEAN	12680	MAX	21300	MIN	4770	AC-FT	9181000		
WTR YR 1991	TOTAL	4317550	MEAN	11830	MAX	19000	MIN	2920	AC-FT	8564000		

09423500 COLORADO RIVER AT NEEDLES, CA

LOCATION.--Lat 34°51'06", long 114°36'33", in SE¼SE¼ sec.19, T.9 N., R.23 E., San Bernardino meridian, San Bernardino County, Hydrologic Unit 15030101, on right bank at Needles, 15 mi upstream from Bureau of Reclamation gaging station near Topock, Az., 30 mi downstream from Davis Dam, and 97 mi downstream from Hoover Dam.

DRAINAGE AREA.--174,500 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing.

PERIOD OF RECORD.--April 1931 to current year (mean elevations through September 1987; maximum elevations thereafter).

REVISED RECORDS.--WSP 1119: 1931-47. WDR AZ-89-1: 1983-88.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 15, 1942, at site 550 ft downstream and May 15, 1942 to Feb. 16, 1969, at site 200 ft upstream.

REMARKS.--Elevation of river below bottom of gage (elevation 459.18 ft) Nov. 23-28, Dec. 3, 4, 9, 14-16, 20-25, Dec. 31-Jan. 17, 20-22, Feb. 28-Mar. 4. Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 475.77 ft Nov. 30, 1944; minimum, 457.84 ft Feb. 26, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 465.29 ft July 25.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	461.27	462.08	460.51	---	459.22	---	460.27	464.27	464.44	464.82	463.75	463.66
2	461.99	460.62	459.42	---	459.37	---	460.29	464.50	463.92	464.91	464.09	464.04
3	460.94	460.34	---	---	459.20	---	459.36	464.37	463.70	464.82	464.29	463.95
4	460.85	460.27	---	---	459.65	---	462.04	463.53	464.27	464.94	464.48	464.11
5	460.36	460.20	459.30	---	459.92	459.58	462.08	463.56	464.50	465.02	464.87	463.88
6	460.35	460.42	459.38	---	460.47	460.36	462.09	462.18	464.05	464.98	465.05	463.06
7	460.51	460.38	459.36	---	460.42	460.46	462.09	463.34	464.03	465.00	465.15	461.73
8	460.61	460.44	459.43	---	460.44	460.59	462.04	463.41	463.27	464.98	465.18	460.71
9	460.96	460.70	---	---	460.37	460.57	462.77	463.74	463.26	465.08	465.06	461.70
10	460.96	460.79	459.50	---	460.32	460.56	463.27	463.59	462.92	465.11	465.05	462.25
11	461.01	460.75	459.47	---	460.27	460.46	463.36	464.03	463.70	465.07	465.15	462.52
12	460.88	460.65	459.44	---	460.36	460.48	463.67	463.61	464.60	464.80	464.41	462.49
13	460.86	460.68	459.42	---	461.50	460.52	463.02	463.78	464.68	464.85	464.32	462.61
14	460.88	460.79	---	---	461.66	460.65	463.12	463.77	464.57	464.79	463.85	463.41
15	460.79	460.81	---	---	461.04	460.67	463.50	464.00	464.56	464.63	463.74	462.61
16	460.81	460.88	---	---	461.29	460.65	463.97	464.04	464.55	463.33	463.75	462.36
17	460.81	460.64	460.47	---	460.75	460.59	464.10	464.04	464.94	463.33	463.72	462.45
18	460.16	460.47	460.52	459.20	461.44	460.95	464.14	463.97	465.03	464.17	463.77	462.48
19	460.16	459.28	460.53	460.10	461.60	461.65	464.19	463.98	464.89	464.92	464.81	462.51
20	460.14	459.28	---	---	461.62	462.06	464.15	464.39	464.95	465.05	464.81	461.87
21	460.09	459.27	---	---	462.07	462.02	464.16	464.42	465.02	464.37	464.84	461.17
22	460.37	459.51	---	---	462.38	461.88	464.03	462.93	465.05	465.01	464.82	460.46
23	460.72	---	---	460.06	462.46	461.88	464.15	462.84	465.00	465.14	464.84	459.31
24	460.82	---	---	461.02	462.24	461.90	464.32	460.92	465.04	465.27	464.55	460.14
25	460.83	---	---	459.83	460.27	461.77	464.35	461.15	465.07	465.29	464.60	460.22
26	460.82	---	459.57	461.66	460.84	461.37	463.80	461.19	465.01	465.17	463.85	460.23
27	460.72	---	459.80	461.83	459.68	461.43	463.44	462.73	464.33	464.80	463.97	460.23
28	460.47	---	459.24	459.66	---	460.22	463.35	463.67	464.33	464.87	463.92	460.22
29	461.27	459.95	459.62	460.72	---	460.55	463.34	463.79	464.26	464.72	462.79	460.20
30	462.24	460.46	459.77	459.64	---	459.89	463.92	463.82	464.06	464.94	462.72	461.46
31	462.07	---	---	459.59	---	460.23	---	464.50	---	464.36	463.57	---
MAX	462.24	---	---	---	---	---	464.35	464.50	465.07	465.29	465.18	464.11

09423550 TOPOCK MARSH INLET NEAR NEEDLES, CA

LOCATION.--Lat 34°50'10", long 114°35'03", in NE¼NW¼ sec.33, T.9 N., R.23 E., San Bernardino meridian, in Mohave County, Arizona, Hydrologic Unit 15030101, on left bank of Colorado River on north side of intake structure, 1.3 mi east of Needles.

PERIOD OF RECORD.--January 1967 to current year.

GAGE.--Water-stage recorders above and below intake gates and on intake gates to record head and gate openings. Datum of gages is 400.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Topock Marsh inlet diverts water from the Colorado River into Topock Marsh, an area of 4,260 acres. This water flows through the marsh and returns to the Colorado River through the Topock Marsh outlet. The U.S. Fish and Wildlife Service operate the gate settings that control the flow into marsh. Monthly total return flows through the outlet, sta 09423650, Topock Marsh Outlet near Topock, AZ, are shown in the table below. Prior to June 1978, daily flows for this station were published separately.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 249 ft³/s Mar. 5, 1976; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	43	22	5.9	11	.00	32	132	86	112	82	47
2	46	24	9.5	1.5	12	.00	44	134	65	128	76	60
3	32	20	7.5	.00	8.4	.00	33	111	88	129	79	72
4	22	21	8.3	.00	15	.00	71	108	99	129	76	79
5	19	21	13	.00	22	20	87	91	106	130	88	74
6	20	23	14	.00	37	43	88	97	98	130	104	53
7	23	25	16	.00	33	66	64	110	96	115	111	39
8	32	19	17	.00	35	86	85	106	94	126	107	22
9	49	30	4.8	.00	31	85	91	114	89	132	98	40
10	42	33	12	.00	23	33	110	86	88	127	96	52
11	34	30	10	.00	18	49	105	68	93	121	86	57
12	34	27	9.2	.00	31	53	102	66	91	98	82	56
13	38	33	9.5	.00	29	63	94	68	96	97	87	59
14	23	35	4.0	.00	37	86	80	67	96	89	79	71
15	36	35	3.8	.00	32	87	92	69	93	89	79	28
16	36	29	.60	.00	29	70	111	67	83	136	75	46
17	22	27	24	15	35	32	123	67	113	131	69	61
18	21	17	28	3.2	29	59	123	66	84	121	67	60
19	20	8.3	14	14	41	65	123	56	128	121	77	50
20	20	7.0	6.3	4.7	43	93	111	48	122	106	80	42
21	15	8.9	4.3	.60	53	81	104	63	126	106	79	34
22	12	8.2	.00	4.9	74	82	106	59	125	124	79	18
23	34	2.8	.00	3.9	61	84	131	57	95	117	76	23
24	38	.60	3.1	25	56	82	133	46	125	127	77	16
25	37	.90	7.9	20	25	66	120	46	120	116	66	25
26	33	.60	18	68	34	54	109	53	90	110	71	27
27	27	1.5	16	31	19	53	108	64	91	100	75	26
28	19	2.0	9.6	14	2.4	28	88	76	94	93	65	25
29	20	9.5	13	34	---	45	103	82	98	109	55	25
30	48	25	6.7	16	---	48	119	81	97	103	58	28
31	45	---	8.2	13	---	47	---	88	---	90	51	---
TOTAL	936	567.30	320.30	274.70	875.8	1660.00	2890	2446	2969	3562	2450	1315
MEAN	30.2	18.9	10.3	8.86	31.3	53.5	96.3	78.9	99.0	115	79.0	43.8
MAX	49	43	28	68	74	93	133	134	128	136	111	79
MIN	12	.60	.00	.00	2.4	.00	32	46	65	89	51	16
AC-FT	1860	1130	635	545	1740	3290	5730	4850	5890	7070	4860	2610
(*)	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR 1990 TOTAL 19274.60 MEAN 52.8 MAX 135 MIN .00 AC-FT 38230 (*) 0
WTR YR 1991 TOTAL 20266.10 MEAN 55.5 MAX 136 MIN .00 AC-FT 40200 (*) 0

(*) Return flow, in acre-feet, to Colorado River.

09424150 COLORADO RIVER AQUEDUCT NEAR PARKER DAM, AZ-CA

LOCATION.--Lat 34°18'58", long 114°09'23", in NW¼SW¼ sec.28, T.3 N., R.27 E., San Bernardino meridian, in San Bernardino County, California, Hydrologic Unit 15030101, at intake pumping plant of Metropolitan Water District of Southern California on Lake Havasu, 1.8 mi upstream from Parker Dam and 149 mi downstream from Hoover Dam.

PERIOD OF RECORD.--January 1939 to current year (monthly diversions only since October 1942). Published as a supplement to records for Colorado River below Parker Dam, 1942-50. Percolation return flow (monthly flow only) October 1964 to September 1973; prior to October 1964 miscellaneous measurements only.

GAGE.--Flow obtained from acoustical flowmeters. Prior to August 1990, flow obtained from Venturi meters in pressure lines at intake pumping plant.

REMARKS.--Pumping began Jan. 7, 1939. Figures of monthly diversion shown represent water pumped from Lake Havasu less return surface flow from Gene and Copper Basin Reservoirs. No water returned as surface flow from these reservoirs this year. Percolation return flow from Gene and Copper Basin Reservoirs is estimated by the U.S. Bureau of Reclamation as 10 acre-ft/day for a yearly total of 3,650 acre-ft, which is used for accounting purposes.

COOPERATION.--Diversion records furnished by Metropolitan Water District of Southern California.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily diversion, 4,284 acre-ft, 2,160 ft³/s May 11, 1990; no diversion at times.

MONTHLY DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Month	Diversions			
	Maximum	Minimum	Mean	Total
October.....	3,794	2,441	3,303	102,395
November.....	3,748	2,818	3,333	100,004
December.....	4,018	3,076	3,563	110,439
CAL YR 1990.....	4,284	134	3,338	1,218,321
January.....	3,835	3,265	3,432	106,398
February.....	3,820	3,366	3,467	97,079
March.....	3,807	2,119	3,295	102,139
April.....	3,785	2,009	3,232	96,969
May.....	3,878	3,342	3,540	109,746
June.....	3,876	3,069	3,492	104,761
July.....	3,867	3,113	3,555	110,195
August.....	3,861	2,472	3,457	107,163
September.....	3,694	3,076	3,498	104,936
WTR YR 1991.....	4,018	2,009	3,431	1,252,224

09424432 FRANCIS CREEK NEAR BAGDAD, AZ

LOCATION.--Lat 34°45'42", long 113°15'54", in NW¼ sec.1, T.16 N., R.10 W., Yavapai County, Hydrologic Unit 15030202, on left bank, 13.1 mi northwest of Bagdad.

DRAINAGE AREA.--134 mi².

PERIOD OF RECORD.--December 1984 to current year (operated as a low-flow station only prior to 1988 water year).

GAGE.--Water-stage recorder. Elevation of gage is 3,260 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversion upstream from station for part of the municipal supply for the town of Bagdad was reported by the Cyprus Bagdad Mine to be 850 acre-feet in the 1991 water year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,830 ft³/s, Aug. 25, 1988, gage height 12.57 ft, from rating curve extended logarithmically above 60 ft³/s; minimum daily discharge 0.27 ft³/s, Aug. 1, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,090 ft³/s, Mar. 1, gage height, 9.42 ft, from rating curve extended logarithmically above 150 ft³/s; minimum daily discharge, 0.35 ft³/s, July 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.95	1.7	3.0	1.7	2.0	1680	118	e1.7	e1.2	1.6	e.53	.83
2	.90	1.6	2.9	1.8	2.1	395	74	e1.7	e1.2	e2.0	.97	.83
3	.90	1.5	3.0	1.9	2.1	72	58	e1.7	e1.2	e2.0	1.1	.79
4	.88	1.5	3.0	1.9	1.9	39	50	e1.7	e1.2	e1.5	1.3	e.81
5	.89	1.5	3.0	1.7	1.8	27	40	e1.6	e1.2	e1.7	1.4	e1.1
6	.87	1.5	3.0	1.7	2.3	20	32	e1.6	1.3	e1.4	1.6	e1.1
7	.89	1.4	3.2	1.9	2.2	14	27	e1.6	1.3	e1.1	1.6	e1.1
8	.86	1.4	3.1	1.6	2.0	11	22	e1.6	1.2	e1.1	1.3	e1.1
9	.86	1.6	3.4	2.0	2.0	8.6	18	e1.6	1.3	e.99	.99	e1.1
10	.96	1.6	3.4	2.1	2.0	7.2	e14	e1.6	1.4	e1.0	1.0	e1.1
11	1.1	1.6	2.5	1.8	2.1	6.3	e12	e1.6	1.4	e1.0	1.1	e1.1
12	1.1	1.7	1.6	1.9	1.9	5.7	e9.3	e1.5	1.7	e.94	32	e1.2
13	1.3	1.9	1.6	1.8	1.9	5.2	e7.7	e1.5	1.7	e.85	3.5	e1.1
14	1.2	2.1	1.8	1.9	2.0	5.2	e6.0	e1.5	1.5	e1.0	1.6	e1.1
15	1.1	2.8	1.6	1.7	2.0	5.4	e5.4	e1.5	1.6	e1.1	.87	e1.1
16	1.1	1.9	1.8	1.7	2.0	5.6	e4.8	e1.5	1.4	e.81	.77	e1.1
17	1.1	2.0	1.7	1.9	1.7	5.2	e4.2	e1.5	1.4	e.55	.82	e1.2
18	1.0	1.7	1.6	2.2	1.7	5.0	e4.0	e1.5	1.3	e.76	.85	e1.2
19	1.1	1.7	1.8	2.5	1.7	6.0	e3.9	e1.4	1.3	e.61	.85	e3.3
20	.98	2.2	1.7	3.0	1.8	20	e3.7	e1.4	1.3	e.49	.80	17
21	1.0	2.2	1.7	3.7	2.0	84	e3.6	e1.4	1.2	e.48	.82	3.9
22	1.0	2.6	1.8	2.1	2.0	166	e3.4	e1.4	1.2	e.50	.75	2.8
23	1.0	2.9	1.7	1.9	1.8	145	e3.1	e1.4	1.2	e.46	.75	2.4
24	1.0	3.2	1.8	1.7	1.9	129	e2.8	e1.4	1.3	e.44	.74	1.9
25	1.1	2.9	1.8	1.6	1.9	100	e2.5	e1.4	1.3	e.43	.89	1.6
26	1.1	3.0	1.7	2.5	1.9	660	e2.2	e1.3	1.2	e.44	13	1.2
27	1.3	2.8	1.6	2.8	2.0	185	e2.0	e1.3	1.5	e.42	4.0	.86
28	1.3	2.8	1.6	2.7	11	308	e1.9	e1.3	1.6	e.41	2.4	.81
29	1.7	3.0	1.6	2.3	---	279	e1.8	e1.3	1.6	e.39	.90	.77
30	1.6	2.9	1.5	2.1	---	245	e1.7	e1.3	1.6	e.38	.82	.75
31	1.8	---	1.5	2.0	---	168	---	e1.3	---	e.35	.82	---
TOTAL	33.94	63.2	67.0	64.1	63.7	4812.4	539.0	46.1	40.8	27.20	80.84	56.25
MEAN	1.09	2.11	2.16	2.07	2.27	155	18.0	1.49	1.36	.88	2.61	1.87
MAX	1.8	3.2	3.4	3.7	11	1680	118	1.7	1.7	2.0	.32	.17
MIN	.86	1.4	1.5	1.6	1.7	5.0	1.7	1.3	1.2	.35	.53	.75
AC-FT	67	125	133	127	126	9550	1070	91	81	54	160	112
CAL YR 1990	TOTAL	1136.33	MEAN	3.11	MAX	185	MIN	.27	AC-FT	2250		
WTR YR 1991	TOTAL	5894.53	MEAN	16.1	MAX	1680	MIN	.35	AC-FT	11690		

e Estimated

09424447 BURRO CREEK AT OLD U.S. 93 BRIDGE, NEAR BAGDAD, AZ

LOCATION.--Lat 34°32'30", long 113°26'40", in SW¼ sec.19, T.14 N., R.11 W., Mohave County, Hydrologic Unit 15030202, on left bank 15 mi upstream from confluence with Big Sandy River, and 15 mi southwest of Bagdad.

DRAINAGE AREA.--611 mi², of which 10 mi² is noncontributing.

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

REVISED RECORDS.--WDR AZ-88-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,880 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--11 years, 63.5 ft³/s, 46,010 acre-ft/yr; median of yearly mean discharges, 51 ft³/s, 36,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,600 ft³/s Mar. 3, 1983, gage height, 13.70 ft; maximum gage height, 13.71 ft Mar. 1, 1991; no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 47,400 ft³/s Feb. 14, 1980, from slope-area measurement of peak flow at present site and datum, gage height, 15.6 ft, from high-water mark in vicinity of gage.

EXTREMES FOR CURRENT Year.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2145	*29,900	*13.71	Mar. 26	1600	5,700	9.04
Mar. 24	0445	2,620	7.65	Mar. 30	0145	5,210	8.86

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	.24	.64	4.3	5.7	9930	1080	5.5	1.2	.22	.10	.00
2	2.1	.25	.66	4.6	5.7	6110	373	4.7	1.1	.24	.09	e.00
3	2.0	.47	.65	4.9	5.4	856	226	4.4	.98	.24	.08	e.00
4	1.8	.64	.66	6.4	5.1	288	149	4.1	.89	.25	.07	e.00
5	1.7	.64	.68	6.4	5.3	171	109	3.9	1.0	.26	.07	e.00
6	1.4	.64	.68	6.2	5.4	103	82	3.6	.87	.26	.05	e.00
7	1.2	.64	.69	6.3	5.3	69	75	3.4	.83	.27	.03	e.00
8	1.1	.64	.72	6.4	5.1	48	67	3.0	.81	.28	.01	e.00
9	.97	.63	.77	6.4	5.2	34	e59	2.7	.70	.29	.00	e.00
10	.89	.64	.89	6.3	5.2	25	e51	2.5	.69	.31	.00	e.00
11	.82	.63	.91	5.9	5.2	18	e44	2.4	.69	.52	.40	e.00
12	.73	.61	1.2	6.0	5.2	12	e38	2.3	.67	.49	.19	e.00
13	.71	.60	1.6	6.0	5.1	7.9	e32	2.2	.66	.30	.09	e.00
14	.69	.60	1.7	5.7	5.1	6.4	e29	2.1	.64	.28	.06	e.00
15	.71	.60	1.9	5.7	5.0	6.0	e25	2.0	.61	.26	.05	e.00
16	.66	.62	2.1	5.7	5.2	6.4	e20	2.0	.57	.27	.05	e.00
17	.64	.61	2.3	5.7	5.4	6.3	e15	1.9	.54	.28	.04	e.00
18	.62	.60	2.5	5.7	5.3	6.2	e10	1.9	.44	.27	.03	e.00
19	.61	.58	2.6	6.0	4.9	6.3	e6.7	2.0	.39	.25	.02	e.00
20	.60	.62	2.8	6.5	5.0	8.3	e5.1	2.0	.28	.26	.02	e.00
21	.58	.63	2.9	6.5	5.2	57	e4.8	1.8	.28	.24	.01	e.00
22	.57	.61	3.1	6.4	5.2	378	e4.9	1.8	.27	.23	.01	e.00
23	.58	.57	3.2	6.4	5.2	958	e5.0	1.7	.26	.21	.01	e.00
24	.58	.57	3.3	6.4	4.8	1330	e5.2	1.6	.25	.18	.01	e.00
25	.56	.61	3.4	6.4	4.8	782	e5.3	1.5	.25	.13	.50	e.00
26	.47	.63	3.5	6.4	4.9	2110	e5.3	1.4	.25	.10	.00	e.00
27	.42	.63	3.6	6.4	6.0	1750	e5.7	1.3	.24	.08	.00	e.00
28	.42	.63	3.8	6.2	22	949	e5.8	1.3	.24	.08	.00	e.00
29	.27	.61	4.0	6.0	---	1990	e5.9	1.3	.24	.08	.00	e.00
30	.24	.61	4.1	5.8	---	2640	e5.9	1.1	.23	.10	.00	e.00
31	.24	---	4.2	5.7	---	1950	---	1.0	---	.12	.00	---
TOTAL	27.08	17.60	65.75	185.7	162.9	32611.8	2549.6	74.4	17.07	7.35	1.99	0.00
MEAN	.87	.59	2.12	5.99	5.82	1052	85.0	2.40	.57	.24	.064	.000
MAX	2.2	.64	4.2	6.5	22	9930	1080	5.5	1.2	.52	.50	.00
MIN	.24	.24	.64	4.3	4.8	6.0	4.8	1.0	.23	.08	.00	.00
AC-FT	54	35	130	368	323	64690	5060	148	34	15	3.9	.00

CAL YR	1990	TOTAL	2737.08	MEAN	7.50	MAX	429	MIN	.00	AC-FT	5430
WTR YR	1991	TOTAL	35721.24	MEAN	97.9	MAX	9930	MIN	.00	AC-FT	70850

e Estimated

09424450 BIG SANDY RIVER NEAR WIKIEUP, AZ

LOCATION.--Lat 34°27'45", long 113°37'25", in SE¼ sec.16, T.13 N., R.13 W., Mohave County, Hydrologic Unit 15030201, on left bank 7 mi downstream from Burro Creek, 15 mi upstream from confluence with Santa Maria River, and 17 mi south of Wikieup.

DRAINAGE AREA.--2,742 mi², of which 10 mi² are noncontributing.

PERIOD OF RECORD.--March 1966 to current year.

REVISED RECORDS.--WDR AZ-88-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,400 ft, above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1970, at datum 3.06 ft higher. Oct. 1, 1970, to Oct. 10, 1973, at datum 2.06 ft higher. Supplementary water-stage recorder for low flows at site 75 ft upstream at same datum from Apr. 10, 1975 to Mar. 1, 1978; Mar. 28 to Dec. 7, 1966, and Apr. 2, 1969, to Apr. 9, 1975, at site 0.8 mi downstream at different datum.

REMARKS.--Records fair. Diversions above station for irrigation of about 3,800 acres, mostly by pumping from ground water.

AVERAGE DISCHARGE.--25 years, 77.7 ft³/s, 56,290 acre-ft/yr; median of yearly mean discharges, 42 ft³/s, 30,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,500 ft³/s Feb. 20, 1980, gage height, 12.51 ft, from high-water mark in gage well; minimum daily, 1.3 ft³/s July 13, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1915	*29,800	*10.94	Mar. 26	2345	4,380	5.42
Mar. 24	0945	2,020	4.15	Mar. 30	0445	4,380	5.42

Minimum daily discharge, 2.0 ft³/s Nov. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	2.3	3.8	4.9	3.5	7810	920	7.1	3.8	3.9	3.7	5.3
2	3.5	2.2	4.2	4.7	3.4	6080	445	6.0	3.6	3.5	3.3	4.9
3	5.3	2.1	4.7	4.1	3.2	802	308	7.1	3.8	3.4	3.3	9.1
4	3.8	2.1	5.4	3.5	3.2	e370	203	7.1	3.2	3.4	4.5	5.0
5	3.5	2.1	5.7	3.5	3.2	197	164	7.6	2.6	3.4	4.7	5.0
6	3.5	2.2	5.7	3.2	3.2	140	120	6.2	2.6	3.2	5.1	5.0
7	3.3	2.3	5.7	3.2	3.2	117	90	5.4	2.5	3.3	5.6	5.3
8	3.2	2.2	5.7	3.2	3.2	99	77	5.4	2.5	4.3	5.3	4.9
9	3.2	2.1	5.7	3.2	3.2	85	67	6.0	2.5	4.6	5.2	4.2
10	3.0	2.1	5.8	3.3	3.2	81	59	6.2	2.6	4.2	7.5	4.2
11	3.0	2.1	6.1	3.5	3.1	74	49	5.2	2.7	3.7	4.1	4.3
12	3.0	2.1	6.2	3.4	3.1	67	42	5.9	3.1	3.5	3.6	4.1
13	3.0	2.1	6.8	3.2	3.2	63	40	5.4	3.1	3.3	3.6	3.8
14	3.0	2.0	7.5	3.1	3.2	60	39	5.0	3.5	3.1	3.7	3.5
15	2.9	2.1	7.8	3.0	3.1	56	34	5.1	4.1	2.7	3.8	3.3
16	2.7	2.1	8.0	2.9	3.1	54	29	5.0	4.2	2.9	3.9	3.1
17	2.7	2.1	8.7	2.7	3.5	53	25	5.3	4.4	3.0	4.2	2.9
18	2.5	2.4	8.7	2.7	4.0	51	20	5.4	4.0	3.2	4.4	2.7
19	2.3	2.5	8.9	2.7	4.4	60	17	5.3	3.4	3.4	4.4	8.9
20	2.3	2.6	9.2	2.7	4.1	72	15	4.3	3.4	3.2	4.1	21
21	2.3	2.5	9.5	2.7	4.1	92	14	4.7	3.4	3.0	4.3	8.0
22	2.1	2.5	9.7	2.7	4.1	199	13	4.9	3.5	2.9	4.6	4.9
23	2.1	2.6	9.6	2.8	4.0	670	12	4.7	3.5	2.7	5.2	5.0
24	2.1	2.7	8.9	3.1	3.6	1130	12	4.5	3.5	2.7	5.5	6.1
25	2.1	2.7	8.0	3.2	3.5	872	11	4.4	3.8	2.9	7.4	5.4
26	2.1	3.2	7.0	3.2	3.4	1350	10	4.5	3.6	2.9	5.6	4.8
27	2.3	3.2	6.5	3.2	3.2	1820	9.6	4.5	3.6	2.9	4.7	4.8
28	2.3	3.2	6.5	3.2	3.7	672	8.1	4.3	3.8	2.8	4.8	5.0
29	2.3	3.4	5.9	3.2	---	1760	7.3	4.1	3.8	2.8	4.7	4.6
30	2.3	3.5	5.7	3.2	---	2400	7.3	4.2	4.0	2.8	4.8	4.4
31	2.3	---	5.0	3.4	---	1600	---	4.0	---	3.2	5.4	---
TOTAL	87.5	73.3	212.6	100.6	96.9	28956	2867.3	164.8	102.1	100.8	145.0	163.5
MEAN	2.82	2.44	6.86	3.25	3.46	934	95.6	5.32	3.40	3.25	4.68	5.45
MAX	5.3	3.5	9.7	4.9	4.4	7810	920	7.6	4.4	4.6	7.5	21
MIN	2.1	2.0	3.8	2.7	3.1	51	7.3	4.0	2.5	2.7	3.3	2.7
AC-FT	174	145	422	200	192	57430	5690	327	203	200	288	324

CAL YR	1990	TOTAL	3189.4	MEAN	8.74	MAX	310	MIN	1.5	AC-FT	6330
WTR YR	1991	TOTAL	33070.4	MEAN	90.6	MAX	7810	MIN	2.0	AC-FT	65600

e Estimated

09424900 SANTA MARIA RIVER NEAR BAGDAD, AZ

LOCATION.--Lat 34°18'21", long 113°20'47", in SE¼ sec.12, T.11 N., R.11 W., Mohave County, Hydrologic Unit 15030203, on right bank 4.0 mi east of Palmerita Ranch, 12 mi upstream from confluence with Big Sandy River, and 21 mi southwest of Bagdad.

DRAINAGE AREA.--1,129 mi².

PERIOD OF RECORD.--April 1966 to September 1985, October 1988 to current year.

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,360 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions above station for irrigation of about 5,300 acres, most of which is by pumping from ground water.

AVERAGE DISCHARGE.--22 years (water years 1967-85, 1989-91), 66.9 ft³/s, 48,470 acre-ft/yr; median of yearly mean discharges, 40 ft³/s, 29,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,600 ft³/s Mar. 1, 1978, gage height, 7.82 ft, from rating curve extended above 5,000 ft³/s on basis of step-backwater computations and slope-area measurements at gage heights 5.50 and 7.82 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2130	*18,900	*8.56	Mar. 30	0315	2,490	4.09
Mar. 26	2400	2,460	4.06				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	4300	759	8.9	4.2	.00	.00	.00
2	.00	.00	.00	.00	.00	e1670	385	7.7	3.7	.00	.00	.00
3	.00	.00	.00	.00	.00	e616	231	7.3	2.7	.00	.00	.00
4	.00	.00	.00	.00	.00	e285	155	8.0	1.3	.00	.00	.00
5	.00	.00	.00	.00	.00	e186	111	8.1	.07	.00	.00	.00
6	.00	.00	.00	.00	.00	e149	79	8.3	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	s124	67	8.7	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	118	60	8.5	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	117	57	8.0	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	113	51	6.7	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	113	41	7.3	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	113	37	7.0	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	113	37	7.7	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	113	34	7.0	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	112	32	6.1	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	108	30	6.8	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	107	28	6.7	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	98	25	6.1	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	87	23	6.3	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	99	21	6.4	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	296	19	5.9	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	580	17	5.6	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	830	17	5.5	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	797	16	5.2	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	594	15	5.2	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	839	13	5.2	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	1640	12	4.9	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	1290	11	4.4	.00	.00	.00	.00
29	.00	.00	.00	.00	---	1660	11	3.9	.00	.00	.00	.00
30	.00	.00	.00	.00	---	1290	9.6	3.6	.00	.00	.00	.00
31	.00	---	.00	.00	---	1020	---	3.1	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	19577	2403.6	200.1	11.97	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	632	80.1	6.45	.40	.000	.000	.000
MAX	.00	.00	.00	.00	.00	4300	759	8.9	4.2	.00	.00	.00
MIN	.00	.00	.00	.00	.00	87	9.6	3.1	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	38830	4770	397	24	.00	.00	.00

CAL YR 1990	TOTAL	1565.13	MEAN	4.29	MAX	591	MIN	.00	AC-FT	3100
WTR YR 1991	TOTAL	22192.67	MEAN	60.8	MAX	4300	MIN	.00	AC-FT	44020

e Estimated

09426000 BILL WILLIAMS RIVER BELOW ALAMO DAM, AZ

LOCATION.--Lat 34°13'51", long 113°36'29", in SE¼SE¼ sec.4, T.10 N., R.13 W., La Paz County, Hydrologic Unit 15030204, on left bank 0.6 mi downstream from Alamo Dam, 3.7 mi downstream from Bullard Wash, and 8 mi downstream from confluence of Santa Maria and Big Sandy Rivers.

DRAINAGE AREA.--4,633 mi², of which 10 mi² probably is noncontributing.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for October and November 1939, published in WSP 1313. Prior to October 1943, published as "Williams River near Alamo." October 1943 to September 1967, published as "Bill Williams River near Alamo."

REVISED RECORDS.--WSP 1213: 1939(M). 1941(P). WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 967 ft above National Geodetic Vertical Datum of 1929, from construction data. Prior to Apr. 9, 1968, at site 1.7 mi upstream at datum 1,002.95 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Diversions above station for irrigation of about 9,100 acres, mostly by pumping from ground water. Flow regulated by Alamo Lake, beginning Mar. 2, 1969. Temporary storage and slight regulation of releases through uncontrolled rectangular conduit through Alamo Dam June 23, 1968, to Mar. 27, 1969. Alamo Lake is formed by an earthfill and rockfill dam, completed in 1968. Total capacity of lake is 1,043,000 acre-ft. See table below for monthend contents.

EXTREMES FOR PERIOD OF RECORD.--1940-68: Maximum discharge, 65,100 ft³/s Aug. 29, 1951, gage height, 30.8 ft, site and datum then in use; minimum daily, 1.1 ft³/s Sept. 4, 1958.
1969-91: Maximum discharge, 4,950 ft³/s Jan. 26, 1969, gage height, 10.20 ft; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--The history of floods that occurred prior to October 1939 is published in WSP 1683. The peak discharges have been correlated with those for Bill Williams River at Planet. The peak discharge for February 1937 has been determined as 105,000 ft³/s at a stage of 46 ft, site and datum then in use, from rating curve extended above 50,000 ft³/s on basis of slope-area measurement for flood of Sept. 6, 1939, at a stage of 39.6 ft, discharge of 86,000 ft³/s and known stable high-water control.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,280 ft³/s Apr. 13; no flow May 10-14, July 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	8.7	6.4	2.7	3.6	2.9	15	8.7	15	11	9.5	11
2	9.4	8.7	6.9	3.2	3.5	8.1	168	8.7	15	11	9.8	11
3	9.4	8.4	6.9	3.3	3.5	184	495	7.3	15	11	9.8	11
4	9.5	8.4	6.8	3.2	3.5	291	831	7.9	15	11	9.5	11
5	9.5	8.0	7.1	2.7	3.4	295	1780	6.9	15	11	9.5	11
6	9.5	7.6	5.2	2.7	3.4	332	2000	6.5	15	11	9.5	11
7	9.3	7.7	3.2	2.7	3.4	358	2020	7.2	15	11	9.5	11
8	9.1	7.6	3.1	2.6	3.3	456	1940	5.8	15	11	9.5	11
9	9.3	7.3	3.0	2.5	3.3	545	1970	.31	15	11	9.1	11
10	9.6	7.2	3.1	2.6	3.2	531	2050	.00	15	4.1	9.1	11
11	9.5	7.1	3.0	2.9	2.6	683	2120	.00	15	.00	9.5	11
12	9.3	6.9	2.9	2.9	.67	961	2150	.00	15	2.2	9.5	11
13	9.4	7.0	3.0	3.0	.14	1080	2280	.00	15	8.4	9.6	11
14	9.2	7.2	2.9	3.1	2.0	1090	2180	.00	15	8.1	10	11
15	9.3	7.2	2.9	3.2	2.0	1080	2230	.44	15	8.2	11	11
16	9.1	7.3	3.2	3.4	2.0	1070	2210	6.6	15	8.4	11	11
17	9.0	7.1	3.0	3.6	2.0	1040	855	16	13	8.4	11	11
18	9.3	6.7	3.1	3.5	2.9	1030	21	16	11	8.4	11	11
19	9.0	6.5	3.3	3.7	2.7	1050	19	16	10	8.4	11	11
20	9.5	6.5	3.3	3.6	2.8	1040	17	16	9.6	8.4	11	11
21	9.3	6.6	3.0	2.8	2.7	1020	16	15	9.5	8.4	11	11
22	9.3	6.6	2.7	2.3	2.7	1040	10	16	9.5	8.4	11	11
23	9.2	6.2	2.9	2.5	2.6	537	5.8	17	9.6	8.0	11	11
24	9.2	5.9	2.9	2.3	2.6	9.2	13	17	9.9	8.0	11	11
25	8.9	5.9	2.9	2.4	2.6	19	16	17	4.0	8.4	11	11
26	8.7	6.1	2.7	2.4	2.6	22	19	17	9.5	9.5	11	11
27	9.0	6.2	2.7	2.5	2.5	22	16	16	11	9.5	11	11
28	8.7	6.6	2.5	2.4	2.8	22	3.9	16	11	9.4	11	11
29	8.4	6.7	2.4	2.6	---	20	6.6	16	11	9.1	11	11
30	8.3	6.4	2.5	3.0	---	15	12	15	11	9.2	11	11
31	8.6	---	2.5	3.6	---	15	---	15	---	9.5	11	---
TOTAL	283.6	212.3	112.0	89.9	75.01	15868.2	27469.3	307.35	379.6	269.40	320.4	330
MEAN	9.15	7.08	3.61	2.90	2.68	512	916	9.91	12.7	8.69	10.3	11.0
MAX	9.6	8.7	7.1	3.7	3.6	1090	2280	17	15	11	11	11
MIN	8.3	5.9	2.4	2.3	.14	2.9	3.9	.00	4.0	.00	9.1	11
AC-FT	563	421	222	178	149	31470	54490	610	753	534	636	655
(*)	70380	70100	69600	69700	70000	142800	93900	92500	90500	88700	86500	85100
(**)	-1520	-280	-500	+100	+300	+72800	-48900	-1400	-2000	-1800	-2200	-1400

CAL YR 1990 TOTAL 3010.0 MEAN 8.25 MAX 13 MIN 2.4 AC-FT 5970 (***) -7880
WTR YR 1991 TOTAL 45717.06 MEAN 125 MAX 2280 MIN .00 AC-FT 90680 (***) +13200

(*) Contents in acre-feet, at end of month in Alamo Lake, furnished by U.S. Army Corps of Engineers.
(**) Change in contents, in acre-feet.

BILL WILLIAMS RIVER BASIN

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09426600 BILL WILLIAMS RIVER AT MINERAL WASH, NEAR PLANET, AZ

LOCATION.--Lat 34°15'18", long 114°00'32", in SE&NE¼ sec.34, T.11 N., R.17 W., on boundary between Mohave and La Paz Counties, Hydrologic Unit 15030204, at convergence with Mineral Wash, 4.0 mi west of Planet Ranch, 6.1 mi upstream from waterline of Havasu Lake at elevation 450 ft above National Geodetic Vertical Datum of 1929, and approximately 30 mi downstream from Alamo Lake.

DRAINAGE AREA (revised).--5,320 mi², of which 686 mi² is below Alamo Dam, and 10 mi² is noncontributing.

PERIOD OF RECORD.--December 1928 to September 1940, November 1942 to October 1946, January 1970 to January 1972, October 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to September 1981.

WATER TEMPERATURES: October 1974 to September 1981.

REMARKS.--Streamflow ungaged.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	
MAR 12...	1300	e100	435	7.9	20.0	8.0	300	760	11.4	97	1000	8500	
MAY 08...	1330	13	960	7.9	38.0	24.0	20	750	6.6	80	56	180	
AUG 22...	0930	e3.0	1010	7.9	33.0	22.5	0.20	755	5.5	64	130	370	
DATE		HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD HCO3 (MG/L AS) (00453)	CAR-BONATE WATER DIS IT FIELD CO3 (MG/L AS) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
MAR 12...	110	0	29	9.2	47	2	5.2	146	0	120	39	36	
MAY 08...	250	0	65	20	100	3	6.5	300	0	246	93	110	
AUG 22...	250	7	68	20	110	3	7.3	300	0	246	100	120	
DATE		FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00615)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
MAR 12...	0.60	15	260	258	0.35	0.820	0.880	3.9	0.060	0.040	0.880	0.920	
MAY 08...	1.3	31	563	580	0.77	0.840	0.890	3.9	0.030	0.020	0.870	0.910	
AUG 22...	1.4	32	584	609	0.79	0.250	0.230	1.0	0.010	0.010	0.260	0.240	
DATE		NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, TOTAL (MG/L AS NO3) (71887)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (70507)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
MAR 12...	0.180	0.050	1.9	2.1	3.0	13	1.50	0.43	0.090	0.140	0.100	0.31	
MAY 08...	0.050	0.030	--	<0.20	--	--	0.090	0.18	0.040	0.060	0.040	0.12	
AUG 22...	<0.010	<0.010	--	<0.20	--	--	0.020	--	0.020	<0.010	0.010	0.03	

e Estimated.

< Actual value is known to be less than value shown.

09426600 BILL WILLIAMS RIVER AT MINERAL WASH, NEAR PLANET, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
MAR 12...	130	5	50	<0.5	130	<1.0	<1	<3	6	110	1	14
MAY 08...	<10	5	99	<0.5	280	<1.0	<1	<3	1	3	<1	51
AUG 22...	<10	6	87	<0.5	320	<1.0	<1	<3	<1	3	<1	51

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
MAR 12...	3	<0.1	<10	2	<1	<1.0	290	<6	6	7460	--
MAY 08...	81	<0.1	<10	1	<1	<1.0	810	8	6	49	1.7
AUG 22...	2	0.2	<10	<1	<1	<1.0	840	<6	<3	--	--

< Actual value is known to be less than value shown.

BILL WILLIAMS RIVER BASIN

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09426620 BILL WILLIAMS RIVER NEAR PARKER, AZ

LOCATION.--Lat 34°15'45", long 114°01'37", in NE¼SE¼SE¼ sec.28, T.11 N., R.17 W., La Paz County, Hydrologic Unit 15030204, on left bank 1.8 mi downstream from Mineral Wash and Havasu National Wildlife Refuge boundary, 5.3 mi upstream from mouth, 17 mi northeast of Parker, and approximately 31 mi downstream from Alamo Dam.

DRAINAGE AREA (Revised).--5,337 mi², of which 703 mi² is below Alamo Dam and 10 mi² is noncontributing.

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark).

REMARKS.--Records poor. Diversions above station for irrigation, mostly by pumping from ground water. Flow regulated by Alamo Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,270 ft³/s Apr. 16, 1991; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--The history of floods that occurred at a former site located about 3 mi upstream is published in WSP 1683, Bill Williams River at Planet (sta 09426500).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,270 ft³/s Apr. 16; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	22	19	9.0	9.8	.00	.00
2	.00	.00	.00	.00	.00	.00	20	19	9.6	9.4	.00	.00
3	.00	.00	.00	.00	.00	.00	19	18	8.7	8.2	.00	16
4	.00	.00	.00	.00	.00	12	19	18	7.9	7.6	.00	4.7
5	.00	.00	.00	.00	.00	27	566	17	7.5	6.0	.00	.00
6	.00	.00	.00	.00	.00	.30	1280	17	7.5	4.8	.00	.00
7	.00	.00	.00	.00	.00	.07	1960	16	7.7	4.3	.00	.00
8	.00	.00	.00	.00	.00	.00	1960	15	7.7	5.1	.00	.00
9	.00	.00	.00	.00	.00	1.7	1920	16	7.8	4.2	.00	.00
10	.00	.00	.00	.00	.00	3.3	1930	16	7.9	3.2	.00	.00
11	.00	.00	.00	.00	.00	2.8	2000	15	7.8	2.5	.00	.00
12	.00	.00	.00	.00	.00	39	2040	14	9.0	2.0	.00	.00
13	.00	.00	.00	.00	.00	118	2140	14	8.9	1.7	.00	.00
14	.00	.00	.00	.00	.00	191	2210	14	8.5	.43	.00	.00
15	.00	.00	.00	.00	.00	279	2250	13	8.9	.00	.00	.00
16	.00	.00	.00	.00	.00	353	2270	12	9.2	.00	.00	.00
17	.00	.00	.00	.00	.00	446	2210	12	8.8	.00	.00	.00
18	.00	.00	.00	.00	.00	540	492	11	8.5	.00	.00	.00
19	.00	.00	.00	.00	.00	614	148	11	8.0	.01	.00	.00
20	.00	.00	.00	.00	.00	679	88	11	7.6	.37	.00	.00
21	.00	.00	.00	.00	.00	719	61	10	7.9	.22	.00	.00
22	.00	.00	.00	.00	.00	764	46	9.7	7.6	1.1	.00	.00
23	.00	.00	.00	.00	.00	e752	38	9.2	7.3	.84	.00	.00
24	.00	.00	.00	.00	.00	e222	33	9.0	6.9	.10	.00	.00
25	.00	.00	.00	.00	.00	e45	30	8.8	6.5	.05	.00	.00
26	.00	.00	.00	.00	.00	38	27	8.6	7.6	.07	.00	.00
27	.00	.00	.00	.00	.00	33	25	8.3	8.2	.02	.00	.00
28	.00	.00	.00	.00	.00	32	23	8.1	10	.02	.00	.00
29	.00	.00	.00	.00	---	28	22	8.1	10	.07	.00	.00
30	.00	.00	.00	.00	---	25	21	8.0	9.5	.06	.00	.00
31	.00	---	.00	.00	---	24	---	8.3	---	.16	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	5988.17	25870	394.1	248.0	72.32	0.00	20.70
MEAN	.000	.000	.000	.000	.000	193	862	12.7	8.27	2.33	.000	.69
MAX	.00	.00	.00	.00	.00	764	2270	19	10	9.8	.00	16
MIN	.00	.00	.00	.00	.00	.00	19	8.0	6.5	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	11880	51310	782	492	143	.00	41

CAL YR 1990 TOTAL 325.32 MEAN .89 MAX 4.4 MIN .00 AC-FT 645
WTR YR 1991 TOTAL 32593.29 MEAN 89.3 MAX 2270 MIN .00 AC-FT 64650

e Estimated

DIVERSIONS ABOVE PARKER DAM

09426650 CENTRAL ARIZONA PROJECT CANAL AT HAVASU PUMPING
PLANT, NEAR PARKER, AZ

LOCATION.--Lat 34°17'20", long 114°06'37", in NW¼NW¼ sec.23, T.11 N., R.18 W., La Paz County, Hydrologic Unit 15030204, on left bank of Bill Williams River arm of Lake Havasu, 2 mi upstream from Parker Dam and 19 mi northeast of Parker.

PERIOD OF RECORD.--October 1984 to current year. Prior to October 1988, published as "CAP Canal Havasu pumping Plant near Parker."

REMARKS.--Figures of monthly diversion shown represent water pumped from Lake Havasu for delivery to the Central Arizona Project.

COOPERATION.--Diversion records furnished by U.S. Bureau of Reclamation, Central Arizona Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily diversion, 6,150 acre-ft, 3,100 ft³/s, July 16, 1989 and June 23, 1990; no diversion on many days each year.

MONTHLY DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Month	Diversion			
	Maximum	Minimum	Mean	Total
October.....	1,430	132	764	23,675
November.....	1,030	129	577	17,300
December.....	951	0	510	15,798
CAL YR 1990.....	6,150	0	2,130	779,054
January.....	548	0	52.7	1,633
February.....	1,370	0	327	9,157
March.....	2,120	537	994	30,824
April.....	3,000	677	1,380	41,270
May.....	3,160	935	1,420	44,077
June.....	4,230	1,560	2,200	66,058
July.....	5,190	1,700	3,110	96,480
August.....	4,920	1,830	2,920	90,494
September.....	2,850	132	1,260	37,946
WTR YR 1991.....	5,190	0	1,300	474,712

DIVERSIONS ABOVE PARKER DAM

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09426700 CENTRAL ARIZONA PROJECT CANAL AT MP 7.98, NEAR PARKER, AZ

LOCATION.--Lat 34°10'43", Long 114°03'04", in NE&SE& sec.29, T.10 N., R.17 W., La Paz County, Hydrologic Unit 15030104, 7.9 mi southeast of the Central Arizona Project Havasu Pumping Plant, and about 18 mi from Parker, AZ.

PERIOD OF RECORD.--August 1985 to current year. Prior to October 1988, published as CAP Canal at MP 7.98, near Parker, AZ.

REMARKS.--Discharge reported by U.S. Bureau of Reclamation.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
OCT 31...	0830	1050	980	8.1	24.0	20.5	738	7.7	89	13	300	160
MAR 13...	0845	1100	990	8.1	15.0	14.5	736	9.8	100	10	300	170
APR 16...	0830	1580	790	8.2	20.5	17.0	732	8.6	93	21	210	61
JUL 25...	0830	2610	1020	8.3	32.5	26.0	735	8.7	112	19	300	160
DATE		CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
OCT 31...	72	28	92	2	4.3	161	0	132	230	74	0.40	
MAR 13...	75	28	93	2	4.1	166	0	136	270	82	0.30	
APR 16...	51	20	80	2	5.7	181	0	148	140	67	0.60	
JUL 25...	72	29	95	2	4.5	164	0	134	260	79	0.30	
DATE		SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS NO3) (00600)	NITRO-GEN, TOTAL (MG/L AS NO3) (71887)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
OCT 31...	8.9	620	589	0.84	<0.100	0.100	0.020	0.40	--	--	<0.010	
MAR 13...	8.5	638	644	0.87	0.210	0.210	<0.010	0.30	0.51	2.3	0.040	
APR 16...	13	501	468	0.68	0.360	0.370	0.020	0.70	1.1	4.7	0.110	
JUL 25...	8.5	664	630	0.90	0.150	0.140	<0.010	0.30	0.45	2.0	<0.010	
DATE		PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, DIS-SOLVED (MG/L AS PO4) (00660)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	CHRO-MIUM, HEXA-VALENT, DIS. (UG/L AS CR) (01032)
OCT 31...	<0.010	<0.010	--	2	1	100	120	120	<1	<1	<1	
MAR 13...	<0.010	<0.010	--	2	2	<100	110	130	<1	1	<1	
APR 16...	0.050	0.040	0.12	5	4	100	81	170	<1	3	<1	
JUL 25...	<0.010	<0.010	--	3	3	<100	120	130	<1	2	1	

< Actual value is known to be less than value shown.

09426700 CENTRAL ARIZONA PROJECT CANAL AT MP 7.98, NEAR PARKER, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, INOR- GANIC, TOTAL (MG/L AS C) (00685)	CYANIDE TOTAL (MG/L AS CN) (00720)	PHENOLS TOTAL (UG/L) (32730)
OCT 31...	1	<3	<100	<1	<0.10	<1	<1.0	4	29	<0.010	1
MAR 13...	1	<3	<100	<1	<0.10	<1	<1.0	5	32	<0.010	1
APR 16...	2	16	3	<1	<0.10	<1	<1.0	3	36	<0.010	<1
JUL 25...	2	<3	3	<1	<0.10	<1	<1.0	<3	30	<0.010	<1

ADDITIONAL ANALYSES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
JUL 25...	0830	K1	150	2	<10	4	10

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L) (38260)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)
JUL 25...	0830	0.03	<0.010	<0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	MIREX, TOTAL (UG/L) (39755)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PER- THANE TOTAL (UG/L) (39034)	PCB, TOTAL (UG/L) (39516)	TOX- APHENE, TOTAL (UG/L) (39400)
JUL 25...	<0.010	<0.010	<0.010	<0.01	<0.01	<0.10	<0.1	<0.1	<1

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

DIVERSIONS ABOVE PARKER DAM

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09427100 CENTRAL ARIZONA PROJECT CANAL AT MP 162.3, AT
7TH STREET, AT PHOENIX, AZ

LOCATION.--Lat 33°42'07", long 112°03'54", in NE&SE&SE& sec.8, T.4 N., R.3 E., Maricopa County, Hydrologic
Unit 15060106, on upstream side of 7th Street Bridge in Phoenix.

PERIOD OF RECORD.--July 1985 to current year. Prior to October 1988, published as CAP Canal at MP 162.3 at 7th
Street at Phoenix, AZ.

REMARKS.--Discharges reported by Central Arizona Water Conservation District. Values are based on the amount of
water pumped in the canal at the Hassayampa pumping plant near Lake Pleasant minus deliveries between the
pumping plant and the sampling site.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	
OCT 18...	0930	280	968	8.3	31.0	23.0	722	8.6	107	15	270	160	
NOV 19...	0820	300	980	8.3	16.5	17.0	717	10.3	114	--	290	170	
DEC 13...	0950	300	986	8.4	16.5	11.0	722	11.4	109	--	290	170	
JAN 17...	0855	0.0	998	8.4	11.0	10.0	724	11.4	107	13	280	160	
FEB 28...	0945	350	977	8.5	16.0	16.0	713	10.2	111	--	280	160	
MAR 21...	0840	500	1010	8.4	8.0	8.5	718	11.4	104	--	290	160	
APR 19...	0830	800	--	8.3	22.0	19.0	721	9.6	110	24	220	60	
MAY 16...	0840	535	990	8.6	22.0	22.0	719	9.2	112	--	290	160	
JUN 21...	0835	1100	1020	8.4	28.0	26.0	718	8.2	108	--	300	170	
JUL 19...	0900	1650	1050	8.4	33.0	28.5	719	8.4	115	17	300	170	
SEP 03...	0745	960	1030	8.4	29.0	27.0	722	7.9	105	--	300	170	
19...	0915	350	1020	8.1	29.0	26.0	721	8.1	106	--	290	170	
DATE		CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	HY-DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
OCT 18...	63	28	88	2	4.4	139	1	0	116	240	75	0.30	
NOV 19...	68	29	91	2	4.4	149	0	0	122	250	75	0.30	
DEC 13...	68	29	93	2	4.6	134	7	0	122	250	77	0.30	
JAN 17...	66	29	94	2	4.1	144	5	0	127	280	79	0.40	
FEB 28...	63	29	95	2	4.9	129	5	0	114	280	84	0.30	
MAR 21...	70	28	91	2	4.4	150	4	0	130	280	82	0.30	
APR 19...	52	22	90	3	6.6	185	5	0	160	160	80	0.70	
MAY 16...	68	29	98	3	5.0	142	7	0	128	270	86	0.40	
JUN 21...	72	29	100	3	4.4	140	6	0	125	280	86	0.20	
JUL 19...	71	29	94	2	4.7	138	6	0	123	290	82	0.30	
SEP 03...	70	30	92	2	4.5	143	6	0	127	260	78	0.10	
19...	68	30	96	2	4.8	151	0	0	124	300	92	0.40	

DIVERSIONS ABOVE PARKER DAM

09427100 CENTRAL ARIZONA PROJECT CANAL AT MP 162.3, AT
7TH STREET, AT PHOENIX, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)
OCT 18...	9.0	609	577	0.83	<0.100	<0.100	0.010	0.40	--	--	<0.010	<0.010
NOV 19...	7.4	618	599	0.84	<0.100	<0.100	0.030	0.30	--	--	0.020	--
DEC 13...	7.8	645	603	0.88	<0.100	<0.100	0.020	0.60	--	--	<0.010	--
JAN 17...	6.9	634	635	0.86	<0.100	<0.100	0.020	0.30	--	--	<0.010	<0.010
FEB 28...	4.1	615	629	0.84	<0.100	<0.100	0.010	<0.20	--	--	<0.010	--
MAR 21...	7.1	638	641	0.87	0.050	0.072	<0.010	0.30	0.35	1.5	<0.010	--
APR 19...	12	523	521	0.71	*0.280	*0.300	0.020	0.60	0.88	3.9	0.030	<0.010
MAY 16...	6.9	638	640	0.87	0.051	<0.050	0.010	0.40	0.45	2.0	0.040	--
JUN 21...	6.8	650	653	0.88	<0.050	<0.050	<0.010	0.50	--	--	0.010	--
JUL 19...	8.0	660	653	0.90	0.064	<0.050	<0.010	0.60	0.66	2.9	0.020	0.010
SEP 03...	8.9	654	620	0.89	0.081	0.100	0.020	0.40	0.48	2.1	0.010	--
19...	8.6	630	674	0.86	<0.050	<0.050	0.020	0.30	--	--	<0.010	--
DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR) (01032)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 18...	0.010	0.03	3	3	200	110	130	<1	<1	<1	2	<3
NOV 19...	<0.010	--	--	--	--	--	130	--	--	--	--	<3
DEC 13...	<0.010	--	--	--	--	--	130	--	--	--	--	7
JAN 17...	<0.010	--	2	2	<100	110	130	<1	<1	<1	2	<3
FEB 28...	<0.010	--	--	--	--	--	120	--	--	--	--	<3
MAR 21...	<0.010	--	--	--	--	--	120	--	--	--	--	4
APR 19...	<0.010	--	4	4	<100	81	200	<1	<1	<1	3	5
MAY 16...	<0.010	--	--	--	--	--	140	--	--	--	--	<3
JUN 21...	<0.010	--	--	--	--	--	140	--	--	--	--	5
JUL 19...	<0.010	--	3	3	200	120	130	<1	<1	<1	2	<3
SEP 03...	<0.010	--	--	--	--	--	130	--	--	--	--	4
19...	<0.010	--	--	--	--	--	140	--	--	--	--	<3

* Value verified.

< Actual value is known to be less than value shown.

09427100 CENTRAL ARIZONA PROJECT CANAL AT MP 162.3, AT
7TH STREET, AT PHOENIX, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, INOR- GANIC, TOTAL (MG/L AS C) (00685)	CYANIDE TOTAL (MG/L AS CN) (00720)	PHENOLS TOTAL (UG/L) (32730)	SEDI- MENT, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT 18...	<100	<1	<0.10	<1	<1.0	7	25	<0.010	<1	1	0.91
NOV 19...	--	--	--	--	--	--	--	--	--	2	1.2
DEC 13...	--	--	--	--	--	--	--	--	--	<0.5	0.32
JAN 17...	<100	<1	<0.10	<1	<1.0	3	27	<0.010	3	<0.5	--
FEB 28...	--	--	--	--	--	--	--	--	--	3	2.9
MAR 21...	--	--	--	--	--	--	--	--	--	1	1.1
APR 19...	4	<1	<0.10	*<1	<1.0	<3	36	<0.010	2	2	4.1
MAY 16...	--	--	--	--	--	--	--	--	--	2	2.9
JUN 21...	--	--	--	--	--	--	--	--	--	22	66
JUL 19...	4	1	<0.10	<1	<1.0	5	27	<0.010	2	19	83
SEP 03...	--	--	--	--	--	--	--	--	--	10	25
19...	--	--	--	--	--	--	--	--	--	6	5.5

ADDITIONAL ANALYSES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	COLOR (PLAT- INUM- COBALT UNITS) (00080)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
JUL 19...	0900	1	28	K48	5	160	20	6	<10

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L) (38260)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)
JUL 19...	0900	0.03	<0.010	<0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	MIREX, TOTAL (UG/L) (39755)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PER- THANE TOTAL (UG/L) (39034)	PCB, TOTAL (UG/L) (39516)	TOX- APHENE, TOTAL (UG/L) (39400)
JUL 19...	<0.010	<0.010	<0.010	<0.01	<0.01	<0.10	<0.1	<0.1	<1

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

DIVERSIONS ABOVE PARKER DAM

09427300 CENTRAL ARIZONA PROJECT CANAL AT MP 252, NEAR COOLIDGE, AZ

LOCATION.--Lat 32°50'08", long 111°25'41", in SW¼SW¼SW¼ sec.4, T.7 S., R.9 E., Pinal County, Hydrologic Unit 15050100, 1.8 mi upstream from Brady Pump Plant and 10.6 mi southeast of Coolidge.

PERIOD OF RECORD.--May 1987 to current year. Prior to October 1988, published as CAF Canal at MP 252, near Coolidge, AZ.

REMARKS.--Water ponded in canal at times. Discharges reported by Central Arizona Water Conservation District.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE	PH (STAND- ARD UNITS)	TEMPER- ATURE AIR	TEMPER- ATURE WATER	BARO- METRIC PRES- SURE	OXYGEN, DIS- SOLVED	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL)	HARD- NESS TOTAL	HARD- NESS NONCARB DISSOLV	
		(00061)	(US/CM) (00095)	(00400)	(DEG C) (00020)	(DEG C) (00010)	(MM OF HG) (00025)	(MG/L) (00300)	(00301)	(00340)	(MG/L AS CACO3) (00900)	(00904)	
OCT													
19...	1320	40	930	8.4	--	24.0	704	8.6	112	--	280	160	
NOV													
28...	1230	30	1060	8.3	18.0	15.0	716	8.4	89	12	280	180	
DEC													
27...	1100	190	943	8.4	13.0	9.5	711	14.6	137	--	260	160	
JAN													
26...	1230	15	930	8.4	22.0	13.0	728	11.0	110	--	260	150	
MAR													
03...	1200	110	985	8.6	23.0	17.0	712	9.1	101	14	290	190	
24...	1130	640	935	8.6	26.5	16.5	710	10.2	113	--	280	160	
APR													
30...	1230	260	800	8.8	33.0	22.5	709	11.5	143	--	240	120	
MAY													
11...	1300	500	903	9.0	30.0	23.0	711	9.8	123	37	190	49	
JUN													
28...	1100	550	998	8.5	34.0	26.5	706	8.4	114	--	300	170	
JUL													
23...	1230	380	1020	8.5	36.0	29.5	719	9.0	126	--	290	170	
AUG													
08...	1030	380	1040	8.5	40.0	29.0	725	--	--	20	300	170	
SEP													
22...	1300	100	1040	8.3	30.0	27.0	725	8.6	114	--	280	180	
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
OCT													
19...	63	29	97	3	4.8	125	11	121	240	82	<0.10	7.3	
NOV													
28...	63	30	100	3	4.7	128	0	105	270	82	0.20	7.1	
DEC													
27...	58	28	90	2	4.6	112	6	102	250	79	0.50	6.0	
JAN													
26...	57	28	89	2	4.7	116	5	104	260	77	0.30	5.2	
MAR													
03...	66	30	98	3	4.6	118	0	97	290	89	0.30	2.8	
24...	66	27	89	2	4.6	142	0	116	290	82	0.30	6.4	
APR													
30...	57	23	89	3	5.9	148	0	121	210	80	0.50	10	
MAY													
11...	42	20	81	3	5.9	132	18	137	150	67	0.60	10	
JUN													
28...	70	30	98	2	4.4	138	7	125	280	92	0.40	--	
JUL													
23...	68	29	93	2	4.2	133	8	123	280	86	0.40	7.6	
AUG													
08...	69	30	96	2	4.7	135	8	124	270	88	0.30	8.7	
SEP													
22...	65	29	95	2	5.0	124	0	102	300	94	0.40	8.7	

< Actual value is known to be less than value shown.

09427300 CENTRAL ARIZONA PROJECT CANAL AT MP 252, NEAR COOLIDGE, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)
OCT 19...	631	596	0.86	<0.100	--	--	0.50	0.020	--	--	--
NOV 28...	621	620	0.84	<0.050	<0.050	0.070	0.50	0.020	<0.010	<0.010	--
DEC 27...	601	577	0.82	<0.100	--	--	0.30	<0.010	--	--	--
JAN 26...	536	583	0.73	<0.100	--	--	0.30	0.020	--	--	--
MAR 03...	621	639	0.84	<0.050	<0.050	0.020	0.40	0.020	0.020	<0.010	--
MAR 24...	615	635	0.84	<0.050	--	--	0.30	<0.010	--	--	--
APR 30...	552	548	0.75	<0.050	--	--	0.40	<0.010	--	--	--
MAY 11...	449	460	0.61	<0.050	<0.050	0.020	0.70	0.020	0.010	0.020	0.06
JUN 28...	--	650	0.88	<0.050	<0.050	<0.010	0.40	0.020	--	<0.010	--
JUL 23...	647	642	0.88	<0.050	<0.050	0.020	<0.20	0.010	--	<0.010	--
AUG 08...	636	641	0.86	<0.050	<0.050	0.010	0.30	0.010	<0.010	<0.010	--
SEP 22...	650	660	0.88	<0.050	0.420	0.050	0.40	0.020	--	<0.010	--

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR) (01032)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 19...	--	--	--	--	140	--	--	--	--	--	<3
NOV 28...	1	2	100	110	130	<1	<1	<1	--	2	44
DEC 27...	--	--	--	--	130	--	--	--	--	--	67
JAN 26...	--	--	--	--	120	--	--	--	--	--	77
MAR 03...	<1	<1	<100	100	130	<1	<1	<1	--	13	18
MAR 24...	--	--	--	--	120	--	--	--	--	--	12
APR 30...	--	--	--	--	130	--	--	--	--	--	12
MAY 11...	3	4	<100	23	170	<1	1	<1	--	2	9
JUN 28...	--	--	--	--	--	--	--	--	--	--	16
JUL 23...	--	--	--	--	140	--	--	--	--	--	8
AUG 08...	2	2	<100	120	130	<1	<1	<1	3	4	7
SEP 22...	--	--	--	--	140	--	--	--	--	--	14

< Actual value is known to be less than value shown.

DIVERSIONS ABOVE PARKER DAM

09427300 CENTRAL ARIZONA PROJECT CANAL AT MP 252, NEAR COOLIDGE, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, INOR- GANIC, TOTAL (MG/L AS C) (00685)	CYANIDE TOTAL (MG/L AS CN) (00720)	PHENOLS TOTAL (UG/L) (32730)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 19...	--	--	--	--	--	--	--	--	--	--	--
NOV 28...	<100	<1	<0.10	<1	<1.0	12	23	<0.010	6	--	--
DEC 27...	--	--	--	--	--	--	--	--	--	--	--
JAN 26...	--	--	--	--	--	--	--	--	--	--	--
MAR 03...	<100	<1	<0.10	<1	<1.0	14	22	<0.010	1	29	8.6
MAR 24...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	3	1	<0.10	<1	<1.0	16	--	<0.010	1	--	--
JUN 28...	--	--	--	--	--	--	--	--	--	--	--
JUL 23...	--	--	--	--	--	--	--	--	--	47	48
AUG 08...	2	<1	<0.10	<1	<1.0	7	27	<0.010	<1	15	15
SEP 22...	--	--	--	--	--	--	--	--	--	--	--

ADDITIONAL ANALYSES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	COLOR (PLAT- INUM- COBALT (UNITS) (00080)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC- CI KF AGAR (COLS. PER 100 ML) (31673)	SULFIDE TOTAL (MG/L AS S) (00745)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
AUG 08...	1030	2	K8	K5	<0.5	110	20	<10	5	<10

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L) (38260)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)
AUG 08...	1030	0.02	<0.010	<0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	MIREX, TOTAL (UG/L) (39755)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PER- THANE TOTAL (UG/L) (39034)	PCB, TOTAL (UG/L) (39516)	TOX- APHENE, TOTAL (UG/L) (39400)
AUG 08...	<0.010	<0.010	<0.010	<0.01	<0.01	<0.10	<0.1	<0.1	<1

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

COLORADO RIVER MAIN STEM

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09427500 LAKE HAVASU NEAR PARKER DAM, AZ-CA

LOCATION.--Lat 34°18'58", long 114°09'23", in NW¼SW¼ sec.28, T.3 N., R.27 E., San Bernardino meridian, in San Bernardino County, California, Hydrologic Unit 15030101, at intake pumping plant for Colorado River aqueduct of Metropolitan Water District of Southern California, 1.8 mi upstream from Parker Dam on Colorado River, and 149 mi downstream from Hoover Dam.

DRAINAGE AREA.--182,700 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing.

PERIOD OF RECORD.--July 1938 to current year. Published as "Parker Reservoir near Parker Dam" 1938.

REVISED RECORDS.--WRD Ariz. 1975: 1974 (elevation).

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

REMARKS.--Lake is formed by concrete-arch dam; dam was completed and storage began July 1, 1938. Usable capacity - based on April 1957 re-survey by Bureau of Reclamation between elevations 430.54 ft and 450.54 ft - 619,400 acre-ft between elevations 400.54 ft, sill of regulating gates, and 450.54 ft, top of regulating gates. Prior to Oct. 1, 1956, different capacity table used. Dead storage, 28,600 acre-ft below elevation 400.54 ft, based on original survey. About 0.07 ft fall indicated between gage and Parker Dam under normal operating conditions, drawdown below elevation 440.54 ft not legally permissible except by consent of the Metropolitan Water District of Southern California or in an emergency affecting the safety of the dam. Lake is used for flood control, power development, re-regulation of river for irrigation demand, and as a basin from which water is pumped by Metropolitan Water District of Southern California to Colorado River aqueduct. Figures given herein represent usable contents. For record of diversion to Colorado River aqueduct, see record for Colorado River aqueduct near Parker Dam elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum storage, 693,000 acre-ft, by temporary use of flashboards, Apr. 18, 1943, June 4, 1953; maximum elevation, 451.23 ft May 27, 1988, affected by wind; minimum storage, 71,400 acre-ft June 25, 1942, elevation, 412.09 ft.

EXTREMES FOR CURRENT YEAR.--Maximum storage, 619,000 acre-ft May 23, elevation, 450.52 ft, affected by wind; minimum storage, 535,500 acre-ft Jan. 25, elevation, 446.14 ft.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	447.62	447.32	446.62	446.55	447.12	447.42	450.00	449.44	449.96	449.60	449.14	448.29
2	447.80	447.36	446.56	446.62	447.02	447.36	449.82	449.70	449.81	449.48	449.09	448.05
3	447.99	447.24	446.36	446.82	446.92	447.10	449.37	449.90	449.73	449.50	449.07	448.13
4	448.26	447.16	446.26	447.02	446.82	447.02	448.97	449.93	449.65	449.67	449.04	448.34
5	448.09	446.96	446.29	447.19	446.83	447.17	448.78	449.78	449.74	449.88	448.69	448.63
6	447.86	447.02	446.44	447.32	446.94	447.10	448.73	449.52	450.02	449.85	448.54	448.90
7	447.72	446.95	446.67	447.40	447.16	447.25	448.56	449.47	450.31	449.77	448.57	449.01
8	447.49	446.84	446.70	447.44	447.24	447.36	448.41	449.35	450.26	449.66	448.74	448.90
9	447.46	446.74	446.64	447.44	447.22	447.63	448.23	449.70	450.15	449.63	448.69	448.70
10	447.46	446.75	446.75	447.54	446.98	447.63	448.30	449.68	449.96	449.64	448.79	448.71
11	447.58	446.71	446.87	447.47	446.74	447.39	448.39	449.82	449.82	449.93	448.64	448.72
12	447.62	446.64	447.02	447.33	446.69	447.31	448.43	449.86	449.73	450.03	448.66	448.72
13	447.44	446.55	447.02	447.14	446.72	447.24	448.49	449.67	449.80	449.89	448.78	448.70
14	447.33	446.67	447.08	447.06	446.99	447.39	448.45	449.79	449.93	449.66	448.83	448.78
15	447.15	446.87	446.95	446.91	447.03	447.55	448.27	449.79	449.88	449.48	448.94	448.66
16	447.19	447.02	446.68	446.70	447.12	447.72	448.40	450.03	449.66	449.29	448.92	448.47
17	447.27	447.09	446.41	446.66	447.01	447.52	448.74	450.16	449.50	449.20	448.76	448.46
18	447.54	447.14	446.58	446.76	446.75	447.48	448.96	450.18	449.36	449.18	448.49	448.55
19	447.59	447.06	446.91	446.75	446.73	447.33	449.20	450.28	449.34	449.07	448.42	448.59
20	447.47	446.96	446.96	446.72	446.64	447.57	449.26	450.17	449.61	449.05	448.42	448.85
21	447.31	447.06	447.02	446.47	446.49	447.99	449.24	450.33	449.70	448.86	448.46	448.85
22	447.12	447.23	447.23	446.44	446.60	448.48	448.95	450.30	449.87	448.86	448.44	448.75
23	447.10	447.34	446.98	446.44	446.71	448.88	449.06	450.52	449.79	448.92	448.54	448.69
24	447.24	447.40	446.52	446.56	446.74	449.11	449.31	450.46	449.75	449.04	448.50	448.53
25	447.36	447.31	446.35	446.14	446.54	449.23	449.68	450.28	449.88	449.34	448.44	448.41
26	447.49	447.38	446.41	446.30	446.62	449.49	449.76	449.96	449.95	449.42	448.36	448.29
27	447.37	447.19	446.50	446.53	446.77	449.98	449.71	449.81	450.09	449.27	448.45	448.00
28	447.19	446.85	446.54	446.52	447.16	450.11	449.56	449.74	450.09	449.04	448.72	447.80
29	446.84	446.62	446.72	446.84	---	450.11	449.31	449.68	450.08	448.94	448.69	447.55
30	446.92	446.54	446.75	447.06	---	450.16	449.30	449.96	449.79	449.08	448.72	447.24
31	447.02	---	446.44	447.14	---	450.23	---	449.98	---	449.00	448.57	---
MAX	448.26	447.40	447.23	447.54	447.24	450.23	450.00	450.52	450.31	450.03	449.14	449.01
MIN	446.84	446.54	446.26	446.14	446.49	447.02	448.23	449.35	449.34	448.86	448.36	447.24

WTR YR 1991 MAX 450.52 MIN 446.14

COLORADO RIVER MAIN STEM

09427500 LAKE HAVASU NEAR PARKER DAM, AZ-CA--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	447.62	447.32	446.62	446.55	447.12	447.42	450.00	449.44	449.96	449.60	449.14	448.29
2	447.80	447.36	446.56	446.62	447.02	447.36	449.82	449.70	449.81	449.48	449.09	448.05
3	447.99	447.24	446.36	446.82	446.92	447.10	449.37	449.90	449.73	449.50	449.07	448.13
4	448.26	447.16	446.26	447.02	446.82	447.02	448.97	449.93	449.65	449.67	449.04	448.34
5	448.09	446.96	446.29	447.19	446.83	447.17	448.78	449.78	449.74	449.88	448.69	448.63
6	447.86	447.02	446.44	447.32	446.94	447.10	448.73	449.52	450.02	449.85	448.54	448.90
7	447.72	446.95	446.67	447.40	447.16	447.25	448.56	449.47	450.31	449.77	448.57	449.01
8	447.49	446.84	446.70	447.44	447.24	447.36	448.41	449.35	450.26	449.66	448.74	448.90
9	447.46	446.74	446.64	447.44	447.22	447.63	448.23	449.70	450.15	449.63	448.69	448.70
10	447.46	446.75	446.75	447.54	446.98	447.63	448.30	449.68	449.96	449.64	448.79	448.71
11	447.58	446.71	446.87	447.47	446.74	447.39	448.39	449.82	449.82	449.93	448.64	448.72
12	447.62	446.64	447.02	447.33	446.69	447.31	448.43	449.86	449.73	450.03	448.66	448.72
13	447.44	446.55	447.02	447.14	446.72	447.24	448.49	449.67	449.80	449.89	448.78	448.70
14	447.33	446.67	447.08	447.06	446.99	447.39	448.45	449.79	449.93	449.66	448.83	448.78
15	447.15	446.87	446.95	446.91	447.03	447.55	448.27	449.79	449.88	449.48	448.94	448.66
16	447.19	447.02	446.68	446.70	447.12	447.72	448.40	450.03	449.66	449.29	448.92	448.47
17	447.27	447.09	446.41	446.66	447.01	447.52	448.74	450.16	449.50	449.20	448.76	448.46
18	447.54	447.14	446.58	446.76	446.75	447.48	448.96	450.18	449.36	449.18	448.49	448.55
19	447.59	447.06	446.91	446.75	446.73	447.33	449.20	450.28	449.34	449.07	448.42	448.59
20	447.47	446.96	446.96	446.72	446.64	447.57	449.26	450.17	449.61	449.05	448.42	448.85
21	447.31	447.06	447.02	446.47	446.49	447.99	449.24	450.33	449.70	448.86	448.46	448.85
22	447.12	447.23	447.23	446.44	446.60	448.48	448.95	450.30	449.87	448.86	448.44	448.75
23	447.10	447.34	446.98	446.44	446.71	448.88	449.06	450.52	449.79	448.92	448.54	448.69
24	447.24	447.40	446.52	446.56	446.74	449.11	449.31	450.46	449.75	449.04	448.50	448.53
25	447.36	447.31	446.35	446.14	446.54	449.23	449.68	450.28	449.88	449.34	448.44	448.41
26	447.49	447.38	446.41	446.30	446.62	449.49	449.76	449.96	449.95	449.42	448.36	448.29
27	447.37	447.19	446.50	446.53	446.77	449.98	449.71	449.81	450.09	449.27	448.45	448.00
28	447.19	446.85	446.54	446.52	447.16	450.11	449.56	449.74	450.09	449.04	448.72	447.80
29	446.84	446.62	446.72	446.84	---	450.11	449.31	449.68	450.08	448.94	448.69	447.55
30	446.92	446.54	446.75	447.04	---	450.16	449.30	449.96	449.79	449.08	448.72	447.24
31	447.02	---	446.44	447.14	---	450.23	---	449.98	---	449.00	448.57	---
MAX	448.26	447.40	447.23	447.54	447.24	450.23	450.00	450.52	450.31	450.03	449.14	449.01
MIN	446.84	446.54	446.26	446.14	446.49	447.02	448.23	449.35	449.34	448.86	448.36	447.24
WTR YR	1991	MAX	450.52	MIN	446.14							

COLORADO RIVER MAIN STEM

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09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA

LOCATION.--Lat 34°17'44", long 114°08'22", in NW¼NW¼ sec.3, T.2 N., R.27 E., San Bernardino meridian, in San Bernardino County, California, Hydrologic Unit 15030104, on north end of powerplant at Parker Dam, 13 mi northeast of Parker, AZ., and 14 mi upstream from Headgate Rock Dam.

DRAINAGE AREA.--182,700 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February to September 1934 (gage heights and fragmentary discharge records), October 1934 to current year. Prior to October 1937, published as "near Parker, Ariz."

REVISED RECORDS.--WSP 1313: 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 300.54 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1967, at site 3.8 mi downstream at datum 346.23 ft above NGVD.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Lake Mead since Feb. 1, 1935, by Lake Mohave since Jan. 17, 1950, and by Lake Havasu since July 1, 1938. Many diversions above station. For record of diversion to Colorado River aqueduct and return flows, see record for Colorado River aqueduct near Parker Dam, elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,400 ft³/s Feb. 8, 1937; no flow at Parker Dam for parts of several days in 1942 when gates in dam were closed; minimum daily discharge, 920 ft³/s Jan. 11, 1978.
An unregulated discharge of probably less than 1,350 ft³/s occurred Aug. 18, 1934 (lowest unregulated discharge since 1917 and probably since a much earlier date).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 16,100 ft³/s July 16; minimum daily, 1,060 ft³/s Jan. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9630	6800	6820	4530	6710	1620	9560	13600	14000	15000	10100	10900
2	7670	6630	6730	3790	7530	2970	11100	11900	13300	15800	10600	10800
3	6460	6890	7380	2960	7600	4950	12100	13100	13400	14600	12200	10500
4	5720	6850	6780	1680	7750	3420	12700	13400	14100	12400	10900	10100
5	9410	8350	6280	1060	7210	4440	13400	13500	13400	13000	14300	8790
6	9590	7880	5540	1060	6260	7890	13400	14200	10800	14600	14100	8750
7	9000	6810	5160	1850	5320	9000	13300	13700	11000	14900	13200	7950
8	9440	7270	6810	2020	6910	8670	13900	13900	13500	14200	12100	8480
9	9010	7240	6130	2100	7600	8650	14700	11200	13400	15300	13000	9580
10	9060	7250	5070	2020	8700	9160	14900	13300	13900	14900	13000	9610
11	8000	7690	5140	2480	8360	10300	12800	11900	14300	12100	12600	9690
12	8060	8390	4920	2870	7380	10000	14200	12200	13500	11800	11500	10000
13	9600	7580	4850	3330	6160	10100	13500	13100	12400	13800	10500	10100
14	9410	6720	6510	2520	5080	9100	12900	12800	12200	13800	10700	9570
15	9050	6390	6190	4780	6280	9220	15800	13100	14300	13900	10100	10200
16	8350	5930	7100	4590	6480	9140	14800	10200	15000	16100	11600	9660
17	7270	6640	6850	4160	7360	10300	13300	12300	15100	15300	12600	9520
18	5140	5980	5140	3310	7890	8920	12000	13200	15200	13400	13000	9130
19	6430	5500	4030	5530	7080	10300	12300	11500	14600	14600	12900	8580
20	8480	6350	5490	6050	7810	9710	12800	12100	12200	14200	12600	8150
21	8360	4560	4280	6040	8860	8190	13300	11600	14000	14100	12000	7640
22	8810	3600	2480	5880	8610	7600	14700	12100	13900	13800	12000	7630
23	8330	3290	6440	5640	8890	8270	14300	9950	13800	14100	11500	8140
24	7640	3040	6430	5940	8860	8680	13400	10700	14000	14200	12400	8430
25	7490	3310	6250	11400	8480	9170	11800	11600	13700	12100	12400	8660
26	7140	3360	5490	7290	7290	8000	12600	12400	13000	13300	12000	9560
27	8760	4940	5510	7440	5500	5620	13600	12200	10900	14600	10900	9840
28	8420	6940	5350	7110	2990	6700	13500	12600	12300	14100	9930	9750
29	9120	5700	4460	5260	---	7710	13700	13300	13100	13500	9930	9790
30	7680	6410	5370	5430	---	8160	13600	10900	14500	12100	9850	9800
31	7150	---	6330	6370	---	8020	---	11200	---	13000	10900	---
TOTAL	253680	184290	177310	136490	200950	243980	397960	382750	402800	432600	365410	279300
MEAN	8183	6143	5720	4403	7177	7870	13270	12350	13430	13950	11790	9310
MAX	9630	8390	7380	11400	8890	10300	15800	14200	15200	16100	14300	10900
MIN	5140	3040	2480	1060	2990	1620	9560	9950	10800	11800	9850	7630
AC-FT	503200	365500	351700	270700	398600	483900	789400	759200	799000	858100	724800	554000
CAL YR 1990	TOTAL	3593210	MEAN	9844	MAX	16000	MIN	1370	AC-FT	7127000		
WTR YR 1991	TOTAL	3457520	MEAN	9473	MAX	16100	MIN	1060	AC-FT	6858000		

09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: September 1982 to current year.

WATER TEMPERATURE: February 1954 to August 1970; September 1982 to current year.

INSTRUMENTATION.--Water temperature recorder from February 1954 to August 1970. Specific conductance and water temperature recorder since September 1982.

REMARKS.--Prior to October 1968, published as 09428000. Temperature probe above water surface part of almost all days, Oct. 9-Apr. 3, May 2, 9, 16, 23, 30-31, and June 6, 7, 14. Conductivity probe above water surface part of each day, Jan. 3-7, 9, 10, 12-14, 17-21, 23-25, Feb. 27-Mar. 2, 26-27; record deleted as appropriate.

EXTREMES FOR PERIOD OF DAILY RECORDS.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,510 microsiemens Dec. 14, 1986; minimum recorded, 804 microsiemens July 20, 1987.

WATER TEMPERATURE: Maximum recorded, 28.5°C Aug. 12, 13, 18, 1955; minimum recorded, 7.5°C Jan. 11, 1983.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,060 microsiemens Sept. 6-27; minimum recorded, 884 microsiemens Sept. 28.

WATER TEMPERATURE: Maximum recorded, 25.7°C Oct. 4; minimum not recorded due to instrument malfunction.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	
OCT 30...	1230	12800	1000	8.0	33.0	21.0	2.4	760	8.4	95	17	
NOV 28...	1230	8790	1000	8.2	14.5	15.0	2.5	770	9.8	96	<10	
DEC 18...	1315	9620	1000	8.2	18.0	12.0	2.1	762	10.2	95	12	
JAN 15...	1230	4810	1000	8.1	24.0	9.0	1.5	762	12.0	104	<10	
FEB 12...	1230	6380	1000	8.1	24.5	12.0	1.5	760	11.2	105	23	
MAR 13...	1200	13700	990	8.2	18.0	14.5	1.5	760	10.1	100	12	
APR 15...	1330	18400	950	8.2	31.0	17.0	7.8	755	9.4	98	14	
MAY 09...	1245	19300	1000	8.2	29.0	19.5	2.1	752	8.8	97	15	
JUN 26...	1215	18800	1010	8.2	36.0	23.0	0.90	755	8.2	97	15	
JUL 24...	1230	18400	1000	8.1	41.0	24.0	1.2	756	8.1	97	13	
AUG 21...	1200	17800	1020	8.2	31.0	25.0	1.0	760	7.7	94	17	
SEP 04...	1215	18600	1020	8.1	37.0	26.0	1.5	756	7.2	90	15	
DATE		COLI- FORM, FECAL, 0.7 UM-MF (COLS. / 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. / PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
OCT 30...	<1	K1	300	160	72	28	91	2	4.6	161	0	
NOV 28...	K1	K1	300	170	73	28	91	2	4.3	161	0	
DEC 18...	<1	<1	300	160	72	28	91	2	4.0	164	0	
JAN 15...	<1	K1	300	160	73	28	92	2	4.3	166	0	
FEB 12...	<1	<1	290	160	73	27	91	2	4.3	164	0	
MAR 13...	K1	<1	310	170	76	29	94	2	4.4	164	0	
APR 15...	<1	22	280	140	68	26	90	2	4.6	170	0	
MAY 09...	<1	K1	310	170	77	28	91	2	4.4	168	0	
JUN 26...	<1	<1	310	170	76	29	94	2	4.8	168	0	
JUL 24...	<1	76	300	170	74	29	96	2	4.6	166	0	
AUG 21...	K5	32	310	170	76	29	94	2	4.5	164	0	
SEP 04...	<1	<1	320	190	77	30	99	2	4.4	159	0	

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

COLORADO RIVER MAIN STEM

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09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 30...	132	250	78	0.50	620	604	0.84	<1	--	<0.010	0.100
NOV 28...	132	260	82	0.40	641	618	0.87	3	--	<0.010	0.200
DEC 18...	134	250	80	0.50	628	606	0.85	4	--	<0.010	0.200
JAN 15...	136	250	80	<0.10	616	609	0.84	17	--	<0.010	0.200
FEB 12...	134	260	81	0.40	639	618	0.87	5	--	<0.010	0.200
MAR 13...	134	270	82	0.30	641	637	0.87	27	--	<0.010	0.220
APR 15...	139	*230	*75	0.30	625	578	0.85	8	--	<0.050	<0.050
MAY 09...	138	280	81	0.30	672	645	0.91	2	0.220	0.010	0.230
JUN 26...	138	270	82	0.20	660	639	0.90	3	--	<0.010	0.210
JUL 24...	136	250	78	0.30	643	614	0.87	1	--	<0.010	0.200
AUG 21...	134	280	89	0.30	630	654	0.86	<1	--	<0.010	0.170
SEP 04...	130	270	87	0.50	676	646	0.92	<1	--	<0.010	0.180

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)
OCT 30...	0.020	0.48	0.50	0.60	2.7	<0.010	<0.010	2	2	120	130
NOV 28...	0.040	--	<0.20	--	--	<0.010	<0.010	2	3	120	120
DEC 18...	0.010	--	<0.20	--	--	<0.010	<0.010	3	3	110	130
JAN 15...	0.010	--	<0.20	--	--	<0.010	<0.010	2	2	110	130
FEB 12...	<0.010	--	0.40	0.60	2.7	0.020	<0.010	2	3	110	120
MAR 13...	0.150	0.05	0.20	0.42	1.9	0.010	<0.010	2	2	120	130
APR 15...	<0.020	--	0.50	--	--	0.060	<0.020	3	3	100	150
MAY 09...	0.020	--	<0.20	--	--	<0.010	<0.010	2	2	120	130
JUN 26...	0.010	0.49	0.50	0.71	3.1	<0.010	<0.010	2	2	120	130
JUL 24...	0.030	0.27	0.30	0.50	2.2	<0.010	<0.010	3	3	120	130
AUG 21...	0.010	0.29	0.30	0.47	2.1	<0.010	<0.010	2	2	120	130
SEP 04...	0.020	0.38	0.40	0.58	2.6	0.010	<0.010	2	2	130	120

* Value verified.

< Actual value is known to be less than value shown.

COLORADO RIVER MAIN STEM

09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
OCT 30...	<1	<1.0	<1	1	2	1	90	8	1	<1
NOV 28...	<1	<1.0	<1	<1	2	1	80	8	1	1
DEC 18...	<1	<1.0	<1	<1	8	3	90	<3	4	<1
JAN 15...	<1	<1.0	<1	<1	3	2	20	<3	<1	<1
FEB 12...	<1	<1.0	<1	<1	2	1	50	<3	1	<1
MAR 13...	<1	<1.0	<1	<1	3	1	50	<3	<1	<1
APR 15...	<1	<1.0	2	<1	4	2	350	5	2	1
MAY 09...	<1	<1.0	<1	<1	2	<1	70	5	1	<1
JUN 26...	<1	<1.0	<1	<1	10	4	70	3	2	<1
JUL 24...	<1	<1.0	6	<1	6	4	--	4	5	<1
AUG 21...	<1	<1.0	1	<1	1	<1	140	<3	1	<1
SEP 04...	<1	<1.0	1	<1	2	<1	50	6	2	<1
DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 30...	10	<1	<0.10	1	1	<1.0	<10	9	5	169
NOV 28...	10	<1	<0.10	<1	2	<1.0	<10	9	4	95
DEC 18...	<10	<1	<0.10	2	2	<1.0	<10	4	3	81
JAN 15...	<10	<1	<0.10	1	2	1.0	<10	4	2	21
FEB 12...	<10	<1	<0.10	1	1	<1.0	<10	3	2	26
MAR 13...	<10	<1	<0.10	2	2	<1.0	<10	5	--	--
APR 15...	20	2	<0.10	2	2	<1.0	<10	<3	--	--
MAY 09...	<10	<1	<0.10	3	<1	1.0	<10	4	--	--
JUN 26...	<10	1	<0.10	3	3	<1.0	<10	10	--	--
JUL 24...	<10	<1	<0.10	2	3	<1.0	<10	7	--	--
AUG 21...	<10	<1	<0.10	2	3	<1.0	<10	3	--	--
SEP 04...	<10	<1	<0.10	2	3	<1.0	<10	8	--	--

< Actual value is known to be less than value shown.

09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	975	963	971	1010	990	997	1010	1000	1010	1010	1000	1010
2	973	961	969	1000	990	996	1020	1000	1010	1010	1000	1000
3	1020	960	990	1000	990	996	1020	1010	1010	1010	---	---
4	1020	999	1010	1000	990	993	1020	1010	1010	1000	---	---
5	1020	1010	1010	1000	990	995	1020	1000	1010	---	---	---
6	1020	998	1010	1000	990	993	1010	990	1000	---	---	---
7	1010	997	1010	1000	990	997	1000	990	999	---	---	---
8	1020	1010	1010	1010	990	999	1010	990	1000	1010	1000	1000
9	1020	1000	1010	1010	990	997	1010	1000	1000	1010	---	---
10	1010	1000	1010	1010	1000	1000	1010	990	999	1010	---	---
11	1010	1000	1010	1010	1000	1000	1010	1000	1000	1010	990	1000
12	1010	974	1010	1010	1000	1000	1010	1000	1000	1010	---	---
13	1010	1000	1010	1010	990	1000	1010	990	1000	1010	---	---
14	1010	1000	1010	1010	980	999	1000	1000	1000	1010	---	---
15	1010	1000	1010	1010	980	997	1010	990	1000	1010	1000	1010
16	1010	1000	1010	1010	990	1000	1010	1000	1000	1010	1000	1010
17	1010	1000	1010	1010	1000	1000	1010	1000	1000	1010	---	---
18	1010	999	1010	1010	980	1000	1010	1000	1000	1010	---	---
19	1010	998	1010	1010	990	1000	1010	1000	1000	1010	---	---
20	1010	997	1010	1010	1000	1000	1010	990	1000	1020	---	---
21	1010	996	1000	1010	1000	1000	1010	990	1000	1020	---	---
22	1010	996	1000	1010	1000	1000	1010	1000	1000	1020	1010	1010
23	1010	995	1000	1010	1000	1000	1010	1000	1000	1020	---	---
24	1000	994	1000	1010	1000	1000	1010	1000	1000	1020	---	---
25	1000	993	1000	1010	1000	1000	1010	1000	1000	1010	---	---
26	1000	993	1000	1010	970	1000	1010	1000	1000	1010	997	1000
27	1000	992	1000	1010	1000	1000	1010	1000	1000	1010	996	1000
28	1000	992	1000	1010	1000	1000	1010	1000	1010	1010	995	998
29	1000	990	998	1010	1000	1000	1010	990	1000	995	995	995
30	1000	990	999	1010	1000	1000	1010	1000	1000	995	984	993
31	1000	990	999	---	---	---	1010	1000	1000	1000	984	994
MONTH	1020	960	1000	1010	970	999	1020	990	1000	---	---	---
FEBRUARY			MARCH			APRIL			MAY			
1	1000	983	992	990	---	---	990	970	982	1020	1000	1010
2	1000	982	991	980	---	---	990	970	984	1020	998	1010
3	1000	990	992	990	960	980	990	980	985	1020	998	1010
4	1000	990	993	990	970	979	1000	980	990	1020	1010	1010
5	1000	991	993	990	970	981	1010	989	996	1020	1000	1010
6	1000	992	996	980	960	974	999	959	993	1010	1000	1010
7	1000	993	998	980	960	972	1010	988	997	1020	1000	1010
8	1000	994	997	980	950	966	1010	987	996	1020	1000	1010
9	1010	996	997	990	970	978	996	966	982	1010	1000	1010
10	1010	997	998	980	960	973	995	975	983	1020	1000	1010
11	1010	998	999	980	970	974	994	974	985	1020	1000	1010
12	1000	990	999	990	970	978	983	973	979	1020	1010	1010
13	1000	990	999	1000	970	985	982	952	969	1020	1000	1010
14	1000	990	998	1000	990	994	972	941	959	1020	1010	1010
15	1000	990	999	1000	990	993	980	930	959	1020	1010	1010
16	1000	990	998	1000	990	992	980	940	961	1030	1010	1020
17	1000	990	998	1000	990	994	980	940	961	1020	1010	1010
18	1000	990	996	1000	990	996	970	930	950	1020	1000	1010
19	1000	990	995	1000	900	985	970	930	957	1020	1010	1020
20	1000	990	996	1000	980	990	990	950	976	1020	1010	1020
21	1000	990	994	1000	980	991	990	960	980	1030	1010	1020
22	1000	990	993	990	980	987	990	970	983	1020	1010	1020
23	1000	990	993	990	980	986	1000	980	988	1030	1010	1020
24	1000	990	995	990	980	983	1000	990	994	1030	1010	1020
25	1000	990	994	990	950	984	1000	990	998	1020	1010	1020
26	1000	990	994	990	---	---	1000	990	997	1020	1010	1020
27	1000	---	---	980	---	---	1000	990	996	1020	1010	1020
28	990	---	---	980	950	972	1010	1000	1000	1030	1010	1020
29	---	---	---	990	970	980	1010	1000	1000	1020	1010	1020
30	---	---	---	990	980	981	1020	1000	1010	1030	1010	1020
31	---	---	---	990	970	981	---	---	---	1030	1010	1020
MONTH	1010	---	---	1000	---	---	1020	930	983	1030	998	1010

09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	1030	1020	1020	1040	1020	1030	1050	1030	1040	1050	1030	1040
2	1030	1020	1020	1040	1020	1030	1040	1030	1040	1050	1010	1030
3	1030	1020	1020	1040	1030	1030	1050	1020	1040	1040	979	1020
4	1030	1020	1020	1040	1030	1030	1050	1040	1040	1040	999	1020
5	1030	1020	1030	1040	1030	1030	1050	1040	1040	1050	978	1030
6	1030	1010	1030	1040	1030	1030	1050	1010	1040	1060	988	1040
7	1030	1020	1030	1040	1030	1030	1050	1020	1040	1060	1050	1050
8	1030	1020	1030	1040	1030	1040	1050	1040	1040	1060	1050	1050
9	1030	1020	1020	1050	1030	1040	1050	975	1040	1060	1050	1050
10	1030	1020	1020	1040	1030	1040	1040	983	1040	1060	1040	1050
11	1030	1020	1020	1040	1030	1030	1040	903	1020	1060	1040	1050
12	1030	1020	1030	1040	1020	1030	1040	1000	1030	1060	1040	1050
13	1030	1020	1020	1030	1020	1030	1040	980	1030	1060	1040	1050
14	1030	1020	1020	1030	1020	1030	1040	1030	1040	1060	1040	1050
15	1030	1020	1020	1030	1020	1030	1040	1020	1030	1060	1050	1050
16	1030	1020	1020	1040	1020	1030	1040	1020	1030	1060	1040	1050
17	1030	1020	1020	1030	1020	1030	1030	1010	1020	1060	1050	1050
18	1030	1020	1030	1030	1020	1020	1030	1010	1020	1060	1050	1050
19	1030	1020	1020	1030	1020	1020	1030	1010	1020	1060	1040	1050
20	1030	1020	1020	1030	1010	1020	1030	1020	1020	1060	1050	1050
21	1030	1020	1020	1030	1010	1020	1030	1020	1020	1060	1050	1050
22	1030	1020	1030	1030	1010	1020	1030	1020	1030	1060	1050	1050
23	1030	1020	1030	1020	1000	1020	1030	1020	1030	1060	1050	1050
24	1030	1020	1020	1020	1010	1020	1030	1020	1030	1060	1040	1050
25	1030	1020	1020	1020	1010	1020	1040	1020	1030	1060	1050	1060
26	1030	1020	1020	1030	1010	1020	1040	1030	1030	1060	1050	1050
27	1030	1020	1030	1030	1020	1020	1040	1030	1030	1060	1050	1060
28	1030	1020	1030	1030	1010	1030	1040	1020	1030	1010	884	917
29	1030	1020	1030	1030	1020	1030	1040	1030	1040	990	904	948
30	1030	1020	1030	1040	1010	1030	1040	1030	1040	1040	947	995
31	---	---	---	1050	1010	1030	1040	1030	1040	---	---	---
MONTH	1030	1010	1020	1050	1000	1030	1050	903	1030	1060	884	1040

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	22.9	18.9	22.2	19.3	---	---	13.2	---	---	8.2	---	---
2	23.0	18.9	22.0	19.0	---	---	13.0	---	---	8.2	---	---
3	22.9	18.6	21.6	18.3	---	---	12.8	---	---	8.2	---	---
4	25.7	17.8	21.8	17.7	---	---	12.4	---	---	---	---	---
5	23.0	18.8	22.0	17.6	---	---	12.3	---	---	---	---	---
6	22.6	18.9	21.9	17.2	---	---	12.2	---	---	---	---	---
7	22.3	18.3	21.4	16.6	---	---	12.1	---	---	---	---	---
8	22.4	17.2	21.2	16.1	---	---	12.0	---	---	---	---	---
9	21.9	---	---	16.6	---	---	12.1	---	---	---	---	---
10	21.9	---	---	16.1	---	---	11.7	---	---	---	---	---
11	21.7	---	---	16.1	---	---	11.7	---	---	---	---	---
12	21.8	---	---	16.0	---	---	12.0	---	---	---	---	---
13	21.7	---	---	16.0	---	---	11.8	---	---	---	---	---
14	21.5	---	---	16.0	---	---	11.8	---	---	---	---	---
15	21.4	---	---	15.8	---	---	11.8	---	---	---	---	---
16	21.4	17.6	20.4	15.8	---	---	11.6	---	---	---	---	---
17	21.4	18.5	20.4	15.6	---	---	11.6	---	---	---	---	---
18	21.4	18.3	20.3	15.6	---	---	11.4	---	---	---	---	---
19	21.4	18.9	20.5	15.5	---	---	11.2	---	---	---	---	---
20	21.0	---	---	15.2	---	---	11.1	---	---	---	---	---
21	20.5	---	---	15.4	---	---	10.9	---	---	---	---	---
22	20.4	---	---	15.3	---	---	10.5	---	---	---	---	---
23	20.3	---	---	15.1	---	---	9.9	---	---	---	---	---
24	20.3	---	---	15.1	---	---	9.4	---	---	---	---	---
25	20.3	---	---	15.0	---	---	9.2	---	---	8.5	---	---
26	20.3	---	---	14.9	---	---	9.0	---	---	9.0	---	---
27	20.2	---	---	14.5	---	---	8.8	---	---	9.2	---	---
28	20.2	---	---	14.1	---	---	8.8	---	---	9.2	---	---
29	20.1	---	---	13.6	---	---	9.3	---	---	9.4	---	---
30	19.9	---	---	13.4	---	---	8.6	---	---	9.3	---	---
31	19.6	---	---	---	---	---	8.3	---	---	---	---	---
MONTH	25.7	---	---	19.3	---	---	13.2	---	---	---	---	---

09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	9.7	---	---	13.3	---	---	---	---	---	17.7	17.1	17.5
2	9.9	---	---	---	---	---	14.4	---	---	17.4	---	---
3	10.1	---	---	12.7	---	---	14.2	---	---	17.5	17.2	17.4
4	10.3	---	---	---	---	---	14.9	14.4	14.7	17.8	17.5	17.7
5	10.4	---	---	---	---	---	14.8	14.6	14.7	18.2	17.7	18.0
6	10.6	---	---	---	---	---	14.7	14.3	14.5	18.2	17.9	18.1
7	---	9.5	---	13.1	---	---	14.8	14.2	14.4	18.4	17.9	18.1
8	10.8	9.3	10.1	13.3	---	---	15.7	14.7	15.3	18.3	17.7	18.1
9	10.9	---	---	13.2	---	---	16.1	15.8	16.0	18.2	---	---
10	10.7	---	---	13.3	---	---	15.9	15.6	15.8	18.5	18.2	18.4
11	10.9	---	---	13.2	---	---	16.0	15.5	15.6	18.6	18.3	18.5
12	11.2	9.0	---	13.4	---	---	15.7	15.3	15.5	18.6	18.2	18.4
13	---	8.8	---	13.3	---	---	15.6	15.3	15.5	18.7	18.2	18.5
14	---	9.8	---	13.4	---	---	15.7	15.5	15.6	19.0	18.1	18.5
15	11.7	10.1	11.1	13.2	---	---	15.8	15.4	15.6	19.3	19.0	19.1
16	11.7	10.1	11.1	13.2	---	---	15.8	15.5	15.6	---	---	---
17	11.4	10.3	10.9	13.4	---	---	15.8	15.5	15.7	19.1	18.8	19.0
18	11.8	8.8	10.9	13.3	---	---	16.2	15.7	16.0	19.1	18.6	18.9
19	11.6	---	---	13.2	---	---	16.1	15.1	16.0	19.1	18.9	19.0
20	11.8	---	---	13.2	---	---	16.1	15.7	16.0	19.2	19.0	19.1
21	11.9	---	---	---	---	---	16.4	15.8	16.1	19.3	18.9	19.0
22	12.1	---	---	13.2	---	---	16.4	16.1	16.3	19.4	18.8	19.1
23	12.0	9.4	11.3	13.3	---	---	16.5	16.2	16.4	---	---	---
24	12.2	8.6	11.2	---	---	---	16.5	16.3	16.4	20.3	19.5	19.8
25	12.5	9.0	11.5	13.3	---	---	16.6	16.4	16.5	19.7	19.3	19.5
26	12.5	---	---	13.0	---	---	17.4	---	---	19.5	19.1	19.3
27	14.3	---	---	13.0	---	---	17.7	17.4	17.6	19.4	19.0	19.2
28	13.8	---	---	---	---	---	17.7	17.4	17.6	19.8	19.1	19.5
29	---	---	---	---	---	---	17.6	17.3	17.5	19.8	19.6	19.8
30	---	---	---	13.5	---	---	17.5	17.3	17.5	19.7	---	---
31	---	---	---	14.0	---	---	---	---	---	20.4	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
JUNE				JULY			AUGUST			SEPTEMBER		
1	20.4	20.1	20.3	23.5	22.7	23.1	23.1	22.5	22.8	25.5	24.5	25.1
2	20.3	20.0	20.2	23.6	23.0	23.3	23.2	22.8	23.1	24.6	23.8	24.3
3	20.4	20.0	20.2	23.3	22.9	23.1	23.6	22.8	23.3	24.7	23.8	24.1
4	20.3	20.1	20.2	23.3	22.6	22.9	23.1	22.3	22.8	24.5	23.6	24.1
5	20.4	20.1	20.3	23.3	22.4	23.0	23.2	22.5	22.9	24.1	22.7	23.5
6	20.9	---	---	23.4	22.6	23.1	23.2	22.6	23.0	23.6	22.4	23.0
7	20.8	---	---	24.2	23.0	23.7	23.6	22.6	23.2	23.8	23.3	23.5
8	20.7	20.4	20.6	24.4	23.8	24.2	24.1	23.4	23.8	23.5	23.2	23.4
9	20.8	20.5	20.7	24.7	24.1	24.5	23.9	23.0	23.6	23.5	22.2	22.9
10	20.8	20.4	20.7	24.4	23.9	24.2	23.6	22.6	23.1	22.5	22.0	22.3
11	20.9	20.4	20.6	24.6	24.0	24.3	23.8	23.3	23.6	22.9	22.3	22.7
12	21.0	20.7	20.8	24.4	23.6	24.2	23.7	23.3	23.5	23.0	22.7	22.9
13	21.2	20.6	20.9	24.1	23.7	24.0	23.8	23.4	23.6	23.0	22.4	22.7
14	21.0	---	---	24.1	23.4	23.9	23.8	23.1	23.5	22.8	22.4	22.6
15	21.3	20.8	21.1	24.1	23.3	23.8	23.4	22.9	23.1	22.8	22.5	22.6
16	21.4	21.0	21.3	24.3	23.3	23.9	23.4	23.0	23.2	23.7	22.5	23.1
17	21.6	21.2	21.4	24.3	23.7	24.0	23.5	23.2	23.4	23.7	23.0	23.4
18	21.7	21.3	21.5	23.9	23.0	23.6	23.6	23.2	23.4	23.3	22.5	22.9
19	21.8	21.2	21.5	23.5	23.0	23.3	23.7	23.3	23.5	23.1	22.5	22.8
20	21.5	21.1	21.3	23.5	23.0	23.3	23.7	23.4	23.6	22.8	22.3	22.6
21	21.6	21.3	21.5	23.5	23.2	23.3	24.2	23.4	23.9	23.1	22.3	22.6
22	21.6	21.1	21.4	23.6	22.9	23.3	23.9	23.3	23.7	22.7	22.2	22.4
23	21.7	21.4	21.6	23.1	22.8	23.0	24.1	23.3	23.7	23.1	22.4	22.9
24	21.6	21.3	21.5	22.9	22.6	22.8	24.1	23.4	23.9	23.5	23.1	23.2
25	21.7	21.2	21.5	22.7	22.4	22.6	24.0	23.2	23.7	23.7	23.0	23.3
26	21.8	21.5	21.7	22.8	22.2	22.6	23.6	23.1	23.4	23.5	23.0	23.1
27	22.1	21.6	21.9	22.8	22.4	22.6	23.6	22.7	23.1	23.6	19.1	23.0
28	22.1	21.8	22.0	23.0	22.4	22.8	23.8	22.8	23.4	23.0	19.1	22.3
29	22.2	21.7	22.0	23.1	22.6	22.9	24.5	23.7	24.1	23.1	18.9	22.3
30	23.0	22.2	22.6	22.9	22.1	22.5	24.6	23.9	24.3	23.8	18.4	22.5
31	---	---	---	23.0	22.3	22.7	24.9	24.1	24.5	---	---	---
MONTH	23.0	---	---	24.7	22.1	23.4	24.9	22.3	23.5	25.5	18.4	23.1

DIVERSIONS AND RETURN FLOWS BETWEEN PARKER DAM AND PALO VERDE DAM

09428500 COLORADO RIVER INDIAN RESERVATION MAIN CANAL NEAR PARKER, AZ

LOCATION.--Two gages, lat 34°10'04", long 114°16'33", in SE¼NW¼ sec.31, T.10 N., R.19 W., Gila and Salt River meridian, La Paz County, Hydrologic Unit 15030104. Forebay gage, on left wall of canal intake, 90 ft upstream from diversion gates at Arizona end of Headgate Rock Dam. Tailrace gage, on right bank of canal 250 ft downstream from gates. Both gages are on Colorado River Indian Reservation 1.7 mi northeast of Parker and 14 mi downstream from Parker Dam.

PERIOD OF RECORD.--January 1915 to current year (prior to January 1937, fiscal year diversions only; January 1937 to September 1954, monthly diversions only).

REVISED RECORDS.--WSP 1513: 1915-36.

GAGE.--Water-stage recorders above and below intake gates to record head, and recorder to show gate openings (since Oct. 1, 1972), with supplementary tape gages read daily and at time of each gate change (prior to Oct. 1, 1972, tape gages only). Datum of gages is 350.00 ft, datum in use locally, or 350.51 ft above National Geodetic Vertical Datum of 1929. Normal operating level of forebay is 364.3 ft; prior to July 9, 1962, normal operating level of forebay was 362.9 ft, datum in use locally. Prior to October 1954, discharge computed by various methods as described in WSP 1313.

REMARKS.--No estimated daily discharges. Records good. Daily diversions computed on basis of head on intake gates and gate openings. Records show water diverted to project and surface return flows to Colorado River through two wasteways and two drains; three of these are equipped with water-stage recorders.

COOPERATION.--Log of canal intake gate opening (supplementary record) furnished by Bureau of Indian Affairs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,940 ft³/s May 26, 1982; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	665	591	379	642	809	217	438	1160	1280	1120	1350	1070	
2	724	612	300	606	770	126	600	1270	1170	1400	1420	984	
3	773	522	328	566	807	119	743	1330	1120	1630	1480	1120	
4	820	433	382	170	863	635	882	1430	1190	1690	1540	1200	
5	698	434	484	.00	910	1280	934	1300	1300	1650	1650	1200	
6	743	493	537	.00	847	487	960	1170	1250	1580	1630	1050	
7	630	532	530	.00	829	300	913	1100	1290	1580	1600	979	
8	628	532	442	.00	784	467	1000	1100	1370	1620	1620	842	
9	747	536	389	.00	638	595	1090	1080	1330	1620	1580	815	
10	763	539	393	.00	650	714	1030	1070	1390	1590	1530	923	
11	724	494	530	.00	667	907	965	1070	1410	1690	1380	1020	
12	717	481	585	.00	574	983	1070	994	1450	1720	1260	957	
13	644	558	514	.00	798	991	1040	1000	1510	1710	1210	915	
14	637	605	483	.00	794	992	896	964	1520	1730	1120	848	
15	715	643	376	.00	717	951	1030	1010	1400	1720	1120	771	
16	766	631	249	.00	682	871	1080	1080	1260	1770	1300	738	
17	733	487	346	.00	580	879	1100	1120	1280	1870	1390	729	
18	624	535	524	.00	613	954	1120	1110	1490	1670	1250	750	
19	621	644	606	.00	761	881	1190	957	1530	1510	1230	735	
20	553	697	596	.00	812	762	1240	1000	1600	1620	1320	653	
21	523	644	697	.00	889	722	1190	1060	1730	1510	1380	531	
22	617	415	605	.00	961	616	1190	1180	1780	1460	1410	354	
23	663	330	418	.00	949	545	1080	1310	1670	1490	1440	431	
24	630	339	376	.00	862	544	1130	1480	1550	1540	1430	495	
25	613	386	351	46	846	583	1180	1460	1530	1620	1350	491	
26	586	369	468	527	872	475	1070	1400	1570	1620	1270	492	
27	530	372	684	486	913	463	1080	1310	1540	1620	1250	515	
28	495	421	844	531	501	404	1090	1340	1390	1500	1270	619	
29	496	447	866	611	---	352	1090	1340	1190	1410	1290	589	
30	589	425	801	670	---	347	1110	1300	1190	1390	1310	676	
31	607	---	720	817	---	335	---	1320	---	1290	1270	---	
TOTAL	20274	15147	15803	5672.00	21698	19497	30531	36815	42280	48940	42650	23492	
MEAN	654	505	510	183	775	629	1018	1188	1409	1579	1376	783	
MAX	820	697	866	817	961	1280	1240	1480	1780	1870	1650	1200	
MIN	495	330	249	.00	501	119	438	957	1120	1120	1120	354	
AC-FT	40210	30040	31350	11250	43040	38670	60560	73020	83860	97070	84600	46600	
(*)	21980	20470	16890	14380	17680	21180	20450	22030	21920	24820	28010	22760	
CAL YR	1990	TOTAL	336154.00	MEAN	921	MAX	1780	MIN	.00	AC-FT	666800	(*)	254700
WTR YR	1991	TOTAL	322799.00	MEAN	884	MAX	1870	MIN	.00	AC-FT	640300	(*)	252600

(*) Return surface flow, in acre-feet, to Colorado River.

DIVERSIONS AND RETURN FLOWS BETWEEN PARKER DAM AND PALO VERDE DAM

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09429000 PALO VERDE CANAL NEAR BLYTHE, CA

LOCATION.--Lat 33°43'55", long 114°30'40", in NW¼NE¼ sec.19, T.5 S., R.24 E., San Bernardino meridian, Riverside County, Hydrologic Unit 15030104, at canal intake structure on west side of Palo Verde diversion dam, 10 mi northeast of Blythe and 44 mi downstream from Headgate Rock Dam.

PERIOD OF RECORD.--January 1922 to December 1923, January 1925 to current year (prior to October 1950, monthly discharge only).

REVISED RECORD.--WSP 1213: 1946-48.

GAGE.--Water-stage recorders above and below intakes to record head and, since May 18, 1964, recorder to show gate openings. Datum of gage is: Forebay gage, National Geodetic Vertical Datum of 1929; tailrace gage, 274.13 ft, NGVD. Aug. 7, 1950, to Nov. 30, 1952, water-stage recorder on tailrace and auxiliary recorder 0.5 mi downstream and Dec. 1, 1952, to Oct. 28, 1957, recording gage above and below former intake structure 0.2 mi upstream, at different datums.

REMARKS.--No estimated daily discharges. Records good. Daily diversions computed on basis of head on intake gates and gate openings. Records published herein represent flow diverted from Colorado River for irrigation. Return flows to Colorado River are measured by 10 wasteways and drains extending throughout the project; 5 of these are equipped with water stage recorder and Parshall flume, 3 are equipped with Sparling flowmeters. Return flows have not been subtracted; combined monthly return flows are given in table below.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,360 ft³/s July 30, 1981; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	916	721	.00	850	381	1000	1490	1660	1750	1900	1360
2	968	758	718	.00	728	362	1080	1450	1480	1850	1840	1370
3	1040	659	811	.00	558	358	1250	1620	1620	1800	1810	1490
4	942	589	801	.00	720	413	1300	1590	1750	1720	1590	1640
5	1040	844	909	.00	787	434	1200	1400	1700	1730	1780	1760
6	1000	813	916	.00	754	448	1270	1430	1980	1670	1810	1730
7	830	929	819	.00	792	527	1250	1360	1930	1490	1790	1460
8	981	947	695	.00	920	649	1530	1570	1770	1730	1960	1240
9	1120	1000	578	101	844	694	1670	1590	1650	1810	1830	1430
10	1140	730	864	257	864	698	1620	1570	1670	1940	1620	1460
11	1310	778	948	203	991	985	1520	1230	1720	1900	1080	1550
12	1250	961	981	217	1140	1020	1550	1080	1760	1840	1120	1470
13	1140	825	891	354	1230	1210	1490	1440	1830	1870	1110	1420
14	990	868	938	475	1180	1170	1210	1560	1910	1700	1240	1220
15	1050	910	836	503	1120	1000	1340	1620	1780	1820	1450	1070
16	945	871	708	568	1080	891	1540	1550	1720	1900	1600	1240
17	958	808	884	689	983	713	1450	1530	1870	1950	1680	1440
18	980	716	879	715	1040	813	1310	1460	1830	1890	1500	1670
19	995	842	1020	659	1020	822	1390	1150	1860	1820	1650	1510
20	885	844	1140	603	1250	632	1370	1260	1840	1790	1670	1220
21	859	737	1080	817	1240	622	1090	1320	1970	1660	1810	1070
22	1020	543	922	921	1180	782	1280	1540	1880	1780	1910	892
23	966	656	719	896	1040	679	1500	1700	1580	1760	1660	1010
24	1060	685	655	963	888	608	1530	1580	1630	1780	1550	1090
25	930	694	579	936	866	714	1540	1560	1730	1810	1280	1240
26	1060	899	1140	784	1030	733	1580	1470	1670	1900	1510	1250
27	999	909	1420	747	1090	676	1440	1500	1720	1800	1560	1130
28	890	823	1500	906	560	618	1230	1750	1880	1570	1660	965
29	1090	732	1520	861	---	734	1440	1660	1920	1690	1650	858
30	1000	728	1090	912	---	745	1480	1640	1570	1800	1600	1140
31	968	---	368	999	---	658	---	1720	---	1880	1560	---
TOTAL	31496	24014	28050	15086.00	26745	21789	41450	46390	52880	55400	49780	39395
MEAN	1016	800	905	487	955	703	1382	1496	1763	1787	1606	1313
MAX	1310	1000	1520	999	1250	1210	1670	1750	1980	1950	1960	1760
MIN	830	543	368	.00	558	358	1000	1080	1480	1490	1080	858
AC-FT	62470	47630	55640	29920	53050	43220	82220	92010	104900	109900	98740	78140
(*)	41900	35740	34930	28830	29640	32980	34420	36510	37090	41960	43380	41230

CAL YR 1990 TOTAL 462447.30 MEAN 1267 MAX 2240 MIN .00 AC-FT 917300 (*) 457900
WTR YR 1991 TOTAL 432475.00 MEAN 1185 MAX 1980 MIN .00 AC-FT 857800 (*) 438600

(*) Return flows, in acre-feet, to Colorado River.

COLORADO RIVER MAIN STEM

09429100 COLORADO RIVER BELOW PALO VERDE DAM, AZ-CA

LOCATION.--Lat 33°43'10", long 114°29'50", in NE¼ sec.2, T.4 N., R.22 W., Gila and Salt River meridian, in Riverside County, California, Hydrologic Unit 15030104 on right bank 1.2 mi downstream from Palo Verde Diversion Dam, 9.5 mi northeast of Blythe, Ca and 11.0 mi upstream from Ehrenberg, Az.

DRAINAGE AREA.--186,200 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing.

PERIOD OF RECORD.--March 1956 to March 1969, October 1988 to current year. If records for the two Colorado River Indian Reservation drains entering below Palo Verde Dam are subtracted from records for this station, records equivalent to those published 1969-1988 as "Colorado River at Palo Verde Dam" can be obtained.

GAGE.--Water-stage recorder. Datum of gage is 260.00 ft above National Geodetic Vertical Datum of 1929. March 1956 to March 1969, at site 120 ft upstream at same datum.

REMARKS.--No estimated daily discharge. Records fair. Many diversions above station for irrigation, municipal, and industrial uses. Flow regulated by Lake Mead, Lake Mohave, and Lake Havasu.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,300 ft³/s Mar. 21, 1958; maximum gage height, 17.94 ft May 4, 1958; minimum daily discharge, 950 ft³/s Dec. 30, 1989.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum daily discharge, 42,300 ft³/s June 30, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,700 ft³/s July 2, gage height, 11.04 ft; minimum daily, 1,420 ft³/s Jan. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7080	5150	5020	5240	5580	3330	6650	10000	9480	11600	8850	7910
2	6500	5150	5460	4490	5240	1700	9070	8610	10700	12300	7070	8050
3	5210	5070	5420	3660	6680	2740	9380	10100	10400	11100	7600	7720
4	4320	5460	5680	2930	6100	4700	11100	9590	10200	10600	8530	7260
5	4110	5030	5200	2860	6380	3300	11300	8880	10200	9310	8860	6630
6	6920	6160	4730	3360	5990	3830	11100	10300	8630	10600	9900	5330
7	6870	5910	4160	3370	4660	6720	10800	10500	7920	11500	9750	5630
8	6720	5670	4430	1420	4370	7860	10700	10500	9010	11200	8580	5260
9	6890	5150	5310	1690	5580	7810	11100	9420	9990	11600	8690	5590
10	6440	5430	4540	1900	6660	7310	11900	9010	10300	11600	9340	6350
11	5820	5590	3500	1570	7390	7890	11000	10200	10600	10100	10200	6640
12	5620	6050	3510	2310	7130	9110	10000	9480	10300	9130	9070	6890
13	6070	6580	3320	2430	5230	8080	11700	9670	9540	9250	8690	7250
14	6870	5690	3510	2600	4690	7740	10600	10100	8660	10800	7620	7640
15	7170	4950	5630	1870	4190	7610	11100	9820	10300	10200	7490	7440
16	6580	4650	4880	3480	5420	7940	12100	8930	11100	11900	7190	7680
17	5850	4320	6000	3610	5470	8280	10800	8440	11600	11300	8000	7180
18	5180	5200	4890	3230	6250	8790	10400	9790	11700	10700	9180	6850
19	3200	4430	3590	2570	6520	7720	8920	10400	11200	10600	9290	6590
20	4570	3900	2270	4210	5580	8890	9160	8990	10000	10800	9570	6520
21	6180	4640	3470	4590	6530	7740	10200	9350	9620	10800	8620	6350
22	6020	3560	2890	4530	7080	7710	11000	8740	10300	11100	8120	6270
23	6480	2980	2190	4510	7020	7100	11500	8450	11200	10100	8410	6170
24	6020	2100	4710	4310	7300	7020	10500	7680	10800	10600	8270	6500
25	5570	1840	4730	4380	7760	8000	9360	8160	10900	9760	9150	6610
26	5500	2170	4450	6030	6720	7820	8330	8600	9940	8960	9100	6910
27	5420	2000	4130	6110	5780	7350	10200	9580	9370	10800	8190	7690
28	6540	3460	3130	5810	5300	5730	10200	8930	8150	10800	7450	7660
29	6650	5140	3090	5830	---	6440	10100	9590	9320	10600	6690	8150
30	6520	4340	3210	3600	---	7570	9990	8870	10300	9800	6750	7990
31	5750	---	4930	3540	---	8160	---	7880	---	8990	6740	---
TOTAL	184640	137770	131980	112040	168600	211990	310260	288560	301730	328500	260960	206710
MEAN	5956	4592	4257	3614	6021	6838	10340	9308	10060	10600	8418	6890
MAX	7170	6580	6000	6110	7760	9110	12100	10500	11700	12300	10200	8150
MIN	3200	1840	2190	1420	4190	1700	6650	7680	7920	8960	6690	5260
AC-FT	366200	273300	261800	222200	334400	420500	615400	572400	598500	651600	517600	410000
CAL YR	1990	TOTAL	2794750	MEAN	7657	MAX	12100	MIN	1840	AC-FT	5543000	
WTR YR	1991	TOTAL	2643740	MEAN	7243	MAX	12300	MIN	1420	AC-FT	5244000	

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA
(National stream-quality accounting network, radiochemical, and tritium network station)

LOCATION.--Lat 32°52'59", long 114°27'55", at Imperial Dam. The Arizona end of the dam is in SW¼NW¼ sec.30, T.6 S., R.21 W., Gila and Salt River meridian, Yuma County, Hydrologic Unit 15030104; the California end is in NW¼SW¼ sec.9, T.15 S., R.24 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030104. Imperial Dam is 5 mi upstream from Laguna Dam, 15 mi northeast of Yuma, Az., 90 mi downstream from Palo Verde Dam, and 147 mi downstream from Parker Dam.

DRAINAGE AREA.--188,500 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1903-34 (yearly discharge only, published in WSP 1313), July 1934 to current year (monthly discharge only October 1942 to September 1979). Prior to October 1942 published as "near Picacho, Ca." October 1942 to September 1971 published as "at Imperial Dam" (monthly discharge shown as "flow reaching Imperial Dam," listed as supplement to "flow passing Imperial Dam").

GAGE.--None. This record is synthesized from records of several other stations (see REMARKS). July 13, 1934, to Sept. 30, 1942, water-stage recorder at site 14.5 mi upstream at datum 167.38 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records show flow of Colorado River reaching Imperial Dam, and are based on combined daily total flow of Colorado River below Imperial Dam (sta 09429500), All-American Canal near Imperial Dam (sta 09523000), Gila Gravity Main Canal at Imperial Dam (sta 09522500), and diversions to Mittry Lake (sta 09522400). Records for 1903-34 and for October 1942 to September 1960 were computed as combined flow of Colorado River at Yuma (sta 09521000) and the canals diverting at Imperial and Laguna Dams, less the flow of Gila River near Dome (sta 09520500); for some of these periods drainage and waste return flows and channel losses between the gaging stations and Imperial Dam were considered, and for other periods they were neglected. Records for October 1960 to September 1979 are based on combined monthly total flow of same stations on which daily flows are currently based. Records for July 1934 to September 1942 show daily discharge of Colorado River at gaging station near Picacho, Ca., water withdrawals, and diversions for irrigation, municipal, and industrial uses, and return flows from irrigated areas. Diversions to Mittry Lake, which began June 23, 1970, are included in river records in table below. Additional regulation, beginning Jan. 31, 1966, to equalize supplies for downstream water users, is provided by pumped storage in reservoir on Senator Wash, about 2 mi upstream from Imperial Dam. Monthend contents of Senator Wash Reservoir - capacity, 13,840 acre-ft - is given in table below.

COOPERATION.--Records of Sparling meter readings of diversion to Mittry Lake and contents of Senator Wash Reservoir furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF 1934-91.--Maximum discharge, 40,800 ft³/s Sept. 5, 1939; minimum, 538 ft³/s Aug. 3, 1934; minimum daily since regulation of Hoover Dam began, 1,450 ft³/s Feb. 17, 1935.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8400	7030	5650	3560	6380	5180	8270	12100	9190	10000	9850	7490
2	8150	6620	5570	5030	6190	4310	8630	11700	8580	10900	9970	7910
3	8170	6510	6240	5090	5770	3010	9700	11400	9330	11500	8750	8360
4	7960	6030	6430	4430	6090	3730	10600	10600	10300	11400	7770	8510
5	6950	6460	6110	3930	6670	4870	10800	9650	10600	10800	9390	8890
6	6480	6380	5940	3860	6950	4680	10900	10500	10600	10600	9440	8260
7	6160	6930	5510	3880	7100	5320	10700	11000	10300	10300	9950	7350
8	6990	6710	5210	4060	6410	6380	12000	11600	9290	11400	10500	6640
9	7550	6450	5100	3940	5920	7540	12300	11200	8720	11600	10200	7140
10	7870	6390	5630	2810	5740	7510	12200	11300	10200	11700	9910	7250
11	8240	5940	5900	2740	6330	8920	12000	10500	10300	11400	10000	7740
12	7680	6600	5890	2550	6700	9720	12200	9540	10500	11100	10300	8190
13	7100	6720	5610	2950	7300	9090	11300	10300	10800	10200	10500	7930
14	6880	7200	5530	3400	6740	9090	11300	10400	10500	9500	10300	8010
15	8010	7040	5430	3420	6190	8800	11400	10200	10000	10300	10300	8040
16	7920	6290	4790	3480	5610	8070	11600	10500	9500	10700	9960	8570
17	7950	6250	5530	3780	5160	7630	11800	10100	10400	11000	9110	8870
18	7270	5170	5420	3980	5780	8800	11700	9460	11300	11500	9170	8920
19	6600	5750	5700	4070	6280	9000	11200	8610	11200	11300	9660	8740
20	6230	5850	5630	4440	6980	9030	10400	9560	11000	10500	9930	7920
21	6080	5800	5550	4980	7030	8720	9670	10200	10600	10600	10100	7260
22	6370	5060	4810	5460	6720	8520	11000	9770	10100	11000	9900	7030
23	6800	4920	4650	5740	6830	7990	11300	9780	9840	11200	9810	7860
24	7140	4420	4180	5720	6960	7500	11800	9320	11200	11200	9620	7670
25	7150	4090	3520	5590	7850	8620	12400	8750	11300	10900	9090	7690
26	6530	4490	4650	5290	8210	8840	11800	8110	11100	10500	9920	7930
27	6100	4420	5110	5190	8210	8040	11000	9390	10900	10000	9930	7690
28	6100	4580	5690	6350	5580	7170	10700	9780	9720	9830	9850	7560
29	7070	4720	5930	6480	---	6600	11800	9980	9160	10500	9650	7550
30	7330	5130	5130	6550	---	6230	12000	10200	9420	10900	8680	8290
31	7180	---	4400	6930	---	6640	---	9700	---	10900	8170	---
TOTAL	222410	175950	166440	139680	183680	225550	334470	315200	305950	335230	299680	237260
MEAN	7175	5865	5369	4506	6560	7276	11150	10170	10200	10810	9667	7909
MAX	8400	7200	6430	6930	8210	9720	12400	12100	11300	11700	10500	8920
MIN	6080	4090	3520	2550	5160	3010	8270	8110	8580	9500	7770	6640
AC-FT	441200	349000	330100	277100	364300	447400	663400	625200	606900	664900	594400	470600
(*)	10986	7027	5743	8303	8396	13649	6985	5923	8411	11099	8933	6624
(**)	861	583	851	861	722	861	833	861	873	922	984	952
CAL YR 1990	TOTAL	3044260	MEAN	8340	MAX	12200	MIN	2900	AC-FT	6038000	(**)	9520
WTR YR 1991	TOTAL	2941500	MEAN	8059	MAX	12400	MIN	2550	AC-FT	5834000	(**)	10160

(*) Monthend contents, in acre-feet, in Senator Wash Reservoir.

(**) Diversions, in acre-feet, to Mittry Lake (09522400).

COLORADO RIVER MAIN STEM

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

WATER-QUALITY RECORDS

LOCATION.--Water samples collected above trash racks at All-American Canal headworks at west end of Imperial Dam.

PERIOD OF RECORD.--August 1969 to current year.

Prior to October 1971, published as sta 09429500, Colorado River at Imperial Dam, AZ-CA.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to current year.

WATER TEMPERATURES: October 1974 to current year.

INSTRUMENTATION.--Specific conductance and water temperature recorder since October 1982. From January 1971 to September 1982, daily specific conductance measurements were made using a composite of four water samples taken at six-hour intervals.

REMARKS.--Replaces water-quality station 09525500 Yuma Main Canal below Colorado River Siphon, at Yuma, AZ. Stream discharges reported by Imperial Irrigation District and represent a summation of all diversions from Imperial Dam. Conductance record deleted Oct. 1, 5, 6, Nov. 9-18, 24, 26-28, Dec. 7-11, 17, 24-28, Aug. 7, 8, 13-15, 17-20, 23, 24, 29, 30, and most of September due to malfunctioning instrumentation. Temperature probe exposed to air for short periods; erroneous values deleted as needed. Temperature record deleted Sept. 23-26 due to malfunctioning instrumentation.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum observed, 1,970 microsiemens Aug. 23, 1977; minimum observed, 866 microsiemens Sept. 12, 1986.

WATER TEMPERATURES: Maximum observed, 33.0°C Aug. 20, 1977, Aug. 28, 29, 1981; minimum recorded, 6.5°C Dec. 25, 26, 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,620 microsiemens Jan. 12; minimum recorded, 955 microsiemens May 31.

WATER TEMPERATURES: Maximum recorded, 30.5°C Sept. 4; minimum recorded, 6.5°C Dec. 25, 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT- SATUR- ATION (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV												
27...	1010	4510	1320	8.2	16.0	15.0	3.0	770	9.7	96	K80	23
JAN												
14...	1100	3500	1490	8.2	17.0	13.0	3.1	770	10.6	100	K9	K8
MAR												
11...	1000	8980	1140	8.2	19.0	15.0	8.0	765	9.9	98	K13	K18
MAY												
21...	1145	10100	1190	8.2	30.0	22.5	6.5	760	8.4	98	K11	K10
JUL												
22...	0945	11000	1190	8.2	33.0	26.0	5.0	764	7.6	94	21	200
SEP												
03...	0945	8260	1180	8.2	39.0	29.0	3.5	765	7.1	92	28	330

DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
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NOV											
27...	360	200	90	33	140	3	4.9	203	0	166	330
JAN											
14...	390	210	99	35	160	4	4.7	227	0	186	360
MAR											
11...	330	190	82	30	110	3	4.6	176	0	144	300
MAY											
21...	330	180	84	30	120	3	4.5	185	0	152	300
JUL											
22...	330	180	82	31	130	3	4.5	185	0	152	320
SEP											
03...	320	170	79	31	120	3	4.7	183	0	150	310

K Based on non-ideal colony count.

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTIT- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
NOV 27...	130	0.50	13	848	844	1.15	--	0.190	0.84	<0.010	0.010
JAN 14...	160	0.20	13	930	945	1.26	0.190	--	--	0.010	<0.010
MAR 11...	110	0.40	9.5	726	735	0.99	--	0.210	0.93	<0.010	0.010
MAY 21...	120	0.50	9.6	760	762	1.03	--	0.240	1.1	<0.010	0.010
JUL 22...	120	0.40	9.4	768	791	1.04	--	--	--	<0.010	<0.010
SEP 03...	110	0.40	8.9	776	755	1.06	--	0.190	0.84	<0.010	0.010

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)
NOV 27...	0.200	0.200	0.040	0.040	--	<0.20	--	--	0.020	<0.010	<0.010
JAN 14...	0.200	0.200	0.030	0.050	--	<0.20	--	--	<0.010	<0.010	<0.010
MAR 11...	0.230	0.220	0.090	<0.010	0.21	0.30	0.53	2.3	0.030	<0.010	<0.010
MAY 21...	0.290	0.250	<0.010	0.030	--	0.30	0.59	2.6	0.020	<0.010	<0.010
JUL 22...	0.220	0.200	<0.010	0.020	--	0.60	0.82	3.6	0.030	<0.010	<0.010
SEP 03...	0.190	0.200	<0.010	0.020	--	0.50	0.69	3.1	0.010	<0.010	<0.010

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 27...	0.010	0.03	<10	2	110	<0.5	<1.0	<1	<3	1	<3
JAN 14...	0.020	0.06	--	--	--	--	--	--	--	--	--
MAR 11...	<0.010	--	30	2	99	<0.5	<1.0	<1	<3	1	4
MAY 21...	<0.010	--	<10	2	110	<0.5	<1.0	<1	<3	<1	4
JUL 22...	<0.010	--	<10	2	120	<0.5	<1.0	<1	<3	5	4
SEP 03...	<0.010	--	--	--	--	--	--	--	--	--	--

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 27...	1	62	3	<0.1	<10	1	1	<1.0	1300	<6	3
JAN 14...	--	--	--	--	--	--	--	--	--	--	--
MAR 11...	<1	50	4	<0.1	<10	<1	2	<1.0	1200	<6	6
MAY 21...	<1	49	5	<0.1	<10	1	2	<1.0	1200	<6	<3
JUL 22...	<1	57	2	<0.1	<10	<1	2	<1.0	1200	<6	<3
SEP 03...	--	--	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.

COLORADO RIVER MAIN STEM

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1140	---	---	1220	1060	1160	1270	1120	1190	1310	1200	1240
2	1150	1020	1080	1240	1080	1170	1270	1120	1180	1230	1110	1170
3	1150	1020	1080	1250	1080	1170	1270	1100	1200	1170	1130	1150
4	1140	1020	1070	1260	1090	1180	1240	1100	1170	1230	1100	1160
5	1140	---	---	1270	1100	1190	1240	1100	1160	1250	1210	1230
6	1190	---	---	1260	1100	1190	1240	1100	1150	1320	1210	1280
7	1240	1130	1180	1250	1110	1180	1220	---	---	1380	1210	1310
8	1150	1040	1090	1250	1030	1170	1210	---	---	1380	1330	1340
9	1150	1030	1080	1260	---	---	1230	---	---	1330	1220	1310
10	1150	1030	1070	1310	---	---	1240	---	---	1340	1220	1310
11	1150	1040	1080	1310	---	---	1190	---	---	1490	1310	1390
12	1180	1040	1110	1280	---	---	1210	1090	1140	1620	1520	1550
13	1200	1040	1120	1280	---	---	1230	1090	1140	1560	1420	1480
14	1210	1040	1130	1270	---	---	1250	1190	1210	1530	1420	1460
15	1210	1040	1110	1300	---	---	1230	1180	1210	1470	1420	1440
16	1200	1050	1130	1290	---	---	1240	1200	1220	1430	1320	1370
17	1230	1050	1140	1300	---	---	1230	---	---	1380	1320	1350
18	1250	1100	1170	1280	---	---	1180	1080	1120	1430	1310	1390
19	1260	1100	1190	1270	1110	1180	1190	1080	1120	1330	1210	1260
20	1270	1100	1180	1250	1090	1180	1250	1090	1180	1280	1210	1260
21	1310	1200	1240	1220	1080	1140	1240	1180	1210	1270	1200	1250
22	1310	1010	1230	1250	1090	1190	1290	1180	1220	1300	1200	1240
23	1240	1100	1170	1260	1090	1160	1360	1200	1310	1260	1100	1180
24	1250	1100	1180	1220	---	---	1310	---	---	1220	1100	1160
25	1240	1110	1170	1390	1210	1260	---	---	---	1240	1090	1180
26	1270	1020	1180	1270	---	---	---	---	---	1240	1090	1160
27	1270	1120	1200	1310	---	---	---	---	---	1240	1090	1170
28	1290	1130	1220	1340	---	---	1150	---	---	1220	1120	1140
29	1280	1130	1210	1360	1320	1340	1200	1090	1130	1160	1090	1120
30	1270	1140	1190	1350	1210	1280	1220	1100	1190	1140	993	1110
31	1260	1140	1190	---	---	---	1270	1200	1240	1180	993	1110
MONTH	1310	---	---	1390	---	---	---	---	---	1620	993	1270
	FEBRUARY			MARCH			APRIL			MAY		
1	1260	1080	1170	1210	1080	1130	1290	1090	1210	1320	1080	1150
2	1280	1210	1230	1180	1070	1140	1250	1080	1190	1250	1100	1170
3	1280	1110	1190	1200	1060	1150	1300	1190	1240	1240	1110	1170
4	1200	1110	1150	1330	1160	1250	1230	1090	1150	1320	1090	1200
5	1170	1010	1120	1330	1260	1310	1260	1090	1170	1200	1090	1140
6	1210	1010	1130	1320	1210	1250	1220	1090	1160	1210	1090	1150
7	1220	1010	1150	1310	1210	1270	1200	1080	1150	1260	1090	1180
8	1220	1100	1150	1280	1200	1260	1200	1080	1150	1250	1100	1170
9	1260	1100	1170	1240	1010	1150	1220	1080	1160	1260	1090	1180
10	1270	1100	1200	1200	1000	1120	1220	1080	1150	1260	1090	1180
11	1230	1100	1160	1170	1010	1130	1180	1070	1120	1310	1080	1210
12	1210	1000	1110	1210	1100	1150	1140	1070	1100	1250	1080	1180
13	1190	992	1080	1180	1020	1120	1190	1070	1120	1250	982	1160
14	1200	991	1110	1170	1010	1080	1190	1070	1120	1250	1080	1170
15	1240	1090	1160	1220	1010	1130	1130	1060	1100	1240	1090	1170
16	1260	1090	1160	1230	1020	1140	1170	1060	1120	1250	1120	1170
17	1260	1090	1180	1240	1030	1160	1130	1000	1080	1250	1080	1160
18	1250	1080	1180	1200	1020	1130	1170	1100	1130	1280	1080	1180
19	1230	1080	1160	1200	1030	1100	1230	1100	1140	1240	1070	1160
20	1180	1080	1120	1200	1030	1110	1240	1110	1170	1210	1070	1130
21	1190	1080	1130	1240	1040	1140	1230	1090	1160	1220	1080	1140
22	1200	1080	1150	1210	1040	1130	1240	1090	1150	1240	1070	1160
23	1180	1080	1110	1300	1040	1150	1210	1000	1120	1240	1080	1150
24	1170	976	1090	1270	1060	1180	1160	1090	1110	1260	1060	1150
25	1140	1070	1100	1260	1050	1180	1160	1090	1130	1230	1060	1150
26	1140	972	1080	1290	1150	1210	1220	1090	1150	1230	972	1130
27	1140	971	1070	1230	1070	1160	1260	1090	1180	1220	1060	1140
28	1180	970	1100	1280	1060	1180	1250	1080	1170	1200	969	1120
29	---	---	---	1270	1070	1160	1210	1080	1130	1190	1060	1100
30	---	---	---	1290	1170	1230	1230	1090	1160	1180	966	1110
31	---	---	---	1330	1180	1240	---	---	---	1180	955	1090
MONTH	1280	970	1140	1330	1000	1170	1300	1000	1150	1320	955	1160

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	1250	1050	1120	1270	1150	1190	1220	1010	1140	---	1100	---
2	1220	1060	1140	1270	1140	1180	1470	1100	1180	1230	1090	1170
3	1180	1050	1120	1210	1140	1160	1470	1100	1200	---	1090	---
4	1220	1100	1140	1210	1150	1180	1270	1100	1200	---	1110	---
5	1210	1100	1150	1260	1140	1190	1260	1010	1170	1270	1110	1200
6	1230	1120	1160	1250	1130	1180	1260	1120	1190	1440	1110	1210
7	1260	1110	1170	1250	1130	1190	---	1020	---	---	1110	---
8	1310	1110	1210	1240	1040	1140	---	1010	---	---	1200	---
9	1310	1110	1200	1220	1120	1150	1230	1010	1130	---	1010	---
10	1230	1030	1160	1220	1030	1130	1260	1030	1160	---	1210	---
11	1230	1120	1170	1190	1030	1140	1220	1020	1130	---	1110	---
12	1240	1120	1170	1220	1020	1140	1190	1020	1110	---	1100	---
13	1220	1040	1140	1260	1120	1180	---	1030	---	---	1130	---
14	1270	1130	1190	1260	1110	1180	---	1030	---	---	1120	---
15	1270	1130	1200	1210	1010	1140	---	1130	---	---	1100	---
16	1290	1130	1210	1170	1010	1090	1270	1130	1170	---	1090	---
17	1200	1130	1150	1220	1100	1150	---	1130	---	---	1100	---
18	1210	1050	1140	1150	1100	1120	---	1040	---	---	1080	---
19	1210	991	1120	1210	1010	1140	---	1040	---	---	1100	---
20	1160	1080	1110	1240	1110	1170	---	1040	---	---	1110	---
21	1160	1090	1120	1220	1110	1140	1350	1040	1150	1450	1130	1180
22	1230	1100	1160	1190	1010	1140	1230	1120	1160	---	1120	---
23	1220	1100	1150	1230	1030	1150	---	1110	---	---	1130	---
24	1220	1110	1150	1220	1120	1150	---	1120	---	---	1140	---
25	1180	1020	1110	1230	1030	1150	1240	1100	1170	---	1150	---
26	1190	1120	1140	1220	1020	1130	1270	1110	1190	---	1150	---
27	1190	1030	1130	1250	1030	1170	1240	1100	1160	---	1150	---
28	1260	1040	1170	1240	1020	1160	1330	1100	1160	---	1130	---
29	1290	1150	1220	1180	1010	1110	---	1100	---	---	1110	---
30	1270	1150	1210	1170	1010	1100	---	1090	---	---	1120	---
31	---	---	---	1170	1010	1110	1250	1090	1170	---	---	---
MONTH	1310	991	1160	1270	1010	1150	---	1010	---	---	1010	---

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	25.3	24.5	24.9	20.4	19.5	20.0	12.2	11.1	11.8	9.0	8.0	8.6
2	25.2	24.7	24.9	19.2	17.6	18.7	12.3	11.5	12.1	9.0	8.5	8.7
3	26.1	25.1	25.5	17.9	16.2	16.9	12.5	12.0	12.2	9.5	8.5	9.1
4	26.8	25.6	26.2	16.4	15.7	16.1	12.7	12.0	12.4	10.3	9.5	9.8
5	27.1	26.0	26.5	16.1	15.3	15.8	12.6	11.6	12.2	11.5	10.5	10.9
6	26.8	26.0	26.6	16.0	15.3	15.7	12.2	11.1	11.9	12.3	11.5	11.9
7	26.5	25.5	26.1	15.6	14.4	15.0	12.2	11.6	12.0	12.7	12.2	12.5
8	25.3	23.0	24.3	14.8	14.0	14.6	12.1	11.2	11.8	12.8	12.5	12.6
9	22.8	22.0	22.4	15.4	14.0	14.8	12.0	11.2	11.8	12.8	12.0	12.6
10	22.3	21.5	21.9	16.4	15.1	15.7	12.3	11.7	11.9	12.8	12.0	12.4
11	22.5	21.0	21.9	17.5	15.7	16.6	12.6	11.7	12.1	12.8	12.0	12.4
12	23.1	22.0	22.5	18.0	16.8	17.6	13.0	12.5	12.8	13.0	12.0	12.5
13	23.2	22.0	22.6	18.2	16.8	17.7	13.1	12.8	13.0	13.2	12.5	12.9
14	23.2	22.0	22.7	18.4	17.4	17.9	13.4	12.8	13.1	13.7	13.0	13.3
15	23.7	23.0	23.3	18.6	17.5	18.1	13.1	12.4	12.8	14.0	13.0	13.5
16	23.8	23.0	23.4	19.0	18.0	18.4	12.4	11.9	12.2	13.8	13.0	13.5
17	24.5	23.0	23.8	18.8	18.0	18.5	12.0	11.4	11.7	13.3	12.0	12.5
18	25.0	24.0	24.4	18.8	18.0	18.5	11.7	11.0	11.4	12.7	12.0	12.3
19	24.8	24.0	24.4	18.6	18.0	18.3	11.3	10.5	11.1	12.2	12.0	12.2
20	23.7	21.5	22.6	18.2	17.5	18.0	11.1	10.5	10.8	12.3	12.0	12.2
21	21.8	20.7	21.2	18.0	17.0	17.5	10.7	10.0	10.6	12.6	11.5	12.0
22	20.7	19.5	20.2	17.5	15.9	16.7	10.2	9.5	10.0	12.0	11.5	11.7
23	20.3	19.0	19.7	16.2	15.4	15.8	9.1	8.0	8.4	11.5	11.0	11.2
24	21.0	19.6	20.4	15.7	14.9	15.5	8.0	7.0	7.3	11.5	10.6	11.0
25	21.6	20.2	21.0	16.1	15.3	15.7	7.1	6.5	6.7	11.5	10.5	10.9
26	22.0	20.3	21.4	16.3	15.1	15.9	7.3	6.5	6.9	11.5	10.5	11.0
27	22.3	20.9	21.8	15.4	---	---	8.2	7.0	7.5	12.1	11.0	11.6
28	22.4	21.5	22.0	14.5	13.2	13.7	9.0	8.0	8.4	12.0	10.0	11.5
29	22.7	21.6	22.2	13.4	12.1	12.9	9.8	8.5	9.2	11.6	10.5	11.2
30	22.8	21.7	22.3	12.4	11.6	11.9	9.7	8.5	9.2	10.7	10.0	10.4
31	22.9	21.8	22.3	---	---	---	9.1	8.0	8.8	10.8	10.0	10.5
MONTH	27.1	19.0	23.1	20.4	---	---	13.4	6.5	10.8	14.0	8.0	11.6

COLORADO RIVER MAIN STEM

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	11.0	10.0	10.6	16.1	15.5	15.8	18.8	17.5	18.3	20.8	20.0	20.5
2	11.6	10.5	11.2	16.0	15.0	15.6	19.1	17.5	18.3	20.2	19.0	19.8
3	12.2	11.0	11.7	17.3	16.0	16.6	19.8	18.0	19.0	19.8	19.0	19.5
4	12.8	11.5	12.2	18.3	17.0	17.7	19.7	18.5	19.1	20.7	19.5	20.1
5	13.3	12.0	12.7	19.1	18.0	18.5	20.1	18.9	19.5	21.1	20.0	20.6
6	13.8	12.5	13.1	18.5	17.5	17.9	20.1	19.3	19.8	21.8	20.5	21.3
7	14.3	13.0	13.6	17.5	16.5	17.1	20.4	19.3	20.0	22.6	21.5	22.2
8	14.7	13.0	14.0	17.0	16.0	16.6	20.2	19.6	19.9	22.8	22.0	22.5
9	15.2	14.0	14.6	16.7	15.0	15.8	19.9	19.1	19.5	22.6	21.5	22.3
10	15.3	14.0	14.9	16.3	15.0	15.8	19.3	18.5	19.0	21.8	20.5	21.2
11	15.3	14.0	14.7	16.3	15.0	15.7	18.6	17.4	17.9	21.3	20.5	20.8
12	15.3	13.5	14.5	16.7	15.5	16.0	17.7	16.9	17.3	21.1	20.6	20.9
13	15.3	14.0	14.7	16.0	14.5	15.4	17.5	16.3	17.1	22.0	20.0	21.4
14	16.1	14.5	15.3	15.3	14.5	14.9	18.7	17.2	18.0	22.0	21.0	21.6
15	16.2	15.0	15.7	15.1	13.5	14.8	18.9	18.2	18.5	22.5	21.5	22.0
16	16.2	15.0	15.7	14.8	13.5	14.2	18.9	18.5	18.8	22.8	21.5	22.3
17	16.0	15.0	15.6	15.3	14.5	14.8	18.5	17.0	17.9	22.8	22.0	22.5
18	16.0	15.0	15.6	16.3	15.0	15.5	17.9	17.0	17.4	22.6	21.5	22.1
19	15.1	14.0	14.6	16.6	15.0	15.8	18.4	17.6	18.0	22.5	21.5	22.0
20	14.7	13.5	14.3	16.2	15.0	15.6	18.9	18.2	18.7	22.3	22.0	22.2
21	15.2	13.5	14.5	15.2	14.5	14.8	19.1	18.3	18.8	22.3	21.5	22.0
22	15.8	14.5	15.2	15.1	14.5	14.8	19.4	18.3	19.0	22.8	22.0	22.4
23	16.2	15.0	15.6	16.6	15.0	15.6	19.3	18.4	18.9	23.6	22.7	23.1
24	16.3	15.0	15.7	17.3	15.1	16.6	19.6	18.5	19.1	24.8	23.5	24.1
25	16.5	15.5	15.8	17.5	16.5	17.0	19.4	18.6	19.1	25.3	24.0	24.7
26	16.3	15.0	15.7	17.3	16.0	16.8	19.4	18.6	19.1	25.2	24.0	24.7
27	16.0	15.0	15.7	16.0	15.0	15.6	20.0	19.2	19.7	24.3	23.5	23.9
28	16.3	15.0	15.8	16.0	14.5	15.3	19.6	19.3	19.5	24.0	23.0	23.4
29	---	---	---	17.2	15.5	16.3	19.7	18.8	19.2	23.6	23.0	23.3
30	---	---	---	18.3	16.5	17.4	20.5	19.4	19.9	23.6	22.3	23.1
31	---	---	---	18.8	17.0	18.1	---	---	---	22.1	20.0	21.6
MONTH	16.5	10.0	14.4	19.1	13.5	16.1	20.5	16.3	18.8	25.3	19.0	22.1
JUNE				JULY			AUGUST			SEPTEMBER		
1	22.7	22.0	22.4	27.5	25.7	26.7	27.9	26.6	27.3	29.6	28.0	28.8
2	24.1	22.0	23.3	27.7	26.7	27.2	28.3	27.5	27.9	29.3	28.0	28.8
3	24.6	23.5	24.0	28.1	26.7	27.5	28.4	27.5	28.0	29.7	28.3	29.1
4	25.2	24.5	24.9	28.3	27.3	27.8	28.3	27.1	27.7	30.5	29.0	29.8
5	25.0	24.0	24.7	28.6	27.8	28.3	27.7	26.7	27.2	29.6	27.5	28.9
6	25.3	24.5	24.9	28.3	27.8	28.0	27.3	26.2	26.7	27.7	27.0	27.4
7	25.7	24.5	25.2	28.9	27.8	28.3	26.6	25.8	26.4	28.4	26.9	27.7
8	26.6	25.0	25.9	28.8	27.8	28.3	27.3	24.8	26.5	28.9	27.4	28.3
9	26.6	25.5	26.1	28.5	27.8	28.1	27.7	26.9	27.3	28.5	27.4	28.0
10	26.0	25.0	25.6	28.6	27.9	28.3	27.2	26.9	27.1	27.4	26.4	27.1
11	25.5	24.5	25.1	28.4	27.9	28.1	27.6	26.5	27.1	27.0	26.2	26.6
12	25.2	24.5	25.0	28.4	27.0	28.0	28.2	27.0	27.5	27.1	25.4	26.3
13	25.5	24.5	25.1	29.1	27.9	28.5	28.4	27.1	28.0	26.9	26.0	26.4
14	25.6	24.5	25.1	29.2	28.4	28.8	29.3	28.1	28.7	26.5	25.7	26.1
15	26.0	24.5	25.3	29.1	28.5	28.7	28.8	27.2	28.4	26.4	25.6	26.0
16	26.3	25.0	25.8	29.0	28.0	28.5	28.7	27.7	28.3	26.3	25.5	25.9
17	26.3	25.5	26.0	29.3	28.5	28.9	28.1	27.3	27.8	26.0	25.1	25.6
18	26.3	25.5	26.0	28.4	27.4	27.8	28.2	27.3	27.7	26.7	25.5	26.1
19	26.2	25.0	25.7	27.5	26.1	27.2	28.2	26.9	27.8	27.3	26.1	26.7
20	25.8	25.0	25.5	27.0	26.1	26.7	28.3	27.4	28.0	27.5	26.6	27.1
21	25.6	25.0	25.3	26.4	25.6	26.2	28.6	28.0	28.3	27.4	26.6	27.0
22	25.3	24.5	25.0	26.6	25.5	26.2	28.7	28.0	28.3	27.2	26.3	26.8
23	25.3	24.5	25.2	26.7	25.4	26.3	29.7	28.0	28.8	27.8	---	---
24	25.3	24.5	25.0	26.9	25.3	26.5	29.8	29.0	29.4	28.2	---	---
25	24.6	23.5	24.2	27.0	25.2	26.6	29.8	28.5	29.2	28.4	---	---
26	24.6	23.5	24.3	26.8	25.2	26.4	29.7	29.0	29.3	28.2	---	---
27	24.8	24.0	24.5	27.3	26.0	26.7	29.0	28.0	28.6	27.5	26.8	27.2
28	25.2	24.0	24.7	27.9	27.0	27.5	28.6	28.0	28.3	27.4	26.5	27.0
29	25.8	24.5	25.1	27.6	26.8	27.2	28.7	27.5	28.3	27.2	26.3	26.8
30	26.3	25.0	25.7	27.3	26.2	27.0	29.0	22.3	28.1	27.4	26.5	26.9
31	---	---	---	27.4	26.2	26.9	29.1	26.5	28.3	---	---	---
MONTH	26.6	22.0	25.0	29.3	25.2	27.5	29.8	22.3	27.9	30.5	---	---

09429500 COLORADO RIVER BELOW IMPERIAL DAM, AZ-CA

LOCATION.--Forebay gage: Lat 32°52'59", long 114°27'57", in NW¼SW¼ sec.9, T.15 S., R.24 E., San Bernardino meridian, in Imperial County, California, Hydrologic Unit 15030107, near All-American Canal headworks at east (revised) end of Imperial Dam, 5 mi upstream from Laguna Dam, 15 mi northeast of Yuma, Az., 90 mi downstream from Palo Verde Dam, and 147 mi downstream from Parker Dam.

DRAINAGE AREA.--188,500 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing.

PERIOD OF RECORD.--October 1960 to current year. Prior to October 1971 published as "at Imperial Dam." Records of flow reaching Imperial Dam, formerly published with this station, are now published separately as sta 09429490, "Colorado River above Imperial Dam."

GAGE.--Water-stage recorder in forebay, 12 calibrated gates on California sluiceway, 8 calibrated gates on Gila sluiceway, and calibrated manometer on each discharge pipe from desilting basin. Datum of forebay gage is 162.00 ft, U.S. Bureau of Reclamation datum. Prior to Aug. 21, 1991, forebay gage located at west end of Imperial Dam at same datum.

REMARKS.--No estimated daily discharges. Records good. Records of daily discharge show flow of Colorado River passing Imperial Dam, and include water released to river through California and Gila sluiceways, sludge from desilting basins returned to river, and leakage through dam. For records of flow reaching Imperial Dam see sta 09429490. Flow of Colorado River regulated by many reservoirs, principally Lake Mead, since 1935. Many diversions from Colorado River and tributaries above station. Diversion to Mittry Lake and monthend contents of Senator Wash Reservoir also are published with sta 09429490.

COOPERATION.--Records of gate openings and sludge return flow from desilting basins furnished by Imperial Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 30,200 ft³/s Aug. 18, 19, 1983; minimum daily, 27 ft³/s Dec. 15-18, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,780 ft³/s Sept. 7; minimum daily, 220 ft³/s Oct. 1, 4-6, 9-14, 19-24, 27-29, Nov. 1-6, 9, 12-16, 19-22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	220	220	509	228	221	1370	1020	321	331	341	649	321
2	373	220	398	652	221	1490	331	321	331	341	804	387
3	356	220	349	221	221	1370	331	321	331	341	547	443
4	220	220	533	274	221	695	331	321	439	341	321	544
5	220	220	543	503	489	1340	331	321	331	341	321	889
6	220	220	221	221	221	816	331	321	331	341	321	1350
7	319	581	221	221	221	221	331	321	438	341	321	1780
8	464	330	221	221	221	321	331	321	331	341	321	635
9	220	220	221	508	221	675	331	321	331	341	321	900
10	220	348	221	311	221	321	331	443	331	341	321	422
11	220	333	221	536	221	321	331	321	331	341	607	374
12	220	220	221	432	221	321	331	321	331	442	403	365
13	220	220	221	847	221	321	331	321	507	341	450	321
14	220	220	221	462	221	321	331	321	331	341	321	321
15	471	220	221	221	221	221	331	321	331	341	321	499
16	277	220	221	221	221	321	331	321	331	341	321	221
17	277	538	221	221	221	321	463	321	331	341	321	221
18	292	346	393	422	221	321	331	321	521	506	321	221
19	220	220	410	221	221	428	331	321	331	554	321	221
20	220	220	221	221	221	373	331	321	331	341	321	221
21	220	220	221	221	221	321	331	455	439	341	321	221
22	220	220	221	221	221	321	331	321	331	341	321	221
23	220	302	221	221	221	321	331	321	331	341	321	221
24	220	339	221	221	221	321	331	321	331	341	321	221
25	493	379	874	221	221	321	545	321	331	341	321	221
26	299	234	632	221	221	321	606	321	331	341	321	221
27	220	234	315	425	221	321	349	321	656	341	321	221
28	220	234	221	419	279	1090	331	321	331	341	321	221
29	220	234	221	293	---	389	331	321	331	341	321	221
30	522	274	221	358	---	572	331	321	331	458	321	221
31	329	---	221	221	---	1430	---	321	---	576	321	---
TOTAL	8652	8226	9597	10206	6514	17616	11258	10207	10944	11402	11485	12866
MEAN	279	274	310	329	233	568	375	329	365	368	370	429
MAX	522	581	874	847	489	1490	1020	455	656	576	804	1780
MIN	220	220	221	221	221	221	331	321	331	341	321	221
AC-FT	17160	16320	19040	20240	12920	34940	22330	20250	21710	22620	22780	25520
CAL YR	1990	TOTAL	122855	MEAN	337	MAX	1360	MIN	220	AC-FT	243700	
WTR YR	1991	TOTAL	128973	MEAN	353	MAX	1780	MIN	220	AC-FT	255800	

COLORADO RIVER MAIN STEM

09429600 COLORADO RIVER BELOW LAGUNA DAM, AZ-CA

LOCATION.--Lat 32°48'44", long 114°30'51", in SE¼NE¼ sec.35, T.15 S., R.24 E., San Bernardino meridian, in Imperial County, California, Hydrologic Unit 15030107, on right bank 1.4 mi downstream from Laguna Dam, 2.8 mi northeast of Bard, Ca., and 10 mi northeast of Yuma, Az.

DRAINAGE AREA.--188,600 mi², approximately, including 3,959 mi² in Great Divide basin in southern Wyoming, which is noncontributing.

PERIOD OF RECORD.--December 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 120.81 ft above National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--No estimated daily discharges. Records fair. Natural flow of Colorado River at this point is affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, municipal, and industrial uses, and return flows from irrigated areas. Flow past station consists mainly of water released through Imperial Dam, sludge from the desilting basins at Imperial Dam, seepage through Imperial Dam, and seepage from the All-American Canal and the Gila Gravity Main Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 30,900 ft³/s Aug. 19, 1983; minimum daily, 71 ft³/s May 29, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,880 ft³/s Sept. 7; minimum daily, 234 ft³/s Dec. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	349	338	391	252	387	435	1390	402	371	401	516	388
2	338	331	315	328	665	1980	566	484	371	389	582	391
3	344	324	329	351	517	1740	410	474	371	378	662	399
4	346	322	334	347	342	909	1230	460	409	374	600	415
5	340	320	306	410	244	1120	570	453	483	375	524	493
6	332	312	309	373	274	1630	473	443	457	377	473	1640
7	325	319	309	360	273	607	461	437	447	378	436	2880
8	327	504	306	349	268	314	439	739	467	377	414	1170
9	349	348	303	343	263	347	439	739	448	374	405	989
10	345	337	302	397	256	404	439	464	422	373	398	620
11	339	347	301	456	256	492	432	399	408	371	406	439
12	331	336	297	453	254	601	432	342	400	369	535	411
13	326	322	297	727	251	692	430	351	423	399	546	410
14	323	313	294	777	251	363	430	363	458	396	393	405
15	318	307	293	357	252	369	428	376	423	379	302	394
16	339	301	294	341	255	371	426	421	424	371	309	332
17	336	297	296	334	259	371	387	422	388	368	569	305
18	336	497	296	341	254	372	323	418	404	401	316	302
19	335	323	313	339	254	394	329	389	454	466	316	301
20	328	310	326	329	254	594	329	351	421	483	318	299
21	325	302	671	325	257	589	341	364	409	437	336	299
22	320	293	720	319	257	376	347	389	434	407	371	300
23	314	289	234	320	257	385	353	391	408	386	374	301
24	312	293	262	317	259	390	356	390	393	377	388	299
25	316	295	293	309	262	391	351	413	385	373	408	298
26	334	304	551	306	321	400	335	454	384	366	408	296
27	331	375	552	305	358	403	377	443	452	360	403	299
28	325	703	358	319	297	454	364	390	500	360	397	293
29	320	618	593	334	---	583	370	362	448	361	392	284
30	318	380	863	338	---	505	371	370	419	364	393	289
31	366	---	341	358	---	863	---	374	---	393	391	---
TOTAL	10287	10660	11649	11514	8297	19444	13928	13267	12681	11983	13281	15941
MEAN	332	355	376	371	296	627	464	428	423	387	428	531
MAX	366	703	863	777	665	1980	1390	739	500	483	662	2880
MIN	312	289	234	252	244	314	323	342	371	360	302	284
AC-FT	20400	21140	23110	22840	16460	38570	27630	26320	25150	23770	26340	31620
CAL YR 1990	TOTAL	141714	MEAN	388	MAX	2120	MIN	216	AC-FT	281100		
WTR YR 1991	TOTAL	152932	MEAN	419	MAX	2880	MIN	234	AC-FT	303300		

09430500 GILA RIVER NEAR GILA, NM

LOCATION.--Lat 33°03'40", long 108°32'12", in NE¼NW¼ sec.30, T.14 S., R.16 W., Grant County, Hydrologic Unit 15040001, on left bank at Hooker damsite, 1.6 mi upstream from Mogollon Creek, 7 mi northeast of Gila, and at mile 572.5.

DRAINAGE AREA.--1,864 mi².

PERIOD OF RECORD.--April to December 1914, December 1927 to current year. Monthly discharge only December 1927 to September 1930, published in WSP 1313.

REVISED RECORDS.--WSP 1283: Drainage area. WSP 1313: 1944 (M), 1949 (M). WDR NM-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 4,655.8 ft above National Geodetic Vertical Datum of 1929, (river-profile survey). Prior to Dec. 31, 1928, at site 5 mi upstream at different datum. Dec. 31, 1928, to Jan. 7, 1942, at site 200 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of about 500 acres upstream from station.

AVERAGE DISCHARGE.--64 years (water years 1928-91), 151 ft³/s, 109,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,200 ft³/s, Dec. 28, 1984, gage height, 13.0 ft, from floodmark, from rating curve extended above 7,000 ft³/s on basis of slope-area measurement at gage height 12.5 ft; maximum gage height, 17.2 ft, from floodmark, Sept. 29, 1941; minimum, 14 ft³/s, July 15, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Other major floods occurred in November 1905, December 1906, and January 1916.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 17	1430	670	2.13	Apr. 8	0130	759	2.64
Dec. 30	0400	4,360	5.25	Aug. 5	0045	1,300	3.17
Jan. 7	0145	1,060	2.85	Aug. 11	0100	748	2.40
Feb. 19	0245	659	2.13	Aug. 18	0445	1,380	3.27
Mar. 2	0245	*4,670	*5.43	Aug. 27	1115	842	2.57
Mar. 6	2215	3,120	4.57	Sept. 7	0030	1,020	2.83
				Sept. 10	2100	892	2.66

Minimum daily discharge, 46 ft³/s, July 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	75	98	747	119	1930	572	227	137	46	167	271
2	182	81	96	555	119	3740	550	210	136	54	187	219
3	185	91	95	436	120	1980	570	210	131	58	323	181
4	198	91	93	403	118	1530	580	224	124	71	610	205
5	174	88	91	826	117	1550	618	221	115	61	752	259
6	155	85	89	971	116	2410	643	210	108	55	480	622
7	137	95	89	943	114	2320	710	198	100	50	325	825
8	125	117	88	699	112	1410	735	201	94	47	405	574
9	115	124	87	548	112	1030	683	223	92	49	390	426
10	109	116	86	485	116	836	598	271	102	54	394	548
11	103	110	85	414	117	738	543	299	108	52	613	609
12	99	105	85	351	128	685	502	298	112	52	418	436
13	94	103	90	309	217	648	454	276	104	53	284	348
14	90	102	97	278	248	589	399	252	96	65	208	295
15	89	99	99	249	282	529	343	237	89	59	232	254
16	86	97	124	231	307	483	317	236	85	56	293	223
17	84	96	595	219	359	430	303	223	79	64	549	197
18	83	93	449	202	590	374	299	206	75	61	1160	179
19	81	91	298	183	573	358	310	197	70	63	816	171
20	81	89	236	169	462	364	317	197	65	73	608	163
21	81	90	220	166	423	361	316	207	61	70	453	151
22	80	88	200	162	434	378	332	213	57	71	355	142
23	79	88	174	157	454	372	333	215	57	93	399	146
24	78	86	149	148	479	432	314	203	55	107	401	134
25	78	86	135	141	476	530	295	185	53	111	528	127
26	77	98	138	136	449	563	275	171	50	159	493	132
27	76	108	139	133	405	590	278	162	47	164	706	131
28	75	109	292	130	452	600	270	157	48	193	482	134
29	73	105	2080	131	---	612	264	155	49	148	417	126
30	74	100	3070	130	---	654	247	148	48	128	395	121
31	74	---	1210	125	---	629	---	138	---	124	331	---
TOTAL	3276	2906	10877	10777	8018	29655	12970	6570	2547	2511	14174	8349
MEAN	106	96.9	351	348	286	957	432	212	84.9	81.0	457	278
MAX	198	124	3070	971	590	3740	735	299	137	193	1160	825
MIN	73	75	85	125	112	358	247	138	47	46	167	121
AC-FT	6500	5760	21570	21380	15900	58820	25730	13030	5050	4980	28110	16560
CAL YR	1990	TOTAL	39307	MEAN	108	MAX	3070	MIN	21	AC-FT	77970	
WTR YR	1991	TOTAL	112630	MEAN	309	MAX	3740	MIN	46	AC-FT	223400	

09431500 GILA RIVER NEAR REDROCK, NM
(National stream-quality accounting network and radiochemical network station)

LOCATION.--Lat 32°43'37", long 108°40'30", in W₄ sec.23, T.18 S., R.18 W., Grant County, Hydrologic Unit 15040002, on left bank 0.2 mi downstream from Copper Canyon, 0.2 mi upstream from lower end of box canyon, 4.7 mi northeast of Redrock, 14 mi downstream from Mangas Creek, and at mile 539.2.

DRAINAGE AREA.--2,829 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1904 to February 1905 (gage heights only). May 1905 to December 1906, January to December 1907 and July to October 1908 (gage heights only). November 1908 to December 1910, January 1911 to January 1912 and May to June 1912 (gage heights only). August 1912 to September 1955, October 1962 to current year. Monthly or annual discharge only for some periods, published in WSP 1313. Published as "near Cliff" 1904-7.

REVISED RECORDS.--WSP 1213: 1906, 1911-15, 1931, 1936-37, 1939, 1941, 1944, 1945(P), 1946(M), 1947. WSP 1283: Drainage area. WSP 1926: 1955. WDR NM-78-1: 1977.

GAGE.--Water-stage recorder. Elevation of gage is 4,090 ft above National Geodetic Vertical Datum of 1929, from plane table survey. Prior to Dec. 31, 1907, nonrecording gage at site 13.5 mi upstream at different datum. May 14, 1908, to July 16, 1909, nonrecording gage at site 0.2 mi downstream at different datum. June 13, 1980 to Feb. 23, 1983 at site 1,300 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 5,000 acres upstream from station.

AVERAGE DISCHARGE.--75 years (water years 1906, 1909-10, 1913-55, 1963-91), 210 ft³/s, 152,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,800 ft³/s, Dec. 19, 1978, gage height, 29.8 ft, in gage well, 34.1 ft from floodmarks, from rating curve extended above 9,500 ft³/s on basis of slope-area measurement of peak flow; minimum, 2.2 ft³/s, Aug. 5, 1947.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 30	1100	4,230	10.99	Mar. 7	0045	3,170	10.13
Mar. 2	0445	*11,600	*14.83	Sept. 10	0600	3,190	10.15

Minimum daily discharge, 47 ft³/s, June 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	95	107	958	e202	1670	794	315	172	68	181	682
2	244	93	105	755	e188	6980	771	310	160	72	187	633
3	266	100	103	589	e174	2270	777	291	157	73	212	610
4	233	96	97	518	e167	1970	802	274	153	74	359	626
5	210	92	104	828	e169	2220	840	266	150	71	608	830
6	166	98	114	1200	e175	2820	891	257	153	55	485	1070
7	148	120	109	1400	176	2620	962	260	141	50	392	1390
8	146	148	91	1150	168	1610	972	270	111	49	348	1110
9	143	140	88	906	156	1240	912	272	103	51	386	945
10	131	128	94	786	155	1070	823	286	101	58	416	1710
11	126	120	109	660	159	950	773	283	102	73	553	1060
12	115	131	103	562	187	884	752	284	119	72	532	855
13	97	129	108	524	208	845	706	275	130	59	454	776
14	92	127	109	503	278	790	662	261	122	60	403	686
15	87	120	96	487	307	727	619	257	102	84	401	636
16	87	105	104	450	324	708	582	258	92	74	513	572
17	101	102	304	436	364	634	540	243	91	68	553	522
18	95	98	537	e397	527	581	510	225	99	74	1010	482
19	91	116	409	e364	702	573	505	214	100	68	1030	421
20	81	114	289	e340	591	565	503	202	94	62	794	383
21	82	115	265	e333	545	573	512	202	91	69	646	370
22	82	98	253	e336	532	583	530	201	73	91	602	353
23	78	96	229	e321	533	566	522	203	61	171	706	335
24	87	99	195	e307	546	622	505	209	54	169	620	293
25	99	115	176	e287	547	713	453	209	51	210	702	262
26	97	125	170	e256	553	783	417	197	60	300	790	231
27	81	129	153	e238	527	818	397	188	50	190	955	224
28	76	134	238	e236	532	813	374	175	47	169	874	215
29	83	135	1600	e246	---	812	356	170	53	172	760	218
30	96	124	3290	e232	---	838	333	166	56	185	781	196
31	94	---	1390	e221	---	836	---	164	---	199	765	---
TOTAL	3784	3442	11139	16826	9692	39684	19095	7387	3048	3240	18018	18696
MEAN	122	115	359	543	346	1280	636	238	102	105	581	623
MAX	266	148	3290	1400	702	6980	972	315	172	300	1030	1710
MIN	76	92	88	221	155	565	333	164	47	49	181	196
AC-FT	7510	6830	22090	33370	19220	78710	37870	14650	6050	6430	35740	37080
CAL YR 1990	TOTAL	42143.3	MEAN	115	MAX	3290	MIN	6.9	AC-FT	83590		
WTR YR 1991	TOTAL	154051	MEAN	422	MAX	6980	MIN	47	AC-FT	305600		

GILA RIVER BASIN

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09431500 GILA RIVER NEAR REDROCK, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
OCT											
24...	1500	85	362	8.3	22.0	16.0	11	9.4	12	130	0
NOV											
27...	1000	132	348	7.9	3.5	9.0	23	10.8	12	120	0
DEC											
19...	1125	428	229	8.2	2.5	4.0	95	11.2	28	76	0
JAN											
23...	1105	343	310	8.2	9.5	7.5	11	9.5	<10	98	0
FEB											
06...	1000	175	321	7.9	7.5	6.5	7.4	10.9	<10	110	0
MAR											
06...	1000	2900	156	8.3	16.5	10.0	250	9.8	59	58	4
APR											
02...	1030	765	192	7.7	16.0	11.0	45	9.4	24	68	0
MAY											
01...	1430	311	226	8.0	24.0	17.5	14	8.3	15	74	0
JUN											
04...	1145	153	274	8.1	29.0	19.5	4.6	8.0	<10	97	0
JUL											
16...	0930	79	340	7.9	21.0	20.5	87	8.1	23	120	0
AUG											
13...	1040	458	237	7.8	33.5	23.5	64	7.3	37	87	3
SEP											
10...	0955	1390	145	7.8	23.5	20.0	1200	7.8	310	49	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT										
24...	40	7.8	33	1	2.1	171	0	140	34	14
NOV										
27...	36	7.2	30	1	1.8	161	0	132	37	3.7
DEC										
19...	22	5.0	17	0.9	1.4	109	0	89	22	9.1
JAN										
23...	29	6.1	23	1	1.5	154	0	126	30	11
FEB										
06...	33	6.5	26	1	1.6	143	0	117	29	14
MAR										
06...	17	3.7	9.5	0.5	1.2	66	0	54	19	3.7
APR										
02...	20	4.4	14	0.7	1.3	83	0	68	20	4.2
MAY										
01...	22	4.7	18	0.9	1.7	100	0	82	21	7.0
JUN										
04...	29	5.9	23	1	1.9	126	0	103	23	9.4
JUL										
16...	38	7.0	30	1	2.3	154	0	126	36	12
AUG										
13...	26	5.3	19	0.9	2.0	102	0	83	21	7.0
SEP										
10...	15	2.8	10	0.6	1.8	70	0	57	8.6	3.1

< Actual value is known to be less than value shown.

09431500 GILA RIVER NEAR REDROCK, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
OCT 24...	2.0	36	245	255	24	--	<0.010	<0.010	0.400	0.400	0.020
NOV 27...	0.20	--	226	195	5	0.380	0.020	--	0.400	--	0.020
DEC 19...	1.4	29	175	162	<1	--	<0.010	<0.010	0.200	0.200	0.030
JAN 23...	1.5	--	187	178	51	--	<0.010	--	0.300	--	<0.010
FEB 06...	1.6	32	208	216	28	--	<0.010	<0.010	0.400	0.400	<0.010
MAR 06...	0.60	--	120	87	728	0.070	0.040	--	0.110	--	0.080
APR 02...	1.0	29	137	136	95	0.090	0.020	<0.010	0.110	0.100	0.030
MAY 01...	1.4	--	157	125	43	0.170	0.010	--	0.180	--	0.040
JUN 04...	1.7	35	185	192	6	0.300	0.020	<0.010	0.320	0.260	0.020
JUL 16...	2.0	--	206	203	205	0.520	0.060	--	0.580	--	0.080
AUG 13...	1.4	36	174	169	165	--	<0.010	<0.010	0.210	0.220	0.050
SEP 10...	0.70	--	102	77	3670	0.170	0.020	--	0.190	--	0.010

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
OCT 24...	0.010	0.58	--	1.0	0.040	0.040	<10	--	1	1	20
NOV 27...	--	0.28	--	0.70	0.120	--	--	1	1	1	18
DEC 19...	0.030	0.27	--	0.50	0.070	0.030	--	--	1	1	14
JAN 23...	--	--	--	--	0.050	--	--	2	1	2	13
FEB 06...	<0.010	--	--	0.90	0.060	0.050	20	--	<1	2	13
MAR 06...	--	0.42	--	0.61	0.130	--	--	<1	1	<1	10
APR 02...	0.030	0.27	--	0.41	0.110	0.040	60	--	1	<1	8
MAY 01...	--	0.16	--	0.38	<0.010	--	--	<1	1	1	10
JUN 04...	<0.010	0.28	--	0.62	0.060	0.020	--	--	1	2	11
JUL 16...	--	0.72	--	1.4	0.330	--	--	<1	2	2	18
AUG 13...	0.030	0.55	0.37	0.81	0.260	0.050	70	--	2	1	13
SEP 10...	--	1.5	--	1.7	0.390	--	--	2	1	2	11

< Actual value is known to be less than value shown.

09431500 GILA RIVER NEAR REDROCK, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
OCT 24...	--	<0.5	50	<1	<1.0	2	<1	<3	13	2	1000
NOV 27...	<10	--	40	<1	<1.0	2	<1	--	16	2	1400
DEC 19...	--	--	30	<1	<1.0	6	<1	--	9	4	5600
JAN 23...	<10	--	30	<1	<1.0	<1	1	--	6	1	1300
FEB 06...	--	0.5	30	<1	<1.0	2	5	<3	4	4	650
MAR 06...	<10	--	10	<1	<1.0	15	<1	--	40	3	240
APR 02...	--	<0.5	10	<1	<1.0	2	<1	<3	8	65	2800
MAY 01...	<10	--	30	<1	<1.0	<1	<1	--	5	1	1500
JUN 04...	--	--	30	<1	<1.0	<1	<1	--	3	2	330
JUL 16...	<10	--	40	<1	<1.0	7	<1	--	15	3	5100
AUG 13...	--	<0.5	30	2	<1.0	4	<1	<3	18	3	5000
SEP 10...	<10	--	30	2	<1.0	73	<1	--	190	7	80000

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
OCT 24...	4	5	1	23	60	3	<0.10	<0.1	<10	--	<1
NOV 27...	18	4	<1	--	70	2	<0.10	--	--	3	--
DEC 19...	140	10	1	--	190	9	<0.10	--	--	--	--
JAN 23...	9	2	<1	--	40	5	<0.10	--	--	3	--
FEB 06...	64	1	1	23	20	9	<0.10	<0.1	<10	--	20
MAR 06...	79	22	<1	--	560	4	<0.10	--	--	26	--
APR 02...	32	5	<1	11	80	2	<0.10	<0.1	<10	--	1
MAY 01...	48	7	1	--	40	2	<0.10	--	--	2	--
JUN 04...	10	3	2	--	<10	2	<0.10	--	--	--	--
JUL 16...	18	10	<1	--	160	1	<0.10	--	--	11	--
AUG 13...	40	16	<1	14	160	2	0.20	<0.1	<10	--	<1
SEP 10...	73	120	<1	--	3900	3	<0.10	--	--	90	--

< Actual value is known to be less than value shown.

GILA RIVER BASIN

09431500 GILA RIVER NEAR REDROCK, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)
OCT 24...	<1	<1	<1.0	170	<6	20	<3	2.1	0.9	3.3
NOV 27...	<1	<1	<1.0	--	--	<10	<3	--	--	--
DEC 19...	<1	<2	<1.0	--	--	20	12	--	--	--
JAN 23...	<1	<1	<1.0	--	--	<10	5	--	--	--
FEB 06...	<1	<1	<1.0	130	<6	<10	10	--	--	--
MAR 06...	<1	<1	<1.0	--	--	80	6	--	--	--
APR 02...	<1	<1	<1.0	85	<6	<10	4	1.2	10	2.1
MAY 01...	<1	<1	1.0	--	--	30	20	--	--	--
JUN 04...	<1	<1	<1.0	--	--	<10	<3	--	--	--
JUL 16...	<1	1	<1.0	--	--	20	<3	--	--	--
AUG 13...	<1	<1	<1.0	110	7	50	13	--	--	--
SEP 10...	<1	<1	<1.0	--	--	320	12	--	--	--
DATE	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 24...	1.4	2.4	1.3	0.07	0.62	66	15	95	26	53
NOV 27...	--	--	--	--	--	54	19	96	K64	230
DEC 19...	--	--	--	--	--	288	333	58	62	210
JAN 23...	--	--	--	--	--	43	40	66	K6	87
FEB 06...	--	--	--	--	--	140	66	17	K3	63
MAR 06...	--	--	--	--	--	1010	7910	38	K48	K380
APR 02...	5.1	1.7	4.7	0.02	0.49	1450	2990	15	K15	62
MAY 01...	--	--	--	--	--	991	832	5	K4	20
JUN 04...	--	--	--	--	--	56	23	66	<1	K7
JUL 16...	--	--	--	--	--	240	51	94	340	500
AUG 13...	--	--	--	--	--	2440	3020	10	180	300
SEP 10...	--	--	--	--	--	7010	26300	76	4800	>10000

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

GILA RIVER BASIN

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09431500 GILA RIVER NEAR REDROCK, NM -- Continued

WATER-QUALITY RECORDS

CROSS SECTION ANALYSES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	STREAM DEPTH, MEAN (FT) (00064)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
DEC									
19...	1126	5	0.50	13	237	8.2	5.0	11.2	255
19...	1127	15	1.30	38	245	8.2	5.0	11.3	275
19...	1128	25	2.10	56	223	8.2	5.0	11.2	307
19...	1129	35	1.99	46	243	8.2	5.0	11.2	448
19...	1130	45	1.63	57	223	8.1	5.0	11.2	315
19...	1131	55	1.68	58	227	8.1	5.0	11.2	328
19...	1132	65	1.41	43	246	8.1	5.0	11.1	256
19...	1133	75	1.40	45	234	8.1	5.0	11.0	220
19...	1134	85	1.30	34	233	8.0	5.0	11.0	252
19...	1135	95	0.82	16	232	8.0	5.0	11.0	223
19...	1136	105	0.50	3.0	245	8.0	5.0	11.0	211
19...	1137	115	0.48	2.2	242	8.0	5.0	10.8	223

09432000 GILA RIVER BELOW BLUE CREEK, NEAR VIRDEN, NM

LOCATION.--Lat 32°38'53", long 108°50'43", in SE&SW¼ sec.18, T.19 S., R.19 W., Grant County, Hydrologic Unit 15040002, on left bank at head of canyon, 1.4 mi downstream from Blue Creek, 10 mi east of Virden, and 16 mi upstream from New Mexico-Arizona State line.

DRAINAGE AREA.--3,203 mi², excluding Animas River basin.

PERIOD OF RECORD.--May to November 1914, March to September 1915, July 1927 to current year. July 1927 to May 1931 monthly discharge only, published in WSP 1313, computed as sum of flow at Virden Bridge, 9 mi downstream, and in Sunset Canal. Published as "Gila River near Duncan, Ariz.," 1914-15 and as "Gila River at Fuller's Ranch, near Duncan, Ariz.," 1931-38.

REVISED RECORDS.--WSP 1283: Drainage area. WSP 1313: 1929, 1931-32(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,875 ft above National Geodetic Vertical Datum of 1929, from river-profile map. May 11, 1914, to Sept. 30, 1915, at site 6 mi downstream, 1,000 ft upstream from intake of Sunset Canal. June 1 to July 7, 1931, nonrecording gage at present site and datum. Since April 18, 1980, supplementary gage on left bank 800 ft downstream at same datum. Since June 1980, crest-stage gages at supplementary gage site.

REMARKS.--No estimated daily discharges. Records good. Station is above all Duncan Valley diversions. Diversions for irrigation of about 6,200 acres above station.

AVERAGE DISCHARGE.--64 (water years 1928-91), 199 ft³/s, 144,200 acre-ft/yr; median of yearly mean discharges, 140 ft³/s, 101,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,700 ft³/s Dec. 19, 1978, gage height, 29.00 ft, from rating curve extended above 38,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 1 ft³/s July 14, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 30	1515	4,390	10.77	Mar. 7	1115	4,140	10.47
Mar. 2	0700	*10,200	*14.14	Sept. 9	2100	3,790	10.24

Minimum daily discharge, 40 ft³/s July 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	105	121	1340	167	1250	858	299	175	48	151	329
2	184	112	117	858	161	7540	841	300	159	59	181	262
3	208	106	116	614	154	3920	872	289	153	70	192	218
4	189	109	114	486	152	2490	923	275	146	69	264	208
5	181	105	114	605	150	2150	991	261	141	69	602	405
6	161	107	125	1250	160	2360	1080	248	143	63	612	522
7	146	125	126	1540	158	3440	1210	245	137	53	443	838
8	138	149	117	1340	156	2350	1460	257	119	46	363	733
9	140	141	111	980	147	1710	1420	266	101	41	441	867
10	134	130	109	753	145	1370	1270	284	102	40	552	1610
11	130	125	122	630	144	1160	1050	295	107	46	648	843
12	125	128	127	485	165	1000	926	303	106	57	614	595
13	112	132	130	400	172	917	849	297	124	56	455	491
14	106	129	128	345	207	809	753	286	123	53	332	392
15	103	127	125	318	229	692	678	277	103	60	314	335
16	98	116	127	295	241	671	595	283	91	80	375	292
17	107	112	169	278	270	620	539	274	85	83	446	274
18	109	110	394	260	386	561	492	252	94	77	933	239
19	105	116	350	234	603	532	454	237	92	67	1430	211
20	93	119	254	220	555	515	450	222	87	55	1050	192
21	92	119	228	211	480	526	449	216	82	47	677	183
22	95	114	219	213	435	530	476	210	75	95	525	187
23	89	108	208	208	418	515	477	212	67	126	585	178
24	86	107	191	201	419	534	458	221	60	148	482	163
25	106	120	179	194	425	601	416	229	54	204	517	150
26	105	131	172	181	439	653	368	213	52	284	536	133
27	86	132	163	172	420	702	345	200	55	185	770	131
28	71	134	186	167	416	741	332	178	49	150	719	129
29	70	135	1060	175	---	750	322	168	47	152	518	142
30	103	133	3750	174	---	776	307	161	46	157	479	139
31	104	---	2510	171	---	841	---	161	---	173	436	---
TOTAL	3730	3636	11962	15298	7974	43226	21661	7619	2975	2913	16642	11391
MEAN	120	121	386	493	285	1394	722	246	99.2	94.0	537	380
MAX	208	149	3750	1540	603	7540	1460	303	175	284	1430	1610
MIN	70	105	109	167	144	515	307	161	46	40	151	129
AC-FT	7400	7210	23730	30340	15820	85740	42960	15110	5900	5780	33010	22590

CAL YR	1990	TOTAL	40658.0	MEAN	111	MAX	3750	MIN	8.6	AC-FT	80650
WTR YR	1991	TOTAL	149027	MEAN	408	MAX	7540	MIN	40	AC-FT	295600

09442680 SAN FRANCISCO RIVER NEAR RESERVE, NM

LOCATION.--Lat 33°44'12", long 108°46'14", in NE¼NW¼SE¼ sec.35, T.6 S., R.19 W., Catron County, Hydrologic Unit 15040004, on left bank 1,300 ft downstream from Rainbow Bridge Canyon, 1.7 mi northwest of Reserve, and at mile 563.1.

DRAINAGE AREA.--350 mi², approximately.

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

REVISED RECORDS.--WDR NM-78-1: 1977. WDR NM-84-1: 1973, 1979-80.

GAGE.--Water-stage recorder. Elevation of gage is 5,820 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 15, 1972 at site 1,800 ft upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Possible minor regulation by Luna Lake, 27 mi upstream. Diversions for irrigation of about 280 acres upstream from station.

AVERAGE DISCHARGE.--32 years, 27.8 ft³/s, 20,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,830 ft³/s, Oct. 1, 1983, gage height, 11.71 ft recorded, 11.3 ft, from outside floodmarks, from rating curve extended above 1,400 ft³/s on basis of slope-area measurement of peak flow; minimum, .78 ft³/s, June 6, 1990.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 15 ft, as determined in 1962 from old floodmarks. Major floods of Nov. 26, 1905 and Dec. 3, 1906, exceeded 20,000 ft³/s at Alma (downstream). See WSP 1313.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 2	1500	563	3.37	July 17	1830	563	2.81
Mar. 6	0830	*661	*3.39	Aug. 7	1700	595	3.07

Minimum discharge, 1.4 ft³/s Aug. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	4.5	8.1	11	12	116	216	e25	8.5	3.4	3.0	2.1
2	61	9.0	6.8	11	13	116	230	e24	11	3.5	8.0	5.1
3	48	17	6.4	11	12	81	205	20	7.8	3.9	3.8	3.9
4	38	13	6.1	16	12	100	197	17	7.1	4.3	2.0	3.9
5	27	11	7.1	26	12	168	201	15	5.6	5.0	3.4	30
6	17	9.9	7.1	52	11	445	206	16	6.0	4.4	4.9	20
7	18	43	6.8	42	11	229	209	14	7.7	5.2	20	12
8	17	24	6.2	30	13	130	184	14	7.0	5.2	6.2	12
9	15	16	5.9	25	11	105	153	12	6.2	5.7	34	11
10	13	16	5.5	23	13	84	135	11	7.1	7.9	31	8.6
11	13	15	5.5	19	15	79	111	11	6.2	5.3	40	8.0
12	11	13	6.4	17	17	61	95	10	9.7	3.6	31	6.2
13	12	13	7.3	16	21	47	81	10	9.3	3.3	17	5.8
14	10	12	8.0	16	24	36	75	10	8.0	4.9	8.2	6.2
15	10	11	7.2	14	29	26	65	9.6	8.0	4.6	24	6.2
16	10	11	11	15	41	27	61	7.6	6.2	7.9	15	5.1
17	7.3	11	17	14	53	22	e61	6.7	4.8	36	7.5	5.1
18	7.2	10	13	14	48	26	e58	8.4	5.5	7.7	7.8	6.2
19	8.0	11	11	13	33	44	e56	6.8	4.9	6.5	6.6	5.4
20	7.0	10	10	10	27	39	e53	8.5	4.6	6.4	5.2	4.8
21	6.7	10	8.6	11	27	58	e51	7.2	4.5	26	3.5	4.7
22	7.5	10	8.1	12	28	43	e48	8.5	4.5	9.8	4.1	6.9
23	5.9	9.2	7.6	12	35	60	e46	8.8	4.4	8.9	20	6.8
24	5.3	8.9	7.9	12	43	86	e43	8.1	4.4	24	7.3	5.0
25	4.6	9.2	8.1	12	46	118	e40	8.7	4.6	11	5.3	4.9
26	5.1	10	7.8	12	47	141	e38	8.5	3.7	9.4	5.0	5.2
27	4.8	11	6.5	10	43	123	e35	8.1	4.3	6.6	4.0	9.6
28	5.3	9.0	8.6	10	56	148	e33	7.9	3.6	4.4	2.8	6.4
29	5.8	7.8	28	9.9	---	118	e31	8.2	3.4	3.7	2.6	6.0
30	6.1	7.9	18	9.7	---	152	e28	6.5	3.0	3.3	2.2	6.8
31	4.1	---	13	11	---	184	---	5.8	---	2.6	2.3	---
TOTAL	431.7	373.4	284.6	516.6	753	3212	3045	342.9	181.6	244.4	337.7	229.9
MEAN	13.9	12.4	9.18	16.7	26.9	104	101	11.1	6.05	7.88	10.9	7.66
MAX	61	43	28	52	56	445	230	25	11	36	40	30
MIN	4.1	4.5	5.5	9.7	11	22	28	5.8	3.0	2.6	2.0	2.1
AC-FT	856	741	565	1020	1490	6370	6040	680	360	485	670	456

CAL YR	1990	TOTAL	2957.49	MEAN	8.10	MAX	69	MIN	.86	AC-FT	5870
WTR YR	1991	TOTAL	9952.8	MEAN	27.3	MAX	445	MIN	2.0	AC-FT	19740

e Estimated

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM

LOCATION.--Lat 33°14'48", long 108°52'47", in NE¼NW¼ sec.23, T.12 S., R.20 W., Catron County, Hydrologic Unit 15040004, on left bank 0.2 mi upstream from hot springs, 5 mi south of Glenwood, 6 mi downstream from Whitewater Creek, and at mile 511.5.

DRAINAGE AREA.--1,653 mi².

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1931, 1934, 1936-37, 1940-42, 1943-44(M), 1945-47. WSP 1283: Drainage area. WDR NM-78-1: 1977. WDR NM-79-1: 1973, 1975-77 (P).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 4,560 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Feb. 15, 1934, at site 4.5 mi upstream at datum 98.82 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 2,000 acres upstream from station.

AVERAGE DISCHARGE.--64 years, 84.8 ft³/s, 61,440 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,100 ft³/s, Oct. 2, 1983, gage height, 18.15 ft recorded, 20.80 ft from outside floodmarks, from rating curve extended above 4,200 ft³/s on basis of slope-area measurements at gage heights 10.74 ft, 15.6 ft and 20.8 ft; minimum, 1.5 ft³/s Aug. 6, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred Jan. 19 and Oct. 14, 1916 when discharges of 60,000 ft³/s or greater were computed for station at Clifton, AZ. On Nov. 26, 1905, a peak of 25,000 ft³/s was measured (by float-area method) at station at Alma (about 12 mi upstream, drainage area, 1,560 mi²); a similar measurement of 21,000 ft³/s was made at the Alma station for peak of Dec. 3, 1906.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 30	unknown	1,560	4.55	Mar. 6	2215	2,190	5.26
Jan. 6	1600	1,000	4.11	Mar. 29	0445	855	3.65
Mar. 2	0615	*7,320	*8.93	Apr. 7	2130	839	3.65

Minimum discharge, 15 ft³/s, Sept. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	31	39	e240	67	2520	637	129	69	26	30	74
2	58	34	37	e170	68	4460	684	129	65	24	62	55
3	52	36	36	134	67	1580	680	122	54	24	46	43
4	52	38	33	130	68	1030	677	108	51	24	45	34
5	51	39	33	603	66	982	705	101	48	28	43	408
6	48	40	32	776	67	1360	759	101	59	28	133	505
7	44	48	31	833	65	1570	799	102	55	27	90	394
8	38	97	27	490	64	875	754	112	54	28	192	219
9	33	95	26	357	65	607	639	138	48	31	139	138
10	32	74	25	290	67	516	553	151	50	28	128	224
11	32	62	24	234	68	467	493	148	56	26	124	217
12	30	54	24	200	78	441	441	141	56	26	e100	159
13	31	50	25	176	80	398	388	127	49	26	e75	112
14	29	47	25	156	78	364	344	124	43	28	58	86
15	30	45	28	140	93	323	289	121	38	30	95	68
16	31	43	31	128	122	294	250	115	35	31	103	53
17	25	42	149	117	167	265	229	109	35	26	205	44
18	22	41	96	110	355	239	230	106	33	29	159	39
19	23	40	66	101	380	235	230	103	32	27	112	38
20	26	40	61	96	289	248	229	104	32	25	91	37
21	32	41	62	91	267	256	234	107	29	50	70	35
22	29	40	59	88	285	266	232	106	28	37	54	33
23	30	40	e60	86	313	261	221	104	28	56	35	34
24	29	40	e60	83	340	359	209	91	25	41	63	35
25	31	40	e60	82	353	559	194	86	26	39	68	29
26	32	42	e60	79	347	574	187	86	28	59	66	29
27	32	41	e62	78	326	685	182	84	30	50	59	33
28	32	42	e175	75	508	748	172	77	30	33	73	36
29	32	41	e362	76	---	791	159	76	30	28	59	39
30	32	40	e824	73	---	736	145	72	28	30	78	38
31	31	---	e397	69	---	665	---	68	---	30	110	---
TOTAL	1071	1403	3029	6361	5113	24674	11945	3348	1244	995	2765	3288
MEAN	34.5	46.8	97.7	205	183	796	398	108	41.5	32.1	89.2	110
MAX	58	97	824	833	508	4460	799	151	69	59	205	505
MIN	22	31	24	69	64	235	145	68	25	24	30	29
AC-FT	2120	2780	6010	12620	10140	48940	23690	6640	2470	1970	5480	6520

CAL YR	1990	TOTAL	13572	MEAN	37.2	MAX	824	MIN	14	AC-FT	26920
WTR YR	1991	TOTAL	65236	MEAN	179	MAX	4460	MIN	22	AC-FT	129400

e Estimated

09444200 BLUE RIVER NEAR CLIFTON, AZ

LOCATION.--Lat 33°17'27", long 109°11'44", in sec.6, T.2 S., R.31 E. (unsurveyed), Greenlee County, Hydrologic Unit 15040004, in Apache National Forest, on right bank 0.1 mi downstream from county road crossing, 0.9 mi upstream from Clear Creek, 8 mi upstream from mouth, and 17 mi northeast of Clifton.

DRAINAGE AREA.--506 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1967 to September 1991 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 4,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--23 years (water years 1969-91), 76.2 ft³/s, 55,210 acre-ft/yr; median of yearly mean discharges, 43 ft³/s, 31,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s Oct. 20, 1972, gage height, 22.56 ft, from rating curve extended above 960 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 1.4 ft³/s Oct. 18-20, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 6	0930	819	7.36	Mar. 6	1430	939	7.57
Mar. 2	0300	*3,820	*11.09				

Minimum daily discharge, 5.8 ft³/s July 1, 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174	15	21	172	68	1690	191	138	24	5.8	27	87
2	152	83	21	148	67	1220	174	135	24	5.8	50	86
3	112	103	19	137	65	561	186	134	24	5.9	37	94
4	81	47	18	169	64	486	203	129	22	8.2	54	110
5	61	34	18	401	64	467	211	121	18	31	105	382
6	47	30	17	708	60	749	221	116	17	44	109	242
7	40	95	17	675	61	634	254	117	15	39	61	125
8	33	77	17	440	61	420	246	118	14	21	117	72
9	31	43	17	297	60	254	203	129	13	14	76	51
10	29	36	17	229	59	221	170	132	13	12	76	43
11	27	32	17	197	58	208	130	129	14	13	87	37
12	23	29	17	170	72	202	147	119	15	18	56	31
13	21	27	18	142	83	191	151	109	15	13	53	29
14	21	26	79	124	84	176	180	102	14	11	58	26
15	19	25	62	116	91	155	171	96	12	11	122	23
16	19	24	263	105	102	168	194	91	11	10	90	19
17	18	23	364	101	209	178	193	84	10	11	77	16
18	18	23	171	94	363	180	186	78	9.3	11	75	16
19	17	23	114	89	182	177	182	72	8.4	8.4	74	16
20	16	23	92	83	121	194	180	65	8.1	7.3	60	16
21	16	23	88	82	115	191	199	60	7.5	7.0	68	15
22	16	24	84	78	118	197	198	56	7.4	7.3	74	15
23	16	24	e47	76	123	256	171	52	7.4	11	85	16
24	16	24	e44	73	131	202	161	46	7.1	12	74	15
25	16	24	e48	70	135	197	153	42	6.9	15	74	13
26	16	23	e48	71	134	222	149	37	6.8	28	115	13
27	15	23	e45	74	134	310	142	33	6.6	18	106	13
28	15	23	125	71	466	382	162	29	6.6	14	101	13
29	15	22	417	73	---	285	156	25	6.3	14	110	12
30	15	21	520	62	---	222	147	23	6.0	16	120	12
31	15	---	237	65	---	167	---	23	---	15	108	---
TOTAL	1130	1049	3082	5392	3350	11162	5411	2640	369.4	457.7	2499	1658
MEAN	36.5	35.0	99.4	174	120	360	180	85.2	12.3	14.8	80.6	55.3
MAX	174	103	520	708	466	1690	254	138	24	44	122	382
MIN	15	15	17	62	58	155	130	23	6.0	5.8	27	12
AC-FT	2240	2080	6110	10700	6640	22140	10730	5240	733	908	4960	3290
CAL YR 1990	TOTAL	11019.4	MEAN	30.2	MAX	520	MIN	2.4	AC-FT	21860		
WTR YR 1991	TOTAL	38200.1	MEAN	105	MAX	1690	MIN	5.8	AC-FT	75770		

e Estimated

GILA RIVER BASIN

09444200 BLUE RIVER NEAR CLIFTON, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1989 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
NOV 27...	0900	22	500	8.5	7.5	6.0	1.0	650	10.7
JAN 06...	1400	782	240	8.5	14.0	7.5	300	656	10.5
MAR 20...	1530	202	313	8.3	14.0	11.0	22	640	8.9
MAY 20...	1500	56	331	8.5	27.5	20.0	5.0	647	7.4
JUL 22...	1130	7.1	536	8.8	28.0	26.0	3.9	656	7.0
SEP 06...	1000	326	302	8.4	24.0	19.0	310	657	7.8

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
NOV 27...	101	203	6	176	312	<1	<0.010	<0.100	0.040
JAN 06...	102	100	0	82	176	930	0.020	<0.100	0.020
MAR 20...	96	147	0	120	209	61	<0.010	<0.050	<0.010
MAY 20...	97	151	3	130	203	36	0.010	<0.050	<0.010
JUL 22...	101	178	10	162	204	13	<0.010	<0.050	<0.010
SEP 06...	98	143	0	118	189	1220	<0.020	<0.120	0.020

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
NOV 27...	0.36	0.40	0.050	0.18	0.060	--	--	--
JAN 06...	0.38	0.40	0.500	0.58	0.190	--	--	--
MAR 20...	--	0.30	0.130	0.34	0.110	--	--	--
MAY 20...	--	0.50	0.040	0.18	0.060	<1	<10	3
JUL 22...	--	0.20	0.070	0.06	0.020	<1	<10	3
SEP 06...	0.18	0.20	1.70	0.46	0.150	<1	<10	78

< Actual value is known to be less than value shown.

09444500 SAN FRANCISCO RIVER AT CLIFTON, AZ

LOCATION.--Lat 33°02'58", long 109°17'43", in SW¼SE¼ sec.30, T.4 S., R.30 E., Greenlee County, Hydrologic Unit 15040004, on downstream side of right pier at Railroad Boulevard Bridge (U.S. Highway 666), at Clifton, 9.9 mi upstream from mouth.

DRAINAGE AREA.--2,766 mi², of which 2 mi² is noncontributing.

PERIOD OF RECORD.--October 1910 to March 1911, July 1911 to June 1912, September 1912, November 1912 to March 1913, May 1913 to July 1918, July 1927 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "San Francisco River at dam above Clifton" in 1911 and under both names in 1912.

REVISED RECORDS.--WSP 1049: 1911, 1913-15, 1917. WSP 1283: Drainage area. WSP 1313: 1927-30(M), 1932(M), 1934(M). WRD Ariz. 1972: 1917(M).

GAGE.--Water-stage recorder. Datum of gage is 3,436.16 ft above National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Apr. 7, 1959. Apr. 7, 1959, to Mar. 23, 1961, at site 1,140 ft downstream at datum 5.37 ft lower. July 18, 1980 to July 28, 1983, supplementary water-stage recorder 0.4 mi upstream on right bank at same datum and June 15, 1981 to Sept. 30, 1983, crest-stage gages at site. Aug. 4, 1983 to Mar. 1, 1985, supplementary water-stage recorder on right bank at main gage site at same datum.

REMARKS.--Records good. Diversions for mining, municipal use, and for irrigation of about 2,700 acres above station.

AVERAGE DISCHARGE.--67 years (water years 1914-15, 1917, 1928-91) 212 ft³/s, 153,600 acre-ft/yr; median of yearly mean discharges, 130 ft³/s, 94,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,900 ft³/s Oct. 2, 1983, gage height, 19.72 ft, from high-water mark, from rating curve extended above 30,000 ft³/s on basis of slope-area measurement at gage height 17.0 ft; minimum daily, 6.1 ft³/s June 21, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 30	1145	3,070	5.57	Mar. 7	1315	3,070	4.79
Jan. 7	0630	1,980	4.87	Sept. 6	1000	2,040	3.99
Mar. 2	0615	*13,800	*8.90	Sept. 10	0515	2,410	4.30

Minimum daily discharge, 38 ft³/s July 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	61	82	655	118	4190	1090	315	122	49	66	169
2	467	77	82	483	116	9930	1090	297	124	45	99	125
3	286	176	79	389	113	3690	1110	294	118	44	252	104
4	215	131	78	352	110	2520	1090	286	105	42	126	112
5	167	106	76	856	107	2170	1110	269	e100	48	199	1450
6	142	97	75	1640	106	2370	1180	255	e99	63	269	1680
7	125	114	74	1820	104	2720	1290	249	e98	64	254	840
8	112	255	74	1300	102	1950	1310	242	e97	58	276	508
9	102	172	73	881	100	1400	1160	272	e95	63	248	324
10	94	154	72	639	100	1180	1030	320	e92	60	283	1310
11	89	131	72	511	100	986	951	339	e90	53	305	754
12	85	116	71	437	115	899	861	332	e87	40	241	493
13	79	108	77	382	136	806	773	309	e84	38	175	355
14	75	103	132	341	126	734	693	280	e82	46	143	276
15	71	100	174	310	121	660	613	269	e79	56	284	226
16	69	97	166	286	133	607	543	260	e78	62	360	191
17	68	94	652	270	166	543	506	242	e70	64	295	164
18	65	93	416	246	511	497	491	227	e68	57	349	148
19	62	91	314	225	655	478	501	216	e59	54	262	139
20	60	89	256	208	479	494	499	210	61	50	239	132
21	53	89	252	197	408	533	502	205	55	49	187	124
22	57	93	255	187	378	582	515	197	52	60	178	116
23	58	89	233	178	373	689	497	195	54	67	242	110
24	55	88	185	167	386	775	470	191	53	78	196	109
25	58	87	174	157	399	928	437	172	48	81	145	103
26	62	89	166	150	403	1080	418	154	47	101	137	83
27	65	95	157	144	392	1340	411	151	49	113	225	78
28	65	92	203	139	477	1370	392	144	51	94	165	88
29	65	87	1430	134	---	1470	374	135	52	74	157	85
30	63	84	2580	132	---	1280	346	128	50	71	160	84
31	57	---	1260	125	---	1180	---	121	---	75	187	---
TOTAL	3316	3258	9990	13941	6834	50051	22253	7276	2319	1919	6704	10480
MEAN	107	109	322	450	244	1615	742	235	77.3	61.9	216	349
MAX	467	255	2580	1820	655	9930	1310	339	124	113	360	1680
MIN	53	61	71	125	100	478	346	121	47	38	66	78
AC-FT	6580	6460	19820	27650	13560	99280	44140	14430	4600	3810	13300	20790
CAL YR 1990	TOTAL	37183	MEAN	102	MAX	2580	MIN	25	AC-FT	73750		
WTR YR 1991	TOTAL	138341	MEAN	379	MAX	9930	MIN	38	AC-FT	274400		

e Estimated

GILA RIVER BASIN

09444600 SAN FRANCISCO RIVER NEAR CLIFTON, AZ

LOCATION.--Lat 33°00'26", long 109°18'52", in NE&SW&SE& sec.12, T.5 S., R.29, E., Greenlee County, Hydrologic Unit 15040004, 2.9 mi downstream from Clifton sewage treatment facility, 3.3 mi south of Clifton, and 5.7 mi upstream from mouth.

DRAINAGE AREA.--2,770 mi², approximately.

PERIOD OF RECORD.--January 1976 to September 1979, October 1980 to March 1984, October 1986 to September 1988, February 1990 to current year.

REMARKS.--Streamflow ungaged. Gaging station 09444500, San Francisco River at Clifton, located 4.0 mi upstream. Prior to October 1986, samples taken at site 2.0 mi upstream; records equivalent.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)
NOV 27...	1430	105	1080	8.6	13.0	11.0	5.6	673	9.3	96	<10	K5
JAN 07...	1030	1860	240	8.4	16.5	7.0	280	679	10.8	100	61	<10
MAR 06...	1430	2390	257	8.3	16.5	10.5	290	652	9.2	97	60	K170
MAY 21...	0700	201	638	8.3	27.0	18.0	3.8	668	8.3	101	16	150
JUL 23...	0900	70	1430	8.4	41.5	28.0	26	676	8.1	118	12	880
SEP 06...	1400	1550	296	8.2	25.0	22.5	700	652	7.0	95	160	2400

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3 CO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV 27...	--	220	72	67	12	140	4	7.9	164	6	145	17
JAN 07...	K10000	89	15	25	6.5	17	0.8	1.7	91	0	74	18
MAR 06...	1400	100	26	28	7.4	19	0.8	2.2	91	0	75	21
MAY 21...	44	140	24	44	8.4	74	3	4.7	141	3	121	19
JUL 23...	500	240	83	75	12	170	5	11	173	7	154	29
SEP 06...	10000	78	5	23	5.1	15	0.7	2.4	89	0	73	14

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)
NOV 27...	240	0.40	604	571	0.82	5	--	<0.010	<0.100	0.040	--
JAN 07...	15	0.30	159	128	0.22	393	--	0.030	<0.100	0.040	0.46
MAR 06...	17	0.30	223	140	0.30	<1	0.042	0.020	0.062	0.020	0.38
MAY 21...	130	0.50	382	353	0.52	37	--	0.010	<0.050	0.010	0.29
JUL 23...	320	0.90	788	710	1.07	105	0.059	0.020	0.079	0.010	0.39
SEP 06...	15	0.20	137	119	0.19	2210	--	<0.010	0.250	<0.010	--

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

GILA RIVER BASIN

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09444600 SAN FRANCISCO RIVER NEAR CLIFTON, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)
NOV 27...	<0.20	--	--	0.050	0.15	0.050	<1	2	3	48	<10
JAN 07...	0.50	--	--	0.160	0.49	0.160	1	1	2	8	<10
MAR 06...	0.40	0.46	2.0	0.540	0.49	0.160	<1	1	<1	25	<10
MAY 21...	0.30	--	--	0.050	0.09	0.030	<1	2	3	28	<10
JUL 23...	0.40	0.48	2.1	0.220	0.09	0.030	<1	3	3	67	<10
SEP 06...	1.3	1.5	6.9	2.80	0.40	0.130	<1	2	2	11	<10
DATE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 27...	80	4	<1.0	<1	<1	10	3	290	<3	3	<1
JAN 07...	20	<1	<1.0	15	<1	40	8	16000	44	15	<1
MAR 06...	10	<1	<1.0	19	<1	12	12	22000	660	19	1
MAY 21...	50	<1	<1.0	2	<1	6	2	330	8	2	<1
JUL 23...	90	<1	<1.0	5	<1	87	10	2000	10	6	<1
SEP 06...	20	2	<1.0	40	1	140	7	42000	15	66	1
DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 27...	30	5	<0.10	1	<1	<1	<1.0	<10	<3	104	29
JAN 07...	600	4	0.20	36	<1	<1	<1.0	60	<3	885	4440
MAR 06...	730	38	0.10	57	<1	<1	<1.0	90	8	--	--
MAY 21...	10	4	<0.10	5	<1	<1	<1.0	<10	4	--	--
JUL 23...	160	17	2.5	7	<1	<1	1.0	30	3	122	23
SEP 06...	1900	2	0.60	91	<1	<1	<1.0	200	<3	2820	11800

< Actual value is known to be less than value shown.

GILA RIVER BASIN

09445000 WILLOW CREEK DIVERSION FROM BLACK RIVER, NEAR MORENCI, AZ

LOCATION.--Lat 33°24'46", long 109°43'08", in SW¼ sec.23, T.1 N., R.25 E. (unsurveyed), Graham County, Hydrologic Unit 15040005, in San Carlos Indian Reservation, on left bank just downstream from end of diversion pipeline, 3.6 mi northeast of Point of Pines, 5.0 mi southeast of pumping plant on Black River, and 29 mi northwest of Morenci.

PERIOD OF RECORD.--April 1945 to current year.

GAGE.--Water-stage recorder and steel-edged rectangular weir. Datum of gage is 5,957.16 ft above National Geodetic Vertical Datum of 1929. Prior to June 26, 1946, at end of pipeline at that time, 3.5 mi upstream at datum about 50 ft higher.

REMARKS.--No estimated daily discharges. Records good. The entire flow consists of Black River (head of Salt River) water which is pumped into headwater of Willow Creek (tributary of Eagle Creek) for industrial and municipal supply in vicinity of Morenci.

AVERAGE DISCHARGE.--46 years, 11.5 ft³/s, 8,330 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 28 ft³/s May 18, 19, 21-26, 1970; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	11	6.4	4.4	4.4	4.1	4.5	9.6	13	14	14	15
2	9.3	9.9	9.6	4.5	4.5	3.9	4.4	9.8	13	14	14	15
3	9.7	9.9	9.5	4.5	4.5	4.3	4.4	9.6	13	14	14	15
4	9.7	9.9	6.4	4.6	4.5	4.4	4.4	9.5	13	14	14	15
5	9.6	9.9	9.5	4.5	4.6	4.5	4.4	9.4	13	14	14	14
6	9.4	9.9	9.7	4.4	4.6	4.4	4.4	9.7	13	14	14	12
7	9.6	9.9	9.3	4.5	4.6	4.4	4.3	9.6	13	14	14	13
8	9.6	9.9	8.7	4.6	3.0	4.5	4.4	9.7	13	14	14	13
9	9.6	9.9	9.3	4.6	4.6	4.4	1.3	9.9	13	14	14	14
10	9.7	9.9	9.7	4.6	4.6	4.5	.00	10	13	14	14	17
11	9.4	9.9	9.7	4.6	4.6	4.6	.00	9.9	13	14	14	18
12	9.7	9.9	9.7	4.6	4.6	4.6	.00	9.9	13	14	14	18
13	9.9	9.9	9.7	4.6	4.6	4.6	.00	9.9	13	14	14	16
14	9.7	9.9	9.7	4.6	4.6	4.6	.87	10	13	14	14	13
15	9.9	9.9	9.5	4.6	4.6	4.6	4.2	10	13	14	14	14
16	9.9	9.9	9.4	3.5	4.6	4.6	6.8	10	13	14	14	14
17	9.9	9.9	8.8	4.6	4.6	4.6	8.9	12	13	14	14	14
18	9.9	9.9	9.3	4.6	4.6	4.6	8.8	14	14	14	14	14
19	9.7	9.9	9.4	4.6	4.6	4.6	8.8	14	14	14	14	14
20	9.7	9.9	8.5	4.6	4.6	4.7	8.8	14	14	14	14	14
21	9.7	9.9	2.6	4.6	4.6	3.0	8.9	14	14	14	14	14
22	9.6	9.9	3.3	4.6	4.6	4.6	8.9	14	14	14	14	14
23	9.8	9.9	4.6	4.6	4.6	4.6	8.9	13	13	14	15	14
24	9.9	9.9	4.6	4.4	4.6	4.5	9.1	13	13	14	14	14
25	9.9	9.9	4.5	4.4	4.6	4.6	9.4	13	13	14	14	14
26	9.9	9.9	4.4	4.6	4.6	4.6	9.5	13	13	14	14	14
27	9.9	9.9	4.4	4.6	4.6	4.6	9.6	13	13	14	15	14
28	9.9	9.9	4.4	4.6	4.6	4.5	9.6	13	14	14	14	14
29	9.9	9.9	1.7	4.6	---	4.6	9.8	13	14	14	15	14
30	4.4	9.9	.00	4.0	---	4.6	9.7	13	14	14	14	14
31	4.8	---	1.1	4.4	---	4.6	---	13	---	14	14	---
TOTAL	291.4	298.1	217.40	139.5	126.7	138.3	177.07	355.5	398	434	437	432
MEAN	9.40	9.94	7.01	4.50	4.52	4.46	5.90	11.5	13.3	14.0	14.1	14.4
MAX	9.9	11	9.7	4.6	4.6	4.7	9.8	14	14	14	15	18
MIN	4.4	9.9	.00	3.5	3.0	3.0	.00	9.4	13	14	14	12
AC-FT	578	591	431	277	251	274	351	705	789	861	867	857
CAL YR	1990	TOTAL	2945.29	MEAN	8.07	MAX	12	MIN	.00	AC-FT	5840	
WTR YR	1991	TOTAL	3444.97	MEAN	9.44	MAX	18	MIN	.00	AC-FT	6830	

09447000 EAGLE CREEK ABOVE PUMPING PLANT, NEAR MORENCI, AZ

LOCATION.--Lat 33°03'52", long 109°26'30", in SW¼SE¼ sec.23, T.4 S., R.28 E., Greenlee County, Hydrologic Unit 15040005, on right bank 2 mi upstream from Phelps Dodge Corp. pumping plant, 5 mi west of Morenci, and 12 mi upstream from mouth.

DRAINAGE AREA.--622 mi².

PERIOD OF RECORD.--April 1944 to current year.

REVISED RECORDS.--WSP 1850-C; 1966. WDR AZ-88-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,673.5 ft above National Geodetic Vertical Datum of 1929. Oct. 25, 1984 to Mar. 6, 1986, at site 1 mi upstream at datum 24.1 ft higher. Prior to Oct. 25, 1984, at various sites within 1 mi upstream from present site at different datums. Aug. 23, 1950 to Aug. 1, 1981, and since Mar. 6, 1984, supplementary gages at various sites within 1 mi upstream from present site at different datums.

REMARKS.--Records fair. Diversions above station for irrigation of about 500 acres, mostly above Willow Creek. Water from Black River was pumped into Eagle Creek basin, 52 mi upstream from this station, for the entire year and water was pumped from wells into Eagle Creek near Double Circle Ranch below Willow Creek for 7 months. The monthly quantities pumped are shown in table below. Diversion by pumping for industrial and municipal use in and near Morenci and Clifton are made from Eagle Creek, 3 mi downstream from this station and from San Francisco River near Clifton. Monthly quantities diverted are shown in the table below; 98 percent of the pumpage was from Eagle Creek.

AVERAGE DISCHARGE (unadjusted).--47 years, 58.7 ft³/s, 42,530 acre-ft/yr; median of yearly mean discharges, 38 ft³/s, 27,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,400 ft³/s Oct. 2, 1983, gage height, 13.04 ft, from rating curve extended above 730 ft³/s on basis of slope-area measurements at gage heights 10.5 ft and 13.04 ft; minimum, 2.9 ft³/s June 25, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*)

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 30	0945	1,580	5.83	Aug. 15	0430	967	5.32
Mar. 2	0430	*13,500	*11.59	Sept. 6	0215	3,120	7.00

Minimum daily discharge, 24 ft³/s Nov. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	25	32	171	34	3960	263	42	39	36	39	72
2	34	24	33	118	34	7030	257	43	38	35	39	66
3	34	30	33	91	33	2240	250	42	39	36	37	64
4	31	30	34	95	33	1010	230	42	37	56	37	55
5	30	29	34	399	33	703	214	41	35	49	65	244
6	29	29	34	527	33	709	204	41	37	34	60	1170
7	29	29	34	465	33	564	197	40	38	33	39	161
8	29	30	35	253	33	363	190	40	37	33	56	76
9	28	30	34	166	33	266	170	40	36	34	40	54
10	28	29	33	119	33	215	150	40	36	35	40	44
11	28	27	36	97	33	174	133	40	40	36	39	36
12	28	27	35	90	35	149	112	41	40	35	38	32
13	27	28	37	85	36	133	97	40	39	36	37	31
14	27	30	41	80	35	118	91	40	38	38	38	30
15	26	30	42	77	33	104	78	40	36	39	345	30
16	26	29	43	74	34	99	73	39	35	39	106	30
17	26	29	78	73	34	94	67	39	35	38	72	29
18	26	30	90	67	48	85	66	39	35	38	110	29
19	26	31	67	59	61	81	66	39	36	36	73	29
20	26	31	56	52	55	83	65	40	35	36	51	29
21	26	31	54	e48	49	93	65	40	34	36	50	30
22	26	31	45	45	46	117	65	39	33	38	49	30
23	26	31	40	42	43	169	64	39	34	60	51	30
24	26	31	36	40	42	437	62	41	34	65	49	30
25	26	32	36	39	41	445	60	41	35	67	97	28
26	26	32	38	37	38	381	58	40	35	98	101	28
27	26	32	38	37	35	483	55	41	35	76	111	29
28	25	32	38	37	43	437	54	39	37	44	69	28
29	25	32	275	36	---	539	47	39	38	39	59	28
30	25	32	1110	36	---	382	43	43	38	39	102	28
31	25	---	340	35	---	303	---	43	---	39	88	---
TOTAL	850	893	2911	3590	1073	21966	3546	1253	1094	1353	2187	2600
MEAN	27.4	29.8	93.9	116	38.3	709	118	40.4	36.5	43.6	70.5	86.7
MAX	34	32	1110	527	61	7030	263	43	40	98	345	1170
MIN	25	24	32	35	33	81	43	39	33	33	37	28
AC-FT	1690	1770	5770	7120	2130	43570	7030	2490	2170	2680	4340	5160
(*)	679	535	434	526	415	332	767	983	1000	1090	685	540
(**)	1160	1370	1380	1490	1240	1140	1120	1500	1460	1720	1440	1370

CAL YR	1990	TOTAL	11678	MEAN	32.0	MAX	1110	MIN	17	AC-FT	23160	*	7760	**	13990
WTR YR	1991	TOTAL	43316	MEAN	119	MAX	7030	MIN	24	AC-FT	85920	*	7990	**	16390

e Estimated

* Pumpage, in acre-feet, into Eagle Creek from Eagle Creek wells.

** Pumpage, in acre-feet, to Clifton and Morenci, from San Francisco River and Eagle Creek.

09447800 BONITA CREEK NEAR MORENCI, AZ

LOCATION.--Lat 32°57'20", long 109°31'50", in SE¼NW¼ sec.36, T.5 S., R.27 E., Graham County, Hydrologic Unit 15040005, on left bank 2.0 mi upstream from intake of City of Safford water supply, 6.3 mi upstream from mouth, and 12.8 mi southwest of Morenci.

DRAINAGE AREA.--302 mi².

PERIOD OF RECORD.--August 1981 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,500 ft above National Geodetic Vertical Datum of 1929, from topographic map. Two crest-stage gages 440 ft upstream on right and left banks.

REMARKS.--Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--10 years, 9.33 ft³/s, 6,760 acre-ft/yr; median of yearly mean discharge, 7.0 ft³/s, 5,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,400 ft³/s Oct. 2, 1983, gage height, 17.3 ft, from rating curve extended above 560 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 0.66 ft³/s Aug. 31, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 20, 1972, 10,000 ft³/s, from slope-area measurement made by City of Safford at site about 2 mi downstream. Flood of June 27, 1981, 1,340 ft³/s, from slope-area measurement at present site, gage height, 5.6 ft, from floodmark.

EXTREMES FOR CURRENT PERIOD.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	0800	1,580	5.99	Sept. 5	2400	*3,220	*7.89
Aug. 26	1915	692	4.67				

Minimum daily discharge, 1.3 ft³/s Apr. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	e4.1	4.5	13	3.6	411	3.4	2.3	1.9	1.9	3.9	e3.7
2	23	e4.2	4.1	7.8	3.6	580	3.3	2.3	1.9	1.9	3.5	e3.3
3	15	e4.1	4.2	5.7	3.5	162	2.5	2.3	1.9	1.9	3.4	e3.1
4	7.4	e4.0	4.2	4.9	3.4	57	1.9	2.3	1.9	17	3.2	e2.6
5	6.3	e4.0	4.3	52	3.4	21	1.6	2.3	1.9	17	3.1	126
6	5.6	4.1	4.2	71	3.5	9.9	1.5	2.3	1.9	9.1	3.8	238
7	5.3	4.6	4.2	34	3.8	7.1	1.4	2.3	1.9	6.9	4.3	20
8	5.0	4.4	4.3	14	4.3	5.3	1.4	2.3	1.9	5.6	4.6	e17
9	4.9	4.0	4.2	7.7	4.4	4.9	1.3	2.3	2.0	4.6	12	e12
10	5.0	4.0	4.3	5.6	4.4	4.6	1.4	2.3	2.1	4.1	7.7	e10
11	5.0	3.9	4.2	5.0	4.2	4.2	1.5	2.3	2.1	3.7	5.9	e7.0
12	4.7	3.6	4.1	4.7	4.9	3.6	1.5	2.3	2.0	3.3	5.2	e5.0
13	4.5	3.7	4.0	4.4	4.2	3.2	1.5	2.2	2.0	3.1	4.5	e3.0
14	e4.1	3.6	3.8	4.2	4.0	2.8	1.7	2.1	2.1	3.1	4.3	e2.8
15	4.1	3.5	3.6	4.1	4.0	2.5	1.8	2.0	2.0	3.1	27	e2.6
16	4.2	3.4	3.8	4.2	3.9	2.3	1.8	2.0	2.0	3.0	10	e2.6
17	4.1	3.4	4.3	4.2	4.0	2.0	1.9	2.0	1.9	2.9	6.5	e2.6
18	3.9	3.5	4.5	4.0	6.2	1.9	1.9	2.0	1.9	2.7	59	e2.5
19	4.2	3.5	4.3	4.0	5.0	1.9	2.0	2.1	1.9	2.7	9.5	e2.4
20	e4.1	3.5	4.4	4.0	4.5	1.9	2.0	2.1	1.9	2.7	12	e2.4
21	4.1	3.7	4.9	3.9	4.4	2.1	2.1	2.0	1.9	2.7	9.0	e2.3
22	4.1	3.4	4.8	3.8	4.3	2.1	2.1	1.9	1.9	2.7	6.6	e2.3
23	4.2	3.5	4.4	3.7	4.3	2.2	2.3	1.9	1.9	2.7	13	e2.3
24	e4.1	3.5	4.2	3.6	4.2	2.6	2.3	1.9	1.9	3.7	7.8	2.2
25	e4.1	3.4	4.3	3.6	4.3	2.8	2.3	1.9	1.9	3.4	63	2.0
26	e4.1	3.5	4.2	3.5	4.5	2.9	2.3	1.9	1.9	3.0	50	2.0
27	e4.1	4.3	4.3	3.5	4.5	3.0	2.3	1.9	1.9	2.8	19	2.0
28	e4.2	4.5	4.3	3.5	5.4	3.1	2.3	1.9	1.9	2.9	e9.1	1.8
29	e4.1	4.5	86	3.7	---	3.2	2.3	1.9	1.9	3.1	e6.9	1.8
30	e4.1	4.5	118	3.8	---	3.2	2.3	1.9	1.9	6.2	e5.6	1.8
31	e4.1	---	31	3.6	---	3.2	---	1.9	---	6.0	e4.1	---
TOTAL	188.7	115.9	353.9	298.7	118.7	1319.5	59.9	65.1	58.1	139.5	387.5	489.1
MEAN	6.09	3.86	11.4	9.64	4.24	42.6	2.00	2.10	1.94	4.50	12.5	16.3
MAX	23	4.6	118	71	6.2	580	3.4	2.3	2.1	17	63	238
MIN	3.9	3.4	3.6	3.5	3.4	1.9	1.3	1.9	1.9	1.9	3.1	1.8
AC-FT	374	230	702	592	235	2620	119	129	115	277	769	970

CAL YR	1990	TOTAL	2477.8	MEAN	6.79	MAX	118	MIN	2.1	AC-FT	4910
WTR YR	1991	TOTAL	3594.6	MEAN	9.85	MAX	580	MIN	1.3	AC-FT	7130

e Estimated

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, AZ

LOCATION.--Lat 32°52'06", long 109°30'38", in SE¼ sec.31, T.6 S., R.28 E., Graham County, Hydrologic Unit 15040005, on left bank 0.6 mi downstream from intake of Brown Canal, 8 mi northeast of Solomon, and 17 mi downstream from San Francisco River. Records include flow of Brown Canal, which is measured 2,000 ft downstream from intake.

DRAINAGE AREA.--7,896 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1914 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1932 and October 1940 to September 1949 published as "near Solomonsville" and October 1932 to October 1933 and May 1935 to September 1940 as "below Bonita Creek near Solomonsville."

REVISED RECORDS.--WSP 1059: 1914, 1916-17, 1923(M), 1924-25, 1927, 1929-31(M). WSP 1179: 1915, 1918-19(M). WSP 1313: 1934. WSP 1733: 1923.

GAGE.--Water-stage recorder. Datum of gage is 3,059.92 ft above National Geodetic Vertical Datum of 1929. Prior to July 8, 1980, at datum 4.96 ft higher. See WSP 1733 for history of changes prior to Jan. 1, 1941. Supplementary water-stage recorder and Parshall flume on Brown Canal.

REMARKS.--No estimated daily discharges. Records good. Records show water reaching head of Safford Valley and include water diverted to Brown Canal. Diversions above station for mining, municipal use, and for irrigation of about 17,500 acres, much of it by pumping from ground water.

COOPERATION.--Record for Brown Canal furnished by Gila Water Commissioner.

AVERAGE DISCHARGE.--77 years, 481 ft³/s, 348,500 acre-ft/yr; median of yearly mean discharges, 330 ft³/s, 239,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 132,000 ft³/s Oct. 2, 1983, gage height, 20.8 ft, from rating curve extended above 52,000 ft³/s on basis of slope-area measurements at 14.40 ft and 20.8 ft; minimum, 11 ft³/s June 25, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 31	0300	6,250	10.66	Sept. 6	0200	7,770	11.26
Mar. 2	0815	*26,200	*14.38	Sept. 10	1430	4,320	9.97

Minimum daily discharge, 77 ft³/s July 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295	176	232	2900	399	4770	2230	654	259	93	182	546
2	738	180	227	1960	389	18600	2130	600	249	90	230	474
3	591	253	220	1580	377	12000	2210	587	247	86	322	401
4	498	282	220	1310	365	6520	2150	561	232	82	330	369
5	419	232	218	1620	349	5590	2170	530	221	111	276	1620
6	365	219	216	2550	344	5570	2290	534	211	116	547	4730
7	325	225	218	3360	344	6330	2470	522	199	109	571	1640
8	290	367	223	3220	338	5700	2600	505	192	101	535	1320
9	255	336	222	2520	336	4340	2440	509	181	96	609	993
10	238	305	214	1880	326	3370	2160	535	174	98	669	2810
11	231	284	210	1580	317	2720	1950	551	170	92	638	2000
12	221	263	209	1390	337	2250	1740	561	177	86	661	1240
13	216	249	220	1210	371	2050	1570	566	178	80	587	857
14	206	248	233	1070	381	1900	1440	550	172	77	480	695
15	197	243	296	950	394	1690	1310	527	166	86	1080	583
16	192	238	284	878	452	1540	1170	514	158	99	741	516
17	189	230	651	830	513	1440	1060	507	152	106	536	465
18	185	220	689	758	854	1320	992	494	142	105	735	473
19	187	212	799	696	1360	1180	948	475	131	94	866	408
20	189	210	782	633	1440	1140	925	453	124	90	1220	369
21	182	211	665	591	1270	1180	909	437	123	87	786	337
22	175	212	600	551	1160	1260	925	410	116	83	634	313
23	175	213	550	539	1110	1350	934	385	113	109	620	296
24	174	212	485	521	1110	1660	909	371	110	129	613	291
25	170	210	448	503	1130	1980	876	358	103	183	579	279
26	170	211	415	487	1140	2180	832	343	93	384	601	259
27	181	224	389	465	1130	2560	798	338	91	293	687	236
28	181	229	395	444	1120	2490	761	320	92	265	716	226
29	177	230	1150	428	---	2820	711	302	95	199	672	221
30	176	232	4680	425	---	2530	685	280	94	199	583	213
31	173	---	4800	414	---	2450	---	270	---	209	607	---
TOTAL	7961	7156	21160	38263	19156	112480	44295	14549	4765	4037	18913	25180
MEAN	257	239	683	1234	684	3628	1476	469	159	130	610	839
MAX	738	367	4800	3360	1440	18600	2600	654	259	384	1220	4730
MIN	170	176	209	414	317	1140	685	270	91	77	182	213
AC-FT	15790	14190	41970	75890	38000	223100	87860	28860	9450	8010	37510	49940
CAL YR	1990	TOTAL	85718	MEAN	235	MAX	4800	MIN	33	AC-FT	170000	
WTR YR	1991	TOTAL	317915	MEAN	871	MAX	18600	MIN	77	AC-FT	630600	

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY NEAR SOLOMON, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1976 to October 1981, October 1988 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV 26...	1500	205	820	8.7	11.0	14.0	24	670	9.1	101	14	K13
JAN 08...	1630	3200	260	8.1	10.0	8.0	300	679	10.8	102	74	<10
MAR 05...	1000	5550	269	8.2	18.5	11.0	40	653	9.7	103	99	K100
MAY 21...	1445	428	610	8.5	28.0	24.0	39	670	7.3	99	16	K24
JUL 24...	0900	108	1120	8.4	32.0	27.0	22	682	8.3	117	<10	K92
SEP 05...	0830	358	686	8.5	22.0	23.0	65	682	7.2	95	28	430

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
------	---	--	--	---	---	---	--	--	--	---	--	--

NOV 26...	K120	190	36	58	12	110	3	6.2	185	4	158	49
JAN 08...	>10000	91	12	26	6.4	22	1	1.9	97	0	79	23
MAR 05...	K300	89	33	26	5.9	19	0.9	3.5	68	0	56	20
MAY 21...	K34	140	10	43	9.0	65	2	4.3	158	3	134	43
JUL 24...	1500	230	76	69	14	140	4	7.7	173	7	153	74
SEP 05...	880	150	11	47	8.9	69	2	4.9	166	4	142	45

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDEED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)
NOV 26...	150	0.80	515	481	0.70	58	--	<0.010	0.200	0.040	0.46
JAN 08...	21	0.50	209	149	0.28	974	0.180	0.020	0.200	0.020	0.38
MAR 05...	12	0.50	182	120	0.25	2110	0.190	0.020	0.210	0.020	0.68
MAY 21...	83	1.1	365	329	0.50	89	0.210	0.020	0.230	0.030	0.27
JUL 24...	230	1.3	668	628	0.91	51	--	<0.030	<0.050	0.010	0.29
SEP 05...	77	1.1	366	339	0.50	334	0.290	0.020	0.310	<0.010	--

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY NEAR SOLOMON, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)
NOV 26...	0.50	0.70	3.1	0.090	0.15	0.050	--	2	3	52	--
JAN 08...	0.40	0.60	2.7	0.130	0.40	0.130	--	1	2	10	--
MAR 05...	0.70	0.91	4.0	0.460	0.43	0.140	<1	4	1	23	<10
MAY 21...	0.30	0.53	2.3	0.140	0.15	0.050	<1	3	3	29	<10
JUL 24...	0.30	--	--	0.140	0.15	0.050	<1	3	3	56	<10
SEP 05...	0.40	0.71	3.1	0.170	0.28	0.090	<1	2	3	40	<10

DATE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 26...	100	<1	<1.0	3	<1	15	2	1600	3	3	<1
JAN 08...	30	<1	2.0	19	<1	<1	<1	20000	79	10	1
MAR 05...	20	2	<1.0	55	<1	190	9	57000	65	80	1
MAY 21...	70	<1	<1.0	4	<1	11	4	1500	35	2	1
JUL 24...	110	<1	<1.0	<1	<1	27	6	1100	5	4	<1
SEP 05...	80	<1	<1.0	8	1	43	4	690	<3	9	<1

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 26...	70	2	<0.10	--	<1	<1	<1.0	<10	<3	226	125
JAN 08...	830	9	0.10	--	<1	<1	<1.0	90	14	--	--
MAR 05...	2000	4	0.20	90	<1	<1	<1.0	270	4	--	--
MAY 21...	40	2	0.10	4	<1	<1	<1.0	<10	3	53	61
JUL 24...	70	8	1.5	4	<1	<1	<1.0	<10	<3	81	24
SEP 05...	220	1	1.5	13	<1	<1	<1.0	40	<3	380	367

< Actual value is known to be less than value shown.

09458200 DEADMAN CREEK NEAR SAFFORD, AZ

LOCATION.--Lat 32°43'59", long 109°48'57", in SW¼ sec.17, T.8 S., R.25 E., (unsurveyed), Graham County, Hydrologic Unit 15040005, in Coronado National Forest, on left bank 9 mi southwest of Safford.

DRAINAGE AREA.--4.78 mi².

PERIOD OF RECORD.--November 1966 to September 1976, August 1986 to May 1988, September 1988 to current year.

GAGE.--Water-stage recorder and sharp-crested V-notch weir. Elevation of gage is 4,950 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion above station. City of Safford diverts water about 1,000 ft downstream for municipal supply.

AVERAGE DISCHARGE.--13 years (water years 1968-76, 1987, 1989-91), 1.48 ft³/s, 1,070 acre-ft/yr; median of yearly mean discharges, 0.84 ft³/s, 610 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 393 ft³/s, Aug. 7, 1991, gage height, 4.30 ft, from rating curve extended above 90 ft³/s on basis of computation of flow over weir, at gage height 3.25 ft; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 19, 1978, reached a discharge of 2,760 ft³/s, from slope-area measurement ¼ mi downstream from station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharges (ft ³ /s)	Gage height (ft)
Dec. 29	0130	23	2.58	Mar. 26	1315	28	2.74
Jan. 4	0945	25	2.60	July 30	0600	36	2.73
Feb. 12	1100	15	2.45	Aug. 7	2215	*393	*4.30
Mar. 1	1815	63	2.97				

No flow July 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	e1.6	.05	5.7	.94	30	6.1	4.8	6.1	.92	1.2	.93
2	8.3	e1.8	.04	4.8	.94	35	6.1	5.1	5.3	.72	.68	1.3
3	7.7	e1.7	.04	4.7	.86	18	6.1	5.1	4.6	.60	.56	1.1
4	7.0	e1.6	.03	14	.78	12	6.3	4.8	4.5	.51	.39	.89
5	6.5	e1.4	.03	15	.76	10	7.1	4.6	5.0	.43	.31	1.3
6	6.0	e1.4	.03	17	.75	11	9.0	4.6	5.3	.37	.22	1.3
7	5.5	1.1	.03	12	.78	10	11	5.4	5.4	.30	9.6	1.1
8	5.2	.66	.02	9.0	.94	8.8	12	7.5	5.5	.33	e10	.90
9	4.9	.27	.01	7.4	.81	7.6	11	11	5.6	.30	e6.0	.85
10	4.5	.16	.01	6.1	.84	6.8	9.5	12	6.0	.19	e4.6	.84
11	4.1	.12	.01	5.2	1.2	6.7	9.1	11	5.8	.13	e3.2	.80
12	3.6	.09	.01	4.5	9.2	6.9	8.1	8.8	5.7	.09	e2.7	.73
13	3.2	.08	3.1	3.7	8.4	6.3	6.9	7.9	5.5	.08	e2.0	.66
14	2.8	.08	2.8	3.0	7.0	6.0	5.7	8.3	5.2	.08	e3.0	.57
15	2.6	.07	1.6	2.6	6.2	5.6	4.9	8.2	4.8	.07	e2.8	.52
16	e2.5	.07	4.9	3.0	5.7	5.7	4.6	7.4	4.6	.05	e2.4	.48
17	e2.3	.06	4.9	3.9	6.0	5.1	4.6	7.2	4.5	.08	e2.3	.45
18	e2.3	.06	2.5	2.8	6.7	4.7	4.7	7.9	4.4	.05	e2.2	.45
19	e2.6	.05	1.6	2.5	5.5	4.8	4.8	8.3	4.5	.03	e2.2	.44
20	e2.8	.05	1.4	2.5	4.9	4.7	5.3	8.6	4.3	.06	e2.2	.41
21	e2.5	.06	1.6	2.3	4.5	6.0	6.2	9.3	3.9	.04	e2.1	.40
22	e2.3	.05	1.5	2.1	4.0	6.4	6.3	9.8	3.2	.05	e2.1	.36
23	e2.1	.04	.94	1.8	3.6	6.1	6.2	9.2	2.8	.06	e1.9	.35
24	e1.9	.04	.94	1.6	3.3	6.1	5.7	8.7	2.4	.03	e1.8	.33
25	e1.9	.03	.94	1.4	2.8	7.2	5.7	9.0	2.1	.08	e1.6	.30
26	e1.9	.29	.94	1.4	2.5	12	5.9	9.7	1.9	.03	e1.5	.29
27	e1.8	.18	.93	1.3	2.3	12	6.1	9.6	1.6	.01	e1.5	.30
28	e1.7	.08	12	1.2	8.4	11	6.0	8.9	1.5	.01	e1.4	.27
29	e1.7	.06	18	1.1	---	9.1	5.4	8.2	1.3	.00	1.2	.28
30	e1.7	.06	10	1.0	---	7.7	5.0	7.4	1.1	5.3	1.3	.27
31	e1.6	---	7.0	.96	---	6.6	---	6.9	---	2.5	1.1	---
TOTAL	113.6	13.31	77.90	145.56	100.60	295.9	201.4	245.2	124.4	13.50	76.06	19.17
MEAN	3.66	.44	2.51	4.70	3.59	9.55	6.71	7.91	4.15	.44	2.45	.64
MAX	8.3	1.8	.18	.17	9.2	35	12	12	6.1	5.3	.10	1.3
MIN	1.6	.03	.01	.96	.75	4.7	4.6	4.6	1.1	.00	.22	.27
AC-FT	225	26	155	289	200	587	399	486	247	27	151	38

CAL YR	1990	TOTAL	483.51	MEAN	1.32	MAX	90	MIN	.00	AC-FT	959
WTR YR	1991	TOTAL	1426.60	MEAN	3.91	MAX	35	MIN	.00	AC-FT	2830

e Estimated

09460150 FRYE CREEK NEAR THATCHER, AZ

LOCATION.--Lat 32°44'38", long 109°50'15", in NE¼ sec.13, T.8 S., R.24 E. (unsurveyed), Graham County, Hydrologic Unit 15040005, in Coronado National Forest, on left bank 8.5 mi southwest of Thatcher.

DRAINAGE AREA.--4.02 mi². (Area at site used 1966-76, 3.91 mi².)

PERIOD OF RECORD.--December 1966 to September 1976, December 1988 to current year.

REVISED RECORDS.--WRD Ariz. 1968: Drainage area.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 5,580 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to December 1988, at site 0.25 mi upstream at different datum.

REMARKS.--Records poor. No regulation or diversion above station. City of Safford diverts water from Frye Mesa Reservoir 1 mi downstream for municipal supply.

AVERAGE DISCHARGE.--11 years (water years 1967-76, 1990-91), 1.36 ft³/s, 985 acre-ft/yr; median of yearly mean discharge, 0.92 ft³/s, 670 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 96 ft³/s, Sept. 6, 1975, gage height, 2.14 ft, from rating curve extended above 45 ft³/s; no flow at times in most years.

EXTREMES FOR CURRENT RECORD.--Peak discharge greater than base discharge of 8.0 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 13	0645	*8.4	*1.02

Minimum daily discharge, 0.15 ft³/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.5	e.90	e.34	1.5	e1.1	e3.0	2.2	4.7	6.9	6.0	2.8	e.85
2	e3.8	e.92	e.34	1.8	e1.1	e4.0	2.4	4.7	7.0	6.0	2.8	e.82
3	e2.5	e.90	e.33	1.9	e1.1	e3.5	2.4	4.7	7.0	5.8	2.5	e.78
4	e1.8	e.88	e.32	1.9	e1.1	e3.1	2.5	4.9	6.8	5.8	2.4	e.70
5	e1.4	e.80	e.37	2.4	e1.1	e2.9	2.5	4.9	7.0	5.4	2.3	e.65
6	e1.3	e.54	e.31	2.8	e1.1	e2.8	2.6	4.9	7.2	5.4	2.2	1.0
7	e1.2	e.72	e.31	3.1	e1.1	e2.6	2.7	4.9	7.2	5.2	2.0	.73
8	e1.2	e.60	e.30	3.3	e1.1	e2.5	2.7	5.0	7.1	5.2	2.0	.52
9	e1.1	e.52	e.30	e3.5	e1.1	e2.4	2.9	5.1	7.4	5.2	2.0	.44
10	e1.1	e.49	e.30	e3.0	e1.1	e2.3	2.9	5.1	7.5	5.2	2.1	.66
11	e1.0	e.47	e.30	e2.8	e1.2	e2.1	3.0	5.2	7.6	4.7	1.9	.67
12	e.98	e.45	e.34	e2.4	e1.2	e2.1	3.2	5.4	7.6	4.7	1.9	.56
13	e.96	e.43	e.46	e2.2	e1.3	e1.9	3.3	5.4	7.9	4.5	1.6	.47
14	e.93	e.42	.43	e2.0	e1.8	e1.9	3.4	5.4	7.9	4.5	1.6	.36
15	e.91	e.41	.56	e1.9	e1.5	e1.9	3.4	5.4	7.9	4.5	1.6	.30
16	e.90	e.40	.58	e1.9	e1.7	e1.9	3.5	5.6	7.8	4.3	1.6	.26
17	e.89	e.39	.49	e1.9	e1.8	e1.9	3.5	5.7	8.1	4.2	1.5	.24
18	e.88	e.39	.53	e1.9	e1.8	e1.9	3.6	5.7	8.1	4.0	1.5	.23
19	e.88	e.38	.61	e1.9	e1.7	e1.9	3.7	5.7	8.4	4.0	1.4	.23
20	e.87	e.39	.70	e1.8	e1.7	e1.9	3.8	5.8	8.1	4.0	1.4	.23
21	e.88	e.40	.74	e1.7	e1.7	1.8	3.9	6.0	8.1	3.7	1.3	.22
22	e.88	e.41	.70	e1.5	e1.7	1.8	4.0	6.0	7.6	3.8	1.3	.22
23	e.88	e.38	.69	e1.5	e1.7	1.8	4.2	6.0	7.4	3.5	1.3	.21
24	e.88	e.36	.84	e1.4	e1.7	1.8	4.2	6.2	7.4	3.5	1.2	.20
25	e.88	e.36	.94	e1.4	e1.7	1.8	4.2	6.2	6.9	3.4	1.2	.19
26	e.88	e.37	1.0	e1.3	e1.8	2.0	4.3	6.2	6.9	3.1	1.1	.18
27	e.88	e.40	1.1	e1.2	e1.9	2.1	4.4	6.3	6.7	3.1	1.1	.18
28	e.88	e.38	1.1	e1.2	e2.3	2.2	4.5	6.5	6.7	2.9	1.2	.17
29	e.88	e.36	1.2	e1.2	---	2.2	4.5	6.6	6.5	2.9	e1.1	.17
30	e.88	e.35	1.2	e1.1	---	2.2	4.6	6.6	6.5	2.9	e1.0	.15
31	e.88	---	1.5	e1.1	---	2.2	---	6.6	---	2.8	e.96	---
TOTAL	38.78	15.17	19.23	60.5	41.2	70.4	103.0	173.4	221.2	134.2	51.86	12.59
MEAN	1.25	.51	.62	1.95	1.47	2.27	3.43	5.59	7.37	4.33	1.67	.42
MAX	4.5	.92	1.5	3.5	2.3	4.0	4.6	6.6	8.4	6.0	2.8	1.0
MIN	.87	.35	.30	1.1	1.1	1.8	2.2	4.7	6.5	2.8	.96	.15
AC-FT	77	30	38	120	82	140	204	344	439	266	103	25

CAL YR	1990	TOTAL	392.27	MEAN	1.07	MAX	80	MIN	.00	AC-FT	778
WTR YR	1991	TOTAL	941.53	MEAN	2.58	MAX	8.4	MIN	.15	AC-FT	1870

e Estimated

09466500 GILA RIVER AT CALVA, AZ
(National stream-quality accounting network station)

LOCATION.--Lat 33°11'08", long 110°13'10", in SW¼ sec.8, T.3 S., R.21 E. (unsurveyed), Graham County, Hydrologic Unit 15040005, in San Carlos Indian Reservation, on Southern Pacific Railroad bridge at head of San Carlos Reservoir, 2.0 mi west of Calva.

DRAINAGE AREA.--11,470 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,517.29 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1954, and Aug. 25, 1958, to Dec. 31, 1962, at datum 2.52 ft lower. Oct. 1, 1954, to Aug. 24, 1958, at datum 5.52 ft lower. Dec. 31, 1962, to Oct. 20, 1972, at site 530 ft downstream at datum 3.65 ft lower. Oct. 20, 1972, to Sept. 30, 1974, supplementary gage at bridge on U.S. Highway 70, 6.2 mi upstream at datum 2,560.19 ft, NGVD.

REMARKS.--Records poor. Diversion above station for irrigation of about 69,000 acres, metallurgical treatment of ores, and municipal uses.

AVERAGE DISCHARGE.--62 years, 332 ft³/s, 240,500 acre-ft/yr; median of yearly mean discharges, 210 ft³/s, 152,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft³/s Oct. 3, 1983, gage height, 23.1 ft, from rating curve extended above 87,000 ft³/s on basis of area-velocity and flow-over-road computations of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1914, probably in excess of 100,000 ft³/s Jan. 20, 1916, determined on basis of peak discharge at stations near Solomon and at Kelvin.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 1	0230	14,100	10.53	Sept. 7	0600	4,880	7.10
Jan. 8	2015	4,790	8.39	Sept. 11	0800	4,210	6.43
Mar. 3	0915	*46,400	*14.15				

Minimum daily discharge, 6.2 ft³/s Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e6.5	e68	e145	12400	213	1080	2300	717	241	32	24	e290
2	e6.4	e69	e143	4510	198	9430	2110	701	228	31	32	e280
3	e6.2	e70	e140	1440	188	36000	2070	637	226	29	28	e270
4	e94	e73	e138	990	179	16000	2080	626	222	28	25	e260
5	e161	e76	e141	722	172	4970	2000	605	194	27	35	254
6	e157	e82	e140	1090	161	3530	2080	593	169	26	47	1700
7	e148	e118	e137	2460	154	3330	2240	561	152	25	45	3460
8	e131	e122	e139	4190	150	5900	2440	520	128	24	159	1770
9	e115	e122	e137	4110	144	5240	2560	498	112	24	172	1700
10	e103	e140	e136	2820	129	3530	2460	511	103	24	183	1530
11	e98	e176	153	e1960	124	2840	2230	544	93	24	181	3740
12	e95	e174	171	e1560	123	2290	1930	589	84	23	e250	2880
13	e85	e172	191	e1410	125	1950	1730	658	79	22	e500	2300
14	e80	e170	213	e1290	123	1710	1550	648	77	22	e1000	1700
15	e75	e166	239	e1180	122	1500	1420	620	73	22	e1500	1390
16	e70	e164	268	e1070	120	1370	1250	608	74	22	1070	e1000
17	e65	e161	297	e971	e118	1210	1100	588	73	21	957	e900
18	e60	e160	329	e884	e116	1110	1020	562	67	20	813	e750
19	e55	e161	362	e804	195	1010	955	536	61	19	756	e650
20	e50	e158	397	e728	635	894	928	528	57	18	e1000	e550
21	e51	e156	e424	e653	927	884	899	519	52	18	e800	e460
22	e52	e149	e493	585	887	979	883	475	48	17	e650	e420
23	e53	e145	e441	525	785	953	918	439	45	16	e570	e380
24	e55	e140	e421	467	708	1110	901	415	42	16	e500	e340
25	e57	e140	e415	419	698	1470	908	411	41	16	e450	e340
26	e58	e139	e393	381	699	1810	890	405	38	15	e420	e310
27	e60	e138	e373	334	687	2030	857	392	37	15	e390	e270
28	e62	e140	e384	309	731	2480	819	370	35	14	e350	e250
29	e64	e151	e435	283	---	2480	795	348	34	18	e330	e220
30	e66	e145	e414	260	---	2720	731	302	33	20	e320	e190
31	e68	---	3330	236	---	2440	---	267	---	22	e300	---
TOTAL	2307.1	4045	11539	51041	9611	124250	45054	16193	2918	670	13857	30554
MEAN	74.4	135	372	1646	343	4008	1502	522	97.3	21.6	447	1018
MAX	161	176	3330	12400	927	36000	2560	717	241	32	1500	3740
MIN	6.2	68	136	236	116	884	731	267	33	14	24	190
AC-FT	4580	8020	22890	101200	19060	246400	89360	32120	5790	1330	27490	60600
CAL YR 1990	TOTAL	30167.60	MEAN	82.7	MAX	3330	MIN	.00	AC-FT	59840		
WTR YR 1991	TOTAL	312039.1	MEAN	855	MAX	36000	MIN	6.2	AC-FT	618900		

e Estimated

GILA RIVER BASIN

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09466500 GILA RIVER AT CALVA, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1943 to October 1944, October 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	
OCT 31...	1400	68	1840	8.6	21.5	17.5	70	697	8.4	97	29	
NOV 30...	1250	153	1370	8.4	15.0	9.0	68	690	11.3	109	29	
JAN 31...	1245	243	1260	8.3	14.5	7.5	41	695	11.1	102	19	
FEB 26...	1400	774	805	8.4	19.5	15.5	100	696	9.2	101	31	
APR 25...	1300	911	1000	8.3	--	18.0	120	645	7.9	99	--	
MAY 23...	1515	464	1850	8.2	30.0	25.0	44	694	7.5	101	--	
JUN 19...	1000	65	4050	8.3	29.0	23.0	2.7	695	8.2	107	--	
JUL 18...	0900	20	4450	8.3	37.0	25.0	1.0	696	7.5	101	52	
AUG 19...	1400	758	670	8.3	--	31.0	1200	697	6.3	93	100	
SEP 05...	1330	249	1690	8.5	30.0	26.0	150	693	7.2	99	37	
DATE		COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC- CI, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
OCT 31...	220	280	270	46	77	19	280	7	7.5	261	7	
NOV 30...	84	310	--	--	--	--	--	--	--	234	9	
JAN 31...	K9	78	240	36	69	17	170	5	5.6	253	0	
FEB 26...	--	--	150	17	44	10	92	3	4.1	163	0	
APR 25...	260	K6	180	25	52	13	140	4	4.5	194	0	
MAY 23...	1200	30	270	35	75	19	270	7	6.6	282	0	
JUN 19...	9	150	520	250	140	42	660	13	12	340	0	
JUL 18...	230	520	--	--	--	--	--	--	--	337	0	
AUG 19...	25000	120000	130	1	37	8.1	77	3	5.0	152	0	
SEP 05...	150	510	250	7	72	17	260	7	7.8	294	1	

K Based on non-ideal colony count.

09466500 GILA RIVER AT CALVA, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED MG/L AS SO4 (00945)	CHLO- RIDE, DIS- SOLVED MG/L AS CL (00940)	FLUO- RIDE, DIS- SOLVED MG/L AS F (00950)	SILICA, DIS- SOLVED MG/L AS SIO2 (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED MG/L (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED MG/L (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE MG/L (00530)	NITRO- GEN, NITRATE TOTAL MG/L AS N (00620)	NITRO- GEN, NITRATE DIS- SOLVED MG/L AS N (00618)
OCT 31...	226	140	320	1.4	36	1060	1020	1.44	142	0.180	--
NOV 30...	206	120	250	1.4	--	790	--	--	116	--	--
JAN 31...	207	110	230	1.4	47	831	780	1.13	87	--	0.490
FEB 26...	135	56	110	1.1	--	427	397	0.58	279	0.150	--
APR 25...	159	92	180	1.1	34	594	615	0.81	163	0.460	--
MAY 23...	231	150	280	1.2	36	1070	981	1.46	--	0.830	--
JUN 19...	279	400	920	1.8	32	2340	2380	3.18	--	0.220	0.210
JUL 18...	276	450	1100	1.9	--	2750	--	--	29	--	--
AUG 19...	124	47	84	1.3	--	386	334	0.52	28	--	--
SEP 05...	242	170	330	1.4	--	1010	1000	1.37	431	1.08	--
DATE	NITRO- GEN, NITRATE DIS- SOLVED MG/L AS NO3 (71851)	NITRO- GEN, NITRITE TOTAL MG/L AS N (00615)	NITRO- GEN, NITRITE DIS- SOLVED MG/L AS N (00613)	NITRO- GEN, NO2+NO3 TOTAL MG/L AS N (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED MG/L AS N (00631)	NITRO- GEN, AMMONIA TOTAL MG/L AS N (00610)	NITRO- GEN, AMMONIA DIS- SOLVED MG/L AS N (00608)	NITRO- GEN, ORGANIC TOTAL MG/L AS N (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL MG/L AS N (00625)	NITRO- GEN, TOTAL MG/L AS N (00600)	NITRO- GEN, TOTAL MG/L AS NO3 (71887)
OCT 31...	--	0.020	<0.010	0.200	0.200	0.010	0.020	0.49	0.50	0.70	3.1
NOV 30...	--	--	--	--	--	--	--	--	--	--	--
JAN 31...	2.2	<0.010	0.010	0.500	0.500	0.030	0.020	--	<0.20	--	--
FEB 26...	--	0.120	--	0.270	--	0.120	--	0.48	0.60	0.87	3.9
APR 25...	--	0.020	<0.010	0.480	0.480	0.050	<0.010	0.25	0.30	0.78	3.5
MAY 23...	--	0.020	<0.010	0.850	0.850	<0.010	<0.010	--	0.50	1.3	6.0
JUN 19...	0.93	0.020	0.020	0.240	0.230	<0.010	0.020	--	0.80	1.0	4.6
JUL 18...	--	<0.010	--	<0.050	--	0.120	--	0.18	0.30	--	--
AUG 19...	--	<0.010	--	0.500	--	<0.010	--	--	1.7	2.2	9.7
SEP 05...	--	0.020	--	1.10	--	0.020	--	0.58	0.60	1.7	7.5

< Actual value is known to be less than value shown.

09466500 GILA RIVER AT CALVA, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
OCT 31...	0.060	0.09	0.020	0.030	0.030	0.09	10	1	4	5	79
NOV 30...	--	--	0.030	--	--	--	--	--	4	--	--
JAN 31...	0.100	0.18	0.080	0.060	0.080	0.25	40	--	3	3	68
FEB 26...	0.440	0.77	--	0.250	--	--	--	<1	3	2	30
APR 25...	0.250	0.28	0.070	0.090	0.060	0.18	<10	<1	3	3	35
MAY 23...	0.050	0.06	0.030	0.020	0.020	0.06	<10	--	--	<1	59
JUN 19...	0.030	--	0.030	<0.010	<0.010	--	20	--	--	4	120
JUL 18...	0.060	0.09	--	0.030	--	--	--	--	5	--	--
AUG 19...	0.170	0.37	--	0.120	--	--	--	--	4	5	31
SEP 05...	0.420	0.34	--	0.110	--	--	--	--	6	5	72

DATE	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
OCT 31...	20	<0.5	310	<1	1.0	5	<1	<3	19	2	4700
NOV 30...	--	--	200	<1	--	4	--	--	18	--	4600
JAN 31...	--	<0.5	180	<1	1.0	3	2	<3	13	10	2900
FEB 26...	<10	--	90	<1	<1.0	7	<1	--	28	4	7000
APR 25...	<10	<0.5	150	<1	3.0	1	1	<3	22	3	4400
MAY 23...	--	<0.5	--	--	<1.0	--	<1	<3	--	3	--
JUN 19...	--	<2	--	--	<3.0	--	<1	<9	--	5	--
JUL 18...	--	--	820	<1	--	<1	--	--	5	--	<10
AUG 19...	--	--	30	2	3.0	78	<1	--	400	17	67000
SEP 05...	--	--	310	<1	<1.0	14	<1	--	80	6	10000

< Actual value is known to be less than value shown.

GILA RIVER BASIN

09466500 GILA RIVER AT CALVA, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
OCT 31...	5	4	<1	240	170	4	<0.10	<0.1	<10	8
NOV 30...	--	4	--	--	150	--	<0.10	--	--	--
JAN 31...	1500	2	2	130	140	110	<0.10	<0.1	<10	--
FEB 26...	10	6	1	--	240	6	<0.10	--	--	8
APR 25...	12	5	1	97	160	6	<0.10	0.1	<10	10
MAY 23...	23	--	<1	180	--	9	--	0.2	<10	--
JUN 19...	19	--	<1	420	--	61	--	<0.1	40	--
JUL 18...	--	<1	--	--	120	--	<0.10	--	--	--
AUG 19...	190	80	<1	--	2300	12	0.10	--	--	--
SEP 05...	5	14	<1	--	440	3	<0.10	--	--	--
DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 31...	1	<1	<1	<1.0	860	12	20	<3	252	46
NOV 30...	--	<1	1	--	--	--	20	--	1040	430
JAN 31...	4	<1	<1	<1.0	590	10	10	15	1250	820
FEB 26...	--	<1	<1	<1.0	--	--	40	5	322	673
APR 25...	<1	<1	<1	<1.0	420	11	30	<3	--	--
MAY 23...	1	--	<1	<1.0	720	12	--	<3	237	297
JUN 19...	3	--	1	<1.0	1600	<18	--	<9	43	7.5
JUL 18...	--	<1	<1	--	--	--	<10	--	158	8.4
AUG 19...	--	<1	<1	<1.0	--	--	300	15	5460	11200
SEP 05...	--	<1	<1	<1.0	--	--	50	3	438	294

< Actual value is known to be less than value shown.

09468500 SAN CARLOS RIVER NEAR PERIDOT, AZ

LOCATION.--Lat 33°17'47", long 110°27'03", in SE¼ sec.36, T.1 S., R.18 E. (unsurveyed), Gila County, Hydrologic Unit 15040007, in San Carlos Indian Reservation, on U.S. Highway 70 bridge, 0.9 mi south of Peridot.

DRAINAGE AREA.--1,026 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1910 to January 1911 (gage heights only), April 1914 to July 1915, August to September 1915 (monthly discharge only), October 1929 to current year. Prior to October 1929 published as "at San Carlos."

REVISED RECORDS.--WSP 1283: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,542.29 ft above National Geodetic Vertical Datum of 1929 (Arizona Highway Department bench mark). See WSP 1713 or 1733 for history of changes prior to Feb. 1, 1942. Feb. 1, 1942, to Aug. 13, 1970, at sites 1.9 mi upstream at different datums. Aug 14, 1970, to Sept. 30, 1980, at site 1.8 mi upstream at datum 2,578.90 ft, National Geodetic Vertical Datum of 1929. Supplementary water-stage recorder Dec. 21, 1967, to July 2, 1968, at site 2.2 mi downstream at datum in use prior to Feb. 1, 1942; Jan. 31, 1979, to Sept. 30, 1980, at present site and datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions above station for irrigation of about 600 acres. Small inflow from sewage treatment system about 3.6 mi upstream. Flow regulated to some extent since June 15, 1979, by Talkalai Reservoir; capacity, about 6,000 acre-ft.

AVERAGE DISCHARGE.--62 years (water years 1930-91), 56.7 ft³/s, 41,080 acre-ft/yr; median of yearly mean discharges, 34 ft³/s, 24,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,600 ft³/s Mar. 14, 1941, gage height, 11.4 ft, site and datum then in use, from rating curve extended above 23,000 ft³/s on basis of rate of change in storage in San Carlos Reservoir; maximum gage height 14.8 ft, Dec. 22, 1965, site and datum then in use; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 29	1745	8,420	8.63	Mar. 1	2100	*13,900	*10.23
Jan. 6	1015	4,240	7.05	Mar. 24	0015	3,320	6.20

Minimum daily discharge, 1.0 ft³/s July 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e13	8.7	12	138	21	9310	406	e16	e9.0	e3.0	e6.5	e20
2	e13	11	12	39	21	6270	405	e16	e9.0	e2.0	e6.5	e41
3	e11	12	12	18	21	1450	297	e16	e9.0	e2.0	e6.5	e35
4	e10	12	12	148	21	1090	e114	e15	e9.0	e2.0	e6.5	e30
5	e9.5	11	12	2680	21	e649	e90	e15	e9.0	e2.0	e6.0	e30
6	e9.0	11	12	3210	20	e253	e85	e14	e9.0	e1.5	e6.0	e130
7	e8.6	11	12	1570	22	e240	e80	e14	e9.0	e1.5	e6.0	e100
8	e8.3	11	12	405	21	e220	e75	e14	e9.0	e1.5	e6.0	e65
9	e8.0	11	12	e235	18	e170	e73	e13	e9.0	e1.5	e5.5	e44
10	e7.5	11	12	e139	19	e150	e70	e13	e9.0	e1.5	e5.5	e30
11	7.3	11	13	104	20	e130	e68	e13	e8.0	e1.5	e5.5	e22
12	7.4	11	13	87	20	e110	e66	e13	e8.0	e1.5	e5.0	e18
13	7.4	11	14	76	21	e90	e64	e13	e8.0	e1.5	e5.0	e15
14	7.3	11	14	69	21	e80	e62	e13	e7.0	e1.5	e5.0	e13
15	7.2	11	14	65	20	e70	e60	e13	e7.0	e1.5	e5.0	e12
16	7.2	11	51	60	21	e60	e58	e13	e6.0	e1.5	e20	e11
17	7.0	12	1390	56	21	e50	e56	e12	e6.0	e1.5	e16	e16
18	7.3	11	278	52	200	e40	e54	e11	e6.0	e1.5	e13	e9.0
19	7.3	11	78	e49	240	e35	e52	e11	e5.0	e1.5	e12	e8.0
20	6.8	12	45	e46	106	e32	e50	e11	e5.0	e1.5	e12	e8.0
21	6.7	13	43	e45	77	e32	e46	e11	e4.5	e1.0	e12	e7.0
22	6.6	13	56	e38	64	e294	e40	e11	e4.5	e1.3	e11	e7.0
23	6.5	12	67	30	58	1240	e36	e11	e4.0	e1.3	e11	e7.0
24	6.8	12	42	28	54	1640	e30	e11	e4.0	e25	e11	e6.0
25	7.0	12	45	27	e48	923	e26	e10	e3.5	e8.0	e10	e6.0
26	7.2	12	39	26	e35	415	e24	e10	e3.5	e8.0	e10	e6.0
27	7.2	12	36	24	29	920	e22	e10	e3.5	e7.5	e10	e5.0
28	7.5	12	306	23	39	657	e20	e10	e3.5	e7.5	e20	e5.0
29	7.5	13	6510	22	---	975	e18	e10	e3.0	e7.0	e12	e5.0
30	7.5	12	3990	21	---	458	e16	e10	e3.0	e7.0	e11	e5.0
31	8.0	---	776	21	---	406	---	e10	---	e6.5	e10	---
TOTAL	248.6	344.7	13940	9551	1299	28459	2563	383	193.0	113.6	287.5	716.0
MEAN	8.02	11.5	450	308	46.4	918	85.4	12.4	6.43	3.66	9.27	23.9
MAX	13	13	6510	3210	240	9310	406	16	9.0	25	20	130
MIN	6.5	8.7	12	18	18	32	16	10	3.0	1.0	5.0	5.0
AC-FT	493	684	27650	18940	2580	56450	5080	760	383	225	570	1420
CAL YR 1990	TOTAL	30082.55	MEAN	82.4	MAX	6510	MIN	.35	AC-FT	59670		
WTR YR 1991	TOTAL	58098.4	MEAN	159	MAX	9310	MIN	1.0	AC-FT	115200		

e Estimated

09468500 SAN CARLOS RIVER NEAR PERIDOT, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1989 to September 1991 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
NOV										
30...	1030	12	760	8.1	11.0	10.0	8.0	710	11.4	109
JAN										
30...	1445	22	590	8.5	10.0	15.0	6.5	700	9.5	103
MAR										
20...	0825	37	540	8.6	8.5	11.0	11	693	10.6	106
MAY										
23...	0930	11	642	8.4	30.0	20.0	4.0	697	8.2	100
JUL										
17...	1300	1.5	--	8.3	40.0	24.0	--	695	7.6	99
SEP										
06...	1045	128	710	8.2	30.0	28.0	1.0	697	7.0	98
DATE	MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)
NOV										
30...	292	0	240	428	5	--	--	--	--	--
JAN										
30...	239	4	202	344	14	--	<0.010	<0.100	<0.010	--
MAR										
20...	221	1	183	315	13	0.420	0.020	0.440	<0.010	--
MAY										
23...	257	1	213	245	46	--	<0.010	<0.050	0.010	0.19
JUL										
17...	293	0	240	428	2	--	<0.010	<0.050	0.120	0.18
SEP										
06...	223	0	183	386	398	--	0.030	<0.050	0.040	0.66
DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ANTI- MONY, TOTAL (UG/L AS SE) (01097)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
NOV										
30...	--	--	--	--	--	--	--	--	--	--
JAN										
30...	<0.20	--	--	0.100	0.25	0.080	--	--	--	--
MAR										
20...	0.50	0.94	4.2	0.110	0.28	0.090	--	--	--	--
MAY										
23...	0.20	--	--	0.070	0.09	0.030	<1	<10	--	5
JUL										
17...	0.30	--	--	0.090	0.21	0.070	<1	<10	--	70
SEP										
06...	0.70	--	--	0.280	0.12	0.040	<1	<10	<0.10	19

< Actual value is known to be less than value shown.

09469000 SAN CARLOS RESERVOIR AT COOLIDGE DAM, AZ

LOCATION.--Lat 33°10'32", long 110°31'36", in NW¼ sec.17, T.3 S., R.18 E. (unsurveyed), Gila County, Hydrologic Unit 15040005, in San Carlos Indian Reservation, at right intake tower of Coolidge Dam on Gila River.

DRAINAGE AREA.--12,886 mi².

REVISED RECORDS.--WSP 1049: 1929, 1934, 1937-38. WSP 1283: Drainage area.

PERIOD OF RECORD.--November 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Jan. 15, 1937, series of stakes with tops at known elevations for reference points on right bank about 1,000 ft upstream from dam. Jan. 15, 1937, to Dec. 31, 1947, water-stage recorder at present site at datum 0.72 ft lower.

REMARKS.--Reservoir is formed by concrete multiple-dome dam. Dam completed Oct. 25, 1928; storage began Nov. 15, 1928. Usable capacity (from capacity table computed by San Carlos Irrigation District, based on an estimate of sediment deposited since 1966; used since Jan. 1, 1991) 866,600 acre-ft between elevations 2,382.63 ft, sill of lowest outlet gate, and 2,510.4 ft (revised), crest of spillway. No dead storage. Figures given herein represent usable contents. Reservoir is used to store water for irrigation of San Carlos project and for power development, dependent on irrigation demands. Spill over Coolidge Dam because of capacity storage has occurred April 22 to May 5, 1979, Feb. 24 to Mar. 13, 1980, Oct. 4-23, 28-31, Dec. 3-13, 1983, Jan. 2 to June 5, 1985.

COOPERATION.--Wire-weight gage readings furnished by U.S. Bureau of Indian Affairs.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,090,000 acre-ft Feb. 26 to Mar. 6, 1980; maximum elevation observed, 2,520.3 ft Feb. 28, 1980; no usable contents at times.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 511,100 acre-ft May 6, 8, elevation, 2,484.9 ft; minimum, 45,000 acre-ft Oct. 1, 2, elevation, 2,418.6 ft.

Capacity table (elevation, in feet, and usable contents, in acre-ft)

Oct. 1 to Dec. 31, 1990				Jan. 1 to Sept. 30, 1991			
2,418	43,400	2,427	71,900	2,430	82,600	2,470	353,600
2,421	52,000	2,430	83,100	2,440	132,700	2,480	455,000
2,424	61,300			2,450	193,500	2,490	573,900
				2,460	267,100		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45000	47000	52500	86600	176300	227200	451600	509200	497300	448100	380800	334100
2	45000	47200	52800	95400	177200	257800	455000	509400	495800	446500	378500	332900
3	45100	47300	53100	100800	178200	287800	457900	509900	494600	444000	376400	331400
4	45200	47300	53300	105100	179000	322000	461000	510100	493300	442000	374300	330500
5	45300	47400	53500	110800	179800	336500	464000	510600	492300	439600	372100	330000
6	45400	47500	53800	116400	180700	346300	467100	511100	490900	437500	369800	329800
7	45500	47600	54000	121700	181500	355500	470000	511000	489700	435000	367700	332400
8	45600	47700	54200	127300	182000	365900	473200	511100	488600	433100	365900	333700
9	45700	47800	54500	133700	182800	374700	477100	510600	487200	431000	363800	334600
10	45900	47900	54700	139200	183400	380600	480600	510100	486000	428800	361900	335300
11	46000	48000	54900	143200	184300	384400	482800	509700	484600	426400	361000	337500
12	46100	48200	55200	146800	185100	387300	485500	509700	483300	424000	359700	339700
13	46300	48400	55600	149700	185800	390100	488000	509200	481700	422900	358100	340900
14	46300	48600	55900	152200	186500	392600	490300	509000	480500	420400	356600	341800
15	46400	48800	56200	154600	187100	394500	492300	508500	479000	417400	355400	342200
16	46500	49100	57200	156500	187700	396100	494200	508500	477500	415400	354400	342600
17	46600	49300	58300	158500	188200	397800	495600	508400	475800	413300	353500	343000
18	46700	49600	58800	160100	189200	399000	497000	508000	474000	411000	352200	343400
19	46700	49900	59400	161800	190300	400000	498100	507800	472100	408500	350700	343800
20	46700	50200	60000	163300	191600	401400	499500	507400	470000	406800	349400	343800
21	46700	50400	60400	164700	193400	402600	500200	506800	468200	404900	348500	343800
22	46700	50600	61200	166000	195400	404700	501400	506600	465900	402300	347800	344300
23	46700	50800	62000	167300	197000	408000	502300	506400	464100	400800	346400	344300
24	46700	51000	62800	168500	198500	413500	503500	505900	462100	398300	344900	344900
25	46700	51300	63600	169600	200000	417200	504700	504900	460100	396200	343600	345000
26	46800	51500	64300	170800	201500	421400	505400	504600	458100	393900	342400	345600
27	46800	51700	65200	171800	203000	426200	506100	503600	456100	391600	340700	345600
28	46800	51900	66200	172800	205100	431500	507100	502600	454100	389200	339500	345600
29	46800	52100	72600	173900	---	437300	507800	501400	452100	387100	338300	345800
30	46900	52300	79700	174400	---	442500	508500	499400	450100	384900	337100	346000
31	46900	---	81500	175500	---	447400	---	498500	---	382900	335700	---
MAX	46900	52300	81500	175500	205100	447400	508500	511100	497300	448100	380800	346000
MIN	45000	47000	52500	86600	176300	227200	451600	498500	450100	382900	335700	329800
(*)	2419.3	2421.1	2429.6	2447.2	2451.7	2479.3	2484.7	2483.8	2479.6	2473.1	2468.0	2469.2
(**)	+2000	+5400	+29200	a+94000	+29600	+242300	+61100	-10000	-48400	-67200	-47200	+10300
CAL YR	1990	MAX	81500	MIN	33900	(**)	+24700					
WTR YR	1991	MAX	511100	MIN	45000	(**)	a+301100					

(*) Elevation in feet, at end of month.

(**) Change in contents, in acre-feet.

a Based on new capacity table effective January 1, 1991.

09469500 GILA RIVER BELOW COOLIDGE DAM, AZ

LOCATION.--Lat 33°10'10", long 110°31'50", in SW¼ sec.17, T.3 S., R.18 E. (unsurveyed), Pinal County, Hydrologic Unit 15050100, on left bank 2,200 ft downstream from Coolidge Dam.

DRAINAGE AREA.--12,886 mi².

PERIOD OF RECORD.--July to October 1899, April 1900 to March 1902, July to September 1902, December 1902 to December 1904, January to May 1905 (gage heights only), June to November 1905; August 1910 to February 1911 (gage heights only); April 1914 to current year. Published as "at San Carlos" 1899-1911, as "near San Carlos" 1914-26, and as "at Coolidge Dam" 1927-38.

REVISED RECORDS.--WSP 629: 1915-16. WSP 1049: 1899-1904. WSP 1149: 19M), 1921, 1922(M), 1923, 1924(M). WSP 1283: Drainage area.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 2,309.33 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 5, 1911, nonrecording gage at various sites and datums upstream from mouth of San Carlos River. Apr. 29, 1914, to Mar. 8, 1937, water-stage recorder at various sites within 1 mi upstream from present site at different datums. Mar. 27, 1979 to Oct. 10, 1980, and since Oct. 4, 1983, supplementary water-stage recorder at site on left bank 1,000 ft upstream at datum 2,309.5 ft above NGVD, used above discharges at approximately 1,570 ft³/s, maximum capacity of parshall flume.

REMARKS.--Records excellent except those below 20 ft³/s, which are fair. Flow regulated by San Carlos Reservoir since Nov. 15, 1928. (See sta 09469000.) Record includes flow of Warm Springs, which enters between dam and gage. Large diversions above San Carlos Reservoir for irrigation, metallurgical treatment of ore, and municipal supply; about 69,000 acres of land was irrigated, a considerable portion by pumping from ground water.

AVERAGE DISCHARGE (adjusted for storage in San Carlos Reservoir).--79 years (water years 1901, 1904, 1915-91) 382 ft³/s, 276,800 acre-ft/yr; median of yearly mean discharges, 230 ft³/s, 167,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--1914-28: Maximum discharge, 130,000 ft³/s Jan. 20, 1916, estimated on basis of peak discharge near Solomon and at Kelvin; no flow at times.
1928-91: Maximum discharge, 5,020 ft³/s Oct. 6, 1983, gage height, 10.7 ft, at supplementary gage; no flow at times prior to 1938; minimum daily since 1938, 0.40 ft³/s in several years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,080 ft³/s Aug. 7-25; minimum daily, 0.46 ft³/s Feb. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.2	1.0	.59	.67	1.0	172	250	802	922	e1050	1040
2	.93	1.2	1.0	.59	.77	.90	284	250	802	942	e1050	1020
3	.81	1.0	1.0	.59	.76	.51	284	285	775	982	e1040	946
4	.81	1.1	1.0	.75	.80	.51	285	303	757	999	e1040	867
5	.81	1.1	1.0	.71	.81	.51	284	303	757	999	e1050	802
6	.81	.81	1.0	.68	.80	.55	285	322	746	999	e1040	771
7	.81	.81	1.0	.59	.79	153	290	349	709	999	e1080	764
8	.81	.81	1.0	.59	.81	270	284	420	698	999	e1080	738
9	.81	.81	1.0	.60	.81	444	273	474	698	999	1080	638
10	.81	.81	1.0	.59	.81	551	273	484	698	999	1080	584
11	.81	.81	1.0	.59	.81	551	273	493	716	995	1080	548
12	.81	.81	1.0	.59	.81	551	273	493	735	999	1080	509
13	.81	.81	1.0	.59	.80	551	273	493	757	999	1080	496
14	.81	.81	1.0	.59	.79	567	273	502	757	1010	1080	481
15	.81	.81	1.0	.61	.65	576	261	502	757	1020	1080	474
16	.81	.81	1.2	.60	.58	577	250	501	757	1020	1080	385
17	.81	.81	e.59	.59	.60	575	250	462	802	1030	1080	314
18	.80	.81	e.59	.59	.56	577	250	426	886	1020	1080	288
19	.82	1.0	e.59	.59	.53	577	250	426	910	1020	1080	188
20	.83	1.0	e.59	.66	.47	577	250	426	910	1040	1080	138
21	.82	1.0	.59	.74	.46	508	250	426	910	1050	1080	138
22	.81	1.0	.59	.77	.47	450	250	426	910	e1050	1080	130
23	.83	1.0	.59	.77	.54	451	250	427	918	e1050	1080	130
24	.92	1.0	.59	.76	.54	452	250	432	922	e1050	1080	109
25	.94	1.0	.59	.76	.54	423	250	477	922	e1050	1080	100
26	1.0	1.0	.59	.78	.55	371	250	525	922	e1050	1070	100
27	.99	1.0	.59	.81	.52	290	250	600	922	e1050	1050	100
28	1.0	1.0	.77	.79	.70	98	250	702	922	e1050	1050	100
29	1.1	1.0	.83	.82	---	.60	250	813	922	e1050	1050	100
30	1.1	1.0	.59	.61	---	.50	250	836	922	e1050	1040	100
31	1.1	---	.59	.62	---	.52	---	809	---	e1050	1040	---
TOTAL	27.24	28.13	25.47	20.51	18.75	10145.60	7817	14637	24621	31542	33090	13098
MEAN	.88	.94	.82	.66	.67	327	261	472	821	1017	1067	437
MAX	1.1	1.2	1.2	.82	.81	577	290	836	922	1050	1080	1040
MIN	.80	.81	.59	.59	.46	.50	172	250	698	922	1040	100
AC-FT	54	56	51	41	37	20120	15510	29030	48840	62560	65630	25980

CAL YR 1990 TOTAL 22892.00 MEAN 62.7 MAX 389 MIN .59 AC-FT 45410
WTR YR 1991 TOTAL 135070.70 MEAN 370 MAX 1080 MIN .46 AC-FT 267900

e Estimated

09470000 GILA RIVER AT WINKELMAN, AZ

LOCATION.--Lat 33°00'21", long 110°45'21", in SW¼SW¼ sec.7, T.5 S., R.15 E., Gila County, Hydrologic Unit 15050100, on right bank 1.2 mi north of Winkelman, 3.0 mi upstream from San Pedro River, and 29 mi downstream from Coolidge Dam.

DRAINAGE AREA.--13,268 mi², of which 382 mi² is below Coolidge Dam.

PERIOD OF RECORD.--September 1917 to June 1918, September 1941 to September 1980, July 1984 to September 1991 (discontinued).

REVISED RECORDS.--WSP 1283: Drainage area. WDR AZ-89-1: 1988.

GAGE.--Water-stage recorder. Elevation of gage is 1,935 ft above National Geodetic Vertical Datum of 1929, from topographic map. Sept. 10, 1917, to June 27, 1918, nonrecording gage at bridge 2.3 mi downstream at different datum. September 1941 to Jan. 5, 1964, at site 0.6 mi downstream at datum 1,920.95 ft, NGVD. Dec. 12, 1974 to Sept. 30, 1980, and July 1984 to Jan. 16, 1987, water-stage recorder 0.7 mi downstream at datum 1,921.76 ft, NGVD. Supplemental nonrecording gage 2.4 mi downstream at datum 1908.08 ft, NGVD, since Aug. 9, 1963. Supplemental water-stage recorder at bridge 2.3 mi downstream Jan. 6, 1964 to Nov. 24, 1975, at datum 1907.00 ft, NGVD.

REMARKS.--Records good except for estimated daily discharges, which are fair. Large diversions above station for irrigation, metallurgical treatment of ore, and municipal supply, but none between Coolidge Dam and this station. About 69,000 acres irrigated in the basin above Coolidge Dam, a considerable portion by pumping from ground water. Flow regulated by San Carlos Reservoir (See sta 09469000).

AVERAGE DISCHARGE (adjusted for storage in San Carlos Reservoir).--46 years (water years 1942-80, 1985-91), 824 ft³/s, 236,900 acre-ft/yr; median of yearly mean discharges, 190 ft³/s, 138,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,000 ft³/s of which 500 ft³/s was released by Coolidge Dam, Aug. 9, 1944, gage height, 18.40 ft, site and datum then in use, from rating curve extended above 2,900 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge during period Oct. 1980 to June 1984, 17,000 ft³/s, Oct. 2, 1983, gage height 16.0 ft, from flood mark, at former site 0.7 mi downstream, from rating curve extended above 8,000 ft³/s, (no significant release from Coolidge Dam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,660 ft³/s, Mar. 2, gage height, 8.11 ft, unadjusted for release from Coolidge Dam; minimum daily, 2.6 ft³/s Oct. 27-Nov. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	2.6	6.3	34	19	396	102	294	807	921	1100	1050
2	12	4.6	6.3	26	19	1630	355	298	790	928	1100	1040
3	5.9	5.8	6.6	21	19	246	366	300	777	985	1100	999
4	5.1	4.6	6.9	28	19	120	355	347	724	1010	1100	897
5	4.5	4.6	6.9	120	19	81	350	355	733	1010	1110	937
6	4.1	4.6	6.7	352	19	72	348	363	764	1010	1110	767
7	4.0	4.6	6.3	113	19	90	344	394	734	1010	1130	736
8	3.7	4.6	6.3	64	18	e240	338	454	697	1020	1130	716
9	3.3	4.5	6.3	47	18	e480	312	551	699	1020	1140	647
10	3.5	4.6	6.3	38	18	e620	309	550	705	1010	1140	518
11	3.4	4.6	6.3	32	18	e620	306	564	702	1010	1140	496
12	3.8	4.6	6.3	30	19	e620	303	555	730	1020	1130	446
13	3.8	4.6	7.0	28	19	e620	304	541	771	1020	1130	425
14	3.8	4.6	7.4	27	19	e630	306	524	763	1030	1140	511
15	3.8	4.6	7.4	25	19	e640	307	525	773	1050	e1140	531
16	3.8	4.6	49	25	19	e640	286	518	769	1060	e1140	516
17	3.5	4.6	31	24	19	e640	282	494	782	1060	e1140	378
18	3.5	4.3	17	23	51	e640	283	422	891	1060	e1140	367
19	3.5	4.4	13	22	34	e640	284	418	943	1060	e1140	341
20	3.5	4.6	12	22	27	647	280	415	940	1080	e1130	198
21	3.5	4.8	21	22	22	761	279	416	930	1100	e1130	181
22	3.5	5.0	24	22	20	812	283	412	902	1100	e1130	189
23	3.5	5.0	21	22	18	688	286	409	902	1100	e1150	184
24	3.4	5.0	16	21	18	611	286	407	924	1100	e1190	152
25	3.0	5.3	15	21	18	560	287	414	919	1100	e1130	157
26	3.0	5.4	14	21	17	500	290	476	917	1100	e1110	163
27	2.6	5.9	14	21	17	473	288	517	917	1100	1110	160
28	2.6	6.2	52	20	27	567	286	645	914	1110	1110	157
29	2.6	6.4	151	20	---	367	286	726	918	1110	1100	151
30	2.6	6.7	146	20	---	232	290	859	921	1110	1090	143
31	2.6	---	56	19	---	134	---	807	---	1100	1060	---
TOTAL	125.4	146.3	751.3	1330	588	16017	8981	14970	24658	32504	34840	14153
MEAN	4.05	4.88	24.2	42.9	21.0	517	299	483	822	1049	1124	472
MAX	12	6.7	151	352	51	1630	366	859	943	1110	1190	1050
MIN	2.6	2.6	6.3	19	17	72	102	294	697	921	1060	143
AC-FT	249	290	1490	2640	1170	31770	17810	29690	48910	64470	69110	28070

CAL YR	1990	TOTAL	26273.48	MEAN	72.0	MAX	1220	MIN	.03	AC-FT	52110
WTR YR	1991	TOTAL	149064.0	MEAN	408	MAX	1630	MIN	2.6	AC-FT	295700

e Estimated

09471000 SAN PEDRO RIVER AT CHARLESTON, AZ
(National stream-quality accounting network station)

LOCATION.--Lat 31°37'33", long 110°10'26", in NE¼NE¼ sec.11, T.21 S., R.21 E., Cochise County, Hydrologic Unit 15050202, in Spanish land grant of San Juan de las Boquillas y Nogales, at downstream side of pier near center of highway bridge, 0.3 mi south of Charleston, 1.5 mi upstream from Charleston damsite, and 9 mi upstream from Babocomari River.

DRAINAGE AREA.--1,234 mi², of which 696 mi² is in Mexico.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January and February 1904 (gage heights only); March 1904 to August 1906; November 1910 to December 1911 (gage heights only); September 1912 to current year. Monthly discharge only October 1926 to May 1928 and December 1933 to April 1935, published in WSP 1313. Published as "near Lewis Springs" 1910-11, and as "near Fairbank" 1911-26.

REVISED RECORDS.--WSP 1119: 1939(M). WSP 1213: 1914, 1916(M), 1918(M), 1919, 1920(M), 1922-23(M), WDR AZ-90-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,954.01 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 1, 1942, nonrecording gage or water-stage recorder at various sites within 6.5 mi downstream at different datums.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions above station, mostly by pumping from ground water, for irrigation of 3,200 acres in 1978, excluding an unknown amount in Mexico. Record shows flow available at Charleston damsite.

AVERAGE DISCHARGE.--80 years (water years 1905, 1913-91), 57.7 ft³/s, 41,800 acre-ft/yr; median of yearly mean discharges, 46 ft³/s, 33,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 98,000 ft³/s Sept. 28, 1926, gage height, 21.9 ft, site and datum then in use, by slope-area measurement of peak flow; minimum since 1928, 0.22 ft³/s June 28, 1990, gage height, 1.75 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	2000	*1,950	*7.66

Minimum daily discharge, 1.1 ft³/s July 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e50	e8.8	11	17	10	95	35	11	3.9	2.0	16	17
2	e40	e8.2	11	13	10	971	33	9.6	3.8	1.5	e7.0	16
3	e30	e7.9	13	9.5	12	719	30	9.0	3.6	1.7	e5.0	14
4	e25	e7.5	12	11	13	133	28	8.6	3.5	1.5	99	e50
5	e20	e7.2	13	13	12	47	27	7.7	3.5	1.8	28	e21
6	e18	e7.5	14	14	13	69	26	6.6	3.4	2.8	9.0	e10
7	e17	e7.5	13	14	e16	60	25	e5.4	3.4	3.1	e4.0	e8.0
8	e13	e7.4	12	13	e13	39	23	e5.4	3.3	2.4	e4.0	e7.0
9	e11	e7.4	11	13	e13	34	21	e5.4	3.3	2.3	5.6	e6.5
10	e10	e7.3	11	13	e13	32	20	e5.4	3.4	2.0	31	e6.4
11	e9.7	e7.3	13	13	e13	30	19	e5.4	3.8	1.3	7.9	5.5
12	e9.4	e7.4	14	14	e17	29	18	e5.3	3.8	1.1	e5.0	4.9
13	e9.2	e7.4	14	15	80	28	18	e5.3	19	1.1	e4.8	4.7
14	e9.1	e7.4	14	15	118	27	18	e5.3	21	1.4	e4.4	4.5
15	e9.0	e7.4	14	15	52	26	18	e5.2	5.9	2.0	e4.2	3.7
16	e8.9	e7.4	15	16	32	25	18	e5.2	4.6	2.0	e4.2	4.3
17	e8.9	e7.4	16	16	26	25	18	e5.2	3.7	1.6	e4.0	4.7
18	e8.8	e7.4	15	18	23	24	17	e5.2	3.7	1.7	e4.0	309
19	e8.8	e8.0	15	20	21	24	17	e5.1	3.5	1.3	84	14
20	e8.8	e9.0	15	21	18	24	16	e5.1	2.4	2.0	e25	e8.0
21	e8.7	e11	16	20	20	23	15	e5.1	1.9	2.2	e15	e7.5
22	e8.7	12	15	19	20	21	15	e5.1	1.6	1.6	e32	e7.0
23	e8.7	12	16	18	19	23	16	e5.1	1.9	1.5	49	e6.8
24	e8.6	12	16	17	19	25	16	e5.0	2.5	1.6	34	5.6
25	8.6	13	16	16	18	25	15	4.6	2.4	2.9	5.9	5.0
26	8.7	11	16	14	18	24	14	4.1	2.3	8.8	45	e3.9
27	e8.4	11	16	12	18	27	13	3.6	2.1	2.7	159	e3.2
28	e8.5	11	18	11	21	34	11	3.6	2.1	2.1	44	e3.8
29	e8.5	11	18	11	---	37	11	3.7	11	2.4	14	e3.6
30	e8.8	11	17	11	---	39	11	3.6	23	2.9	e159	e3.5
31	e9.1	---	17	11	---	37	---	3.8	---	59	37	---
TOTAL	419.9	267.8	447	453.5	678	2776	582	173.7	157.3	150.4	950.0	569.1
MEAN	13.5	8.93	14.4	14.6	24.2	89.5	19.4	5.60	5.24	4.85	30.6	19.0
MAX	50	13	18	21	118	971	35	11	23	59	159	309
MIN	8.4	7.2	11	9.5	10	21	11	3.6	1.6	1.1	4.0	3.2
AC-FT	833	531	887	900	1340	5510	1150	345	312	298	1880	1130

CAL YR	1990	TOTAL	10075.86	MEAN	27.6	MAX	946	MIN	.22	AC-FT	19990
WTR YR	1991	TOTAL	7624.7	MEAN	20.9	MAX	971	MIN	1.1	AC-FT	15120

e Estimated

09471000 SAN PEDRO RIVER AT CHARLESTON, AZ--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--July 1963 to September 1975, December 1986 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1975.

WATER TEMPERATURES: July 1963 to September 1975.

SUSPENDED-SEDIMENT DISCHARGE: July 1963 to September 1975.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV 21...	1300	11	530	8.6	16.0	15.0	2.4	658	--	--	<10
JAN 28...	1430	13	520	8.7	14.0	9.5	10	651	13.5	139	<10
MAR 23...	1400	26	515	8.5	17.0	17.0	2.9	650	8.4	102	<10
MAY 29...	1100	4.2	442	8.5	28.0	29.0	3.8	656	8.4	128	14
JUL 29...	0945	2.1	428	8.4	23.0	22.0	34	664	6.8	89	<10
SEP 10...	0900	6.4	443	8.4	19.0	19.0	16	648	8.0	102	<10
DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
NOV 21...	--	K97	200	0	57	13	39	1	2.5	246	6
JAN 28...	K14	K20	210	26	63	12	41	1	2.6	200	10
MAR 23...	K15000	K250	210	8	63	12	39	1	2.7	235	4
MAY 29...	K8	800	160	0	44	12	38	1	2.4	237	5
JUL 29...	--	290	150	0	43	10	35	1	3.1	227	1
SEP 10...	36	100	180	0	53	11	34	1	2.9	248	1
DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
NOV 21...	212	43	9.4	0.40	24	316	316	0.43	2	--	--
JAN 28...	180	68	11	0.20	18	297	325	0.40	20	--	0.180
MAR 23...	200	75	8.3	0.40	20	322	341	0.44	8	--	--
MAY 29...	202	33	12	0.70	25	274	291	0.37	27	--	0.440
JUL 29...	187	21	7.3	0.60	23	248	256	0.34	48	--	--
SEP 10...	204	32	9.6	0.50	23	256	290	0.35	28	0.074	--

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

09471000 SAN PEDRO RIVER AT CHARLESTON, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)
NOV 21...	--	<0.010	<0.010	<0.100	<0.100	0.040	0.050	--	<0.20	--	--
JAN 28...	0.80	<0.010	0.020	0.200	0.200	<0.010	0.020	--	0.20	0.40	1.8
MAR 23...	--	<0.010	<0.010	0.130	0.150	<0.010	<0.010	--	0.40	0.53	2.3
MAY 29...	1.9	0.010	0.010	<0.050	0.450	<0.010	<0.010	--	0.30	--	--
JUL 29...	--	0.010	<0.010	<0.050	<0.050	0.020	<0.010	0.28	0.30	--	--
SEP 10...	--	0.020	<0.010	0.094	0.110	0.020	<0.010	--	<0.20	--	--
DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
NOV 21...	0.020	0.06	0.030	0.020	0.020	0.06	10	<1	3	3	120
JAN 28...	0.020	--	0.020	<0.010	<0.010	--	--	--	2	2	84
MAR 23...	0.020	--	<0.010	<0.010	<0.010	--	<10	<1	2	2	91
MAY 29...	<0.010	--	0.010	<0.010	<0.010	--	<10	--	4	4	120
JUL 29...	0.060	--	0.030	<0.010	<0.010	--	--	--	4	3	100
SEP 10...	0.070	0.03	0.030	0.010	<0.010	--	<10	--	3	3	120
DATE	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 21...	<10	<0.5	70	<1	<1.0	<1	<1	<3	8	4	210
JAN 28...	--	--	50	--	<1.0	--	<1	--	--	3	--
MAR 23...	<10	0.6	30	<1	<1.0	1	2	<3	6	3	340
MAY 29...	--	<0.5	80	<1	<1.0	<1	2	<3	21	2	310
JUL 29...	--	--	70	<1	<1.0	2	1	--	5	3	1200
SEP 10...	--	<0.5	70	<1	<1.0	3	1	<3	7	2	700

< Actual value is known to be less than value shown.

09471000 SAN PEDRO RIVER AT CHARLESTON, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
NOV 21...	15	1	<1	35	40	23	<0.10	<0.1	<10	3	<1
JAN 28...	7	--	<1	--	--	78	<0.10	--	--	--	--
MAR 23...	8	<1	2	22	30	8	<0.10	<0.1	<10	2	1
MAY 29...	11	2	<1	38	60	21	<0.10	<0.1	<10	--	1
JUL 29...	10	4	<1	--	120	60	<0.10	--	--	--	--
SEP 10...	6	3	<1	31	110	48	<0.10	0.3	<10	--	1

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 21...	<1	<1	<1.0	580	510	<6	<10	<3	56	1.7
JAN 28...	<1	<1	<1.0	430	--	--	--	4	152	5.3
MAR 23...	<1	<1	<1.0	460	490	<6	<10	3	211	15
MAY 29...	<1	<1	<1.0	500	500	<6	50	3	365	4.1
JUL 29...	<1	<1	<1.0	400	--	--	<10	<10	67	0.37
SEP 10...	<1	<1	<1.0	420	430	<6	10	<3	51	0.87

< Actual value is known to be less than value shown.

09472000 SAN PEDRO RIVER NEAR REDINGTON, AZ

LOCATION.--Lat 32°22'50", long 110°26'45", in NE¼NW¼ sec.19, T.12 S., R.19 E., Cochise County, Hydrologic Unit 15050203, on left bank, 0.3 mi upstream from Cochise-Pima County line, 4.3 mi southeast of Redington, and 30 mi north of Benson.

DRAINAGE AREA.--2,927 mi², of which 696 mi² is in Mexico.

PERIOD OF RECORD.--June 1943 to June 1947, July 1950 to current year (monthly discharge only, July 1954 to March 1955). Also extremes for water years 1948-50, published in WSP 1179.

REVISED RECORDS.--WDR AZ-90-1: Drainage area.

GAGE.--Water-stage recorder, and, since Aug. 26, 1981, crest-stage gage. Datum of gage is 2,930.04 ft above National Geodetic Vertical Datum of 1929. June 1943 to June 1947, and Oct. 1, 1962, to June 27, 1963, at present site at datum 7.49 ft higher. July 1950 to Sept. 30, 1962, at site 400 ft upstream at datum 10.47 ft higher. Supplementary water-stage recorder 50 ft upstream at same datum since June 29, 1977.

REMARKS.--Records fair except for periods of estimated daily discharges and those below 25 ft³/s, which are poor. Diversions above station for irrigation of about 10,800 acres in 1978, excluding an unknown amount in Mexico. Diversion above gage into formerly used ditch on right bank was placed in operation in January 1972; diversion was observed Dec. 19, May 14, June 25, Aug. 7, and Aug. 25.

AVERAGE DISCHARGE.--44 years (water years 1944-46, 1951-91), 43.9 ft³/s, 31,810 acre-ft/yr; median of yearly mean discharges, 28 ft³/s, 20,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,600 ft³/s Aug. 2, 1951, gage height, 20.2 ft, present site and datum, from rating curve extended above 16,000 ft³/s on basis of slope-area measurement of peak flow, maximum gage height 21.60 ft, Oct. 2, 1983; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1906, about 90,000 ft³/s Sept. 28, 1926, gage height, 29.0 ft, present site and datum, from floodmark, computed on basis of peak discharge of same flood for station at Charleston and for Gila River at Kelvin.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	0300	*5,060	*14.09

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.4	.00	.00	.00	.00	613	45	e.00	.00	.00	.00	13
2	e4.3	.00	.00	.00	.00	1930	41	e.00	.00	.00	.00	7.6
3	e3.6	.00	.00	.00	.00	636	40	e.00	.00	.00	.00	10
4	e2.9	.00	.00	.00	.00	360	38	e.00	.00	.00	.00	10
5	e1.7	.00	.00	4.4	.00	148	36	e.00	.00	.00	.00	8.0
6	1.3	.00	.00	145	.00	107	34	e.00	.00	.00	.00	14
7	1.2	.00	.00	27	.00	58	34	e.00	.00	.00	.00	14
8	1.2	.00	.00	5.5	.00	47	29	e.00	.00	.00	.00	6.4
9	e1.0	.00	.00	4.6	.00	32	20	e.00	.00	.00	.00	4.7
10	e1.0	.00	.00	4.0	.00	22	13	e.00	.00	.00	.00	3.9
11	e1.0	.00	.00	3.7	.00	12	e.00	e.00	.00	.00	.00	2.7
12	e.90	.00	.00	3.7	.00	8.5	e.00	e.00	.00	.00	.00	33
13	e.85	.00	.00	3.2	.00	6.4	e.00	e.00	.00	.00	.00	13
14	e.82	.00	.00	3.0	.00	6.3	e.00	e.00	.00	.00	.00	9.3
15	e.80	.00	.00	2.9	.00	5.8	e.00	.00	.00	.00	.00	7.5
16	e.78	.00	.00	3.0	.00	6.1	e.00	.00	.00	.00	.00	6.3
17	e1.2	.00	.00	2.9	.00	5.8	e.00	.00	.00	.00	.00	4.7
18	1.3	.00	.00	2.9	.00	5.5	e.00	.00	.00	.00	.00	4.1
19	1.3	.00	.00	2.9	.00	5.9	e.00	.00	.00	.00	.00	22
20	.85	.00	.00	2.9	.00	5.7	e.00	.00	.00	.00	.00	26
21	.00	.00	.00	2.9	.00	7.9	e.00	.00	.00	.00	.00	3.7
22	.00	.00	.00	2.9	.00	30	e.00	.00	.00	.00	.61	2.7
23	.00	.00	.00	3.1	.00	83	e.00	.00	.00	.00	.00	2.3
24	.00	.00	.00	3.2	.00	141	e.00	.00	.00	.00	.00	12
25	.00	.00	.00	3.2	.00	99	e.00	.00	.00	.00	.00	4.7
26	.00	.00	.00	3.3	.00	86	e.00	.00	.00	.00	.00	3.3
27	.00	.00	.00	2.0	.00	112	e.00	.00	.00	.00	.00	3.5
28	.00	.00	.00	.00	.00	119	e.00	.00	.00	.00	4.9	3.8
29	.00	.00	.00	.00	---	112	e.00	.00	.00	.00	5.9	3.9
30	.00	.00	.00	.00	---	85	e.00	.00	.00	.00	4.9	3.6
31	.00	---	.00	.00	---	59	---	.00	---	.00	3.3	---
TOTAL	30.40	0.00	0.00	242.20	0.00	4954.9	330.00	0.00	0.00	0.00	19.61	263.7
MEAN	.98	.000	.000	7.81	.000	160	11.0	.000	.000	.000	.63	8.79
MAX	4.3	.00	.00	145	.00	1930	45	.00	.00	.00	5.9	33
MIN	.00	.00	.00	.00	.00	5.5	.00	.00	.00	.00	.00	2.3
AC-FT	60	.00	.00	480	.00	9830	655	.00	.00	.00	39	523

CAL YR	1990	TOTAL	4830.53	MEAN	13.2	MAX	545	MIN	.00	AC-FT	9580
WTR YR	1991	TOTAL	5840.81	MEAN	16.0	MAX	1930	MIN	.00	AC-FT	11590

e Estimated

09473000 ARAVAIPA CREEK NEAR MAMMOTH, AZ

LOCATION.--Lat 32°50'37", long 110°37'09", in NW¼NW¼ sec.9, T.7 S., R.17 E., Pinal County, Hydrologic Unit 15050203, on right bank 6 mi upstream from mouth and 9 mi north of Mammoth.

DRAINAGE AREA.--537 mi².

PERIOD OF RECORD.--May 1931 to December 1942 (published as "near Feldman"), May 1966 to current year. Monthly discharge only July 1941 to December 1942, published in WSP 1313.

REVISED RECORDS.--WDR AZ-68-1: 1967. WDR AZ-82-1: 1968, 1969, 1973, 1979 (M). WDR AZ-90-1: Drainage area.

GAGE.--Water-stage recorder and, since March 1980, crest-stage gage. Elevation of gage is 2,345 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1981 to Oct. 1, 1983 gage at site 300 ft upstream at datum 4.19 ft higher. Prior to Oct. 1, 1981, at datum 1.00 ft higher. May 1931 to December 1942 at site 0.3 mi downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions for irrigation of several hundred acres above station.

AVERAGE DISCHARGE.--36 years, 35.1 ft³/s, 25,430 acre-ft/yr; median of yearly mean discharges, 24 ft³/s, 17,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge since at least 1919, 70,800 ft³/s Oct. 1, 1983, from slope-area measurement of peak flow, gage height, 16.76 ft, from profile past gage; minimum, 0.3 ft³/s Aug. 30, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 20,000 ft³/s occurred Aug. 2, 1919, at site of former gaging station 6 mi downstream, operated April 1919 to September 1921, gage height, 6.3 ft, from floodmark, site and datum then in use, from rating curve extended above 5,100 ft³/s on basis of velocity-area study.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*), from rating curve extended above 130 ft³/s on the basis of slope area measurement at gage height 16.76 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	0815	*6,760	*7.31

Minimum daily discharge, 9.2 ft³/s, Nov. 11, 12, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	13	19	43	19	841	181	23	19	13	17	20
2	15	14	19	31	19	3100	113	22	18	13	20	20
3	15	14	19	26	19	505	80	22	16	21	20	17
4	13	13	15	72	19	133	70	22	17	23	22	14
5	13	12	16	113	19	70	62	22	15	23	21	17
6	13	12	19	304	19	60	53	23	16	22	20	15
7	13	12	19	133	19	56	47	21	16	21	19	16
8	13	12	19	66	19	55	38	20	13	24	50	18
9	13	12	19	46	19	55	35	20	10	24	38	20
10	12	12	19	37	19	55	32	20	11	21	33	21
11	12	9.2	19	32	19	54	31	19	12	12	32	22
12	12	9.2	19	31	19	51	30	19	12	9.9	25	23
13	12	11	19	e28	18	48	30	19	18	13	21	22
14	12	11	19	e27	19	43	29	18	19	14	20	20
15	13	11	19	e26	18	41	26	17	17	14	28	21
16	12	11	26	e26	19	48	27	18	16	14	17	20
17	11	9.2	26	e25	18	38	26	18	16	15	18	24
18	12	11	21	e25	64	36	27	17	16	17	20	23
19	12	12	20	24	30	35	24	16	15	15	22	21
20	12	12	21	24	20	34	23	15	15	23	25	22
21	11	20	28	23	18	349	23	15	15	19	25	23
22	11	18	31	e22	16	478	23	16	15	15	23	24
23	12	19	27	e22	15	421	23	17	14	14	23	25
24	11	15	24	e21	14	570	22	17	14	14	22	28
25	12	16	22	e21	14	465	22	16	14	15	22	25
26	12	17	21	e21	13	383	23	16	14	13	21	24
27	12	19	24	e21	12	518	23	16	14	11	21	21
28	13	19	156	e20	41	707	23	17	16	11	21	21
29	11	19	254	e20	---	698	23	18	13	11	20	22
30	12	19	174	e20	---	549	22	17	12	15	20	21
31	12	---	78	19	---	336	---	17	---	17	20	---
TOTAL	384	413.6	1231	1369	577	10832	1211	573	448	506.9	726	630
MEAN	12.4	13.8	39.7	44.2	20.6	349	40.4	18.5	14.9	16.4	23.4	21.0
MAX	15	20	254	304	64	3100	181	23	19	24	50	28
MIN	11	9.2	15	19	12	34	22	15	10	9.9	17	14
AC-FT	762	820	2440	2720	1140	21490	2400	1140	889	1010	1440	1250

CAL YR 1990 TOTAL 9041.8 MEAN 24.8 MAX 486 MIN 7.2 AC-FT 17930
WTR YR 1991 TOTAL 18901.5 MEAN 51.8 MAX 3100 MIN 9.2 AC-FT 37490

e Estimated

09473100 SAN PEDRO RIVER BELOW ARAVAIPA CREEK, NEAR MAMMOTH, AZ

WATER-QUALITY RECORDS

LOCATION.--Lat 32°51'03", long 110°43'27", in SE&NE&SE& sec.5, T.7 S., R.16 E., Pinal County, Hydrologic Unit 15050203, at former gaging station, 1.0 mi downstream from mouth of Aravaipa Creek, 10 mi north of Mammoth, and 11 mi upstream from mouth.

DRAINAGE AREA.--4,360 mi²; of which 696 mi² is in Mexico.

PERIOD OF RECORD.--

CHEMICAL QUALITY DATA: October 1980 to September 1986.

SUSPENDED SEDIMENT DATA: October 1980 to current year.

SUSPENDED SEDIMENT DISCHARGE
WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (000061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT					
12...	1325	3.6	27.0	54	0.53
NOV					
28...	1505	3.9	16.0	193	2.0
DEC					
20...	1340	9.8	10.0	219	5.8
JAN					
18...	1155	10	17.0	183	5.1
MAR					
20...	1025	14	17.0	107	4.2
MAY					
10...	1210	12	27.0	71	2.3
JUN					
27...	1400	7.0	22.0	1430	27
AUG					
24...	1055	16	26.0	796	35
27...	0955	17	24.0	391	18
SEP					
12...	1300	14	--	49	1.9

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (000061)	TEMPER- ATURE WATER (DEG C) (00010)	BED MAT. SIEVE DIAM. % FINER THAN (80164)	BED MAT. SIEVE DIAM. % FINER THAN (80165)	BED MAT. SIEVE DIAM. % FINER THAN (80166)	BED MAT. SIEVE DIAM. % FINER THAN (80167)	BED MAT. SIEVE DIAM. % FINER THAN (80168)	BED MAT. SIEVE DIAM. % FINER THAN (80169)	BED MAT. SIEVE DIAM. % FINER THAN (80170)	BED MAT. SIEVE DIAM. % FINER THAN (80171)	BED MAT. SIEVE DIAM. % FINER THAN (80172)
MAR												
20...	1025	14	17.0	1	1	5	31	71	91	96	100	--
MAY												
10...	1210	12	27.0	0	1	6	24	48	66	80	92	100

09474000 GILA RIVER AT KELVIN, AZ

LOCATION.--Lat 33°06'10", long 110°58'33", in NE¼NW¼ sec.12, T.4 S., R.13 E., Pinal County, Hydrologic Unit 15050100, on left bank at Kelvin, 500 ft downstream from Mineral Creek, 18 mi downstream from San Pedro River, and 19 mi upstream from Ashurst-Hayden Dam.

DRAINAGE AREA.--18,011 mi², of which 5,125 mi² is below Coolidge Dam.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1911 to current year.

REVISED RECORDS.--WSP 329: 1911. WSP 609: 1916(M). WSP 629: 1914-17. WSP 1119: 1913, 1915, 1917(M), 1921(M), 1922-23, 1927(M). WSP 1283: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,745.02 ft above National Geodetic Vertical Datum of 1929. Prior to June 15, 1914, and Dec. 1, 1914, to Aug. 31, 1915, nonrecording gages at several sites within 2 mi of present site at different datums. Sept. 1, 1915, to Sept. 30, 1963, water-stage recorder at site 900 ft downstream at datum 1.80 ft lower. Jan. 16, 1985, to June 1990, supplementary water-stage recorder at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Large diversions above station for irrigation, of which about 90 percent is above Coolidge Dam. About 82,000 acres irrigated, a considerable portion by pumping from ground water. Flow regulated by San Carlos Reservoir 49 mi upstream since Nov. 15, 1928. (See sta 09469000.) San Pedro River contributes major portion of unregulated inflow.

AVERAGE DISCHARGE (adjusted for storage in San Carlos Reservoir).--80 years, 501 ft³/s, 363,000 acre-ft/yr; median of yearly mean discharges, 340 ft³/s, 246,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--1911-28: Maximum discharge, about 132,000 ft³/s Jan. 20, 1916, gage height, 19.5 ft, site and datum then in use, from rating curve extended above slope-area measurement at gage height, 16.2 ft for flood of Sept. 28, 1926; no flow Feb. 25, 1913.

1929-91: Maximum discharge, 100,000 ft³/s Oct. 2, 1983, gage height, 33.0 ft from floodmark, from rating curve extended above 12,000 ft³/s on basis of peak discharge computed by step-backwater method at Hayden Railroad Bridge, 17.8 mi upstream, and by flood-routing; minimum daily, 0.1 ft³/s June 25, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 3	unknown	*11,100	*15.89

Minimum daily discharge, 6.3 ft³/s, Oct. 29-Nov. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	6.3	11	2330	41	523	537	325	e770	924	e1100	1100
2	26	6.8	11	1270	41	4870	524	320	e760	927	e1080	1100
3	19	7.3	12	539	40	e3200	575	323	e730	967	e1050	1070
4	13	8.3	12	241	39	e1070	540	340	e710	991	e1050	999
5	15	8.0	12	275	39	e735	516	349	e700	1010	e1050	1040
6	14	7.7	13	483	39	e300	495	352	e675	1010	e1060	864
7	10	7.9	12	e1950	38	245	477	357	e671	1010	1080	798
8	8.9	7.9	12	e1300	38	315	460	375	646	1000	1090	790
9	8.7	8.1	13	e1270	37	421	e430	440	638	1010	1080	765
10	8.7	8.1	14	e300	36	665	e410	458	642	1000	1090	644
11	8.2	7.9	14	95	35	704	e400	471	636	1000	1100	595
12	8.2	7.9	15	83	37	688	e385	473	647	1010	1150	544
13	8.2	7.8	17	74	e37	680	e375	471	674	1010	1100	502
14	8.3	7.6	18	68	e40	677	e365	468	682	1010	1100	490
15	8.0	7.2	18	63	e36	689	e360	476	673	1030	1090	479
16	7.8	7.3	71	59	e36	720	e345	482	675	1030	1120	474
17	7.9	7.7	168	56	e46	712	337	485	672	1030	1120	404
18	7.8	7.9	97	52	e82	733	330	448	748	1090	1120	354
19	7.8	7.7	77	50	e78	724	324	439	812	1050	1110	326
20	7.5	8.3	429	49	e76	846	322	e435	821	1100	1110	254
21	7.5	8.7	e325	47	e56	974	318	e430	818	1150	1110	201
22	7.4	8.9	216	44	e50	1230	316	e425	809	1130	1110	205
23	7.3	9.0	199	44	e45	1170	316	e420	823	1130	1280	223
24	7.0	8.7	210	43	39	1180	315	e410	849	1130	1160	e185
25	6.9	9.0	199	43	37	1180	313	e400	857	1130	1150	179
26	6.7	9.6	194	42	36	1010	309	e400	883	1130	1150	147
27	6.7	10	194	41	36	1120	304	e440	902	1130	1120	143
28	6.5	9.7	366	41	43	1180	301	e630	906	1140	1110	143
29	6.3	10	1400	43	---	1480	e302	e720	906	1140	1100	140
30	6.3	10	2130	44	---	1170	330	e780	917	1160	1110	132
31	6.3	---	2420	43	---	776	---	e770	---	1150	1090	---
TOTAL	287.9	247.3	8899	11082	1233	31987	11631	14112	22652	32729	34340	15290
MEAN	9.29	8.24	287	357	44.0	1032	388	455	755	1056	1108	510
MAX	26	10	2420	2330	82	4870	575	780	917	1160	1280	1100
MIN	6.3	6.3	11	41	35	245	301	320	636	924	1050	132
AC-FT	571	491	17650	21980	2450	63450	23070	27990	44930	64920	68110	30330

CAL YR	1990	TOTAL	47086.6	MEAN	129	MAX	2420	MIN	6.3	AC-FT	93400
WTR YR	1991	TOTAL	184490.2	MEAN	505	MAX	4870	MIN	6.3	AC-FT	365900

e Estimated

GILA RIVER BASIN

09474000 GILA RIVER AT KELVIN, AZ--Continued

WATER-QUALITY RECORDS

LOCATION.--Water samples collected at Florence-Kelvin road bridge 200 ft upstream from Mineral Creek, and 700 ft upstream from gaging station.

PERIOD OF RECORD.--December 1950 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1976.

WATER TEMPERATURES: December 1950 to September 1976.

SUSPENDED-SEDIMENT DISCHARGE: January 1958 to September 1976.

REMARKS.--No inflow from Mineral Creek between sampling point and gaging station except during infrequent periods of heavy local rains. Unpublished daily specific conductance measurements for period December 1950 to September 1964 available from district office in Tucson, AZ.

SUSPENDED SEDIMENT DISCHARGE
WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
NOV					
30...	1210	10	15.0	344	9.7
MAR					
20...	1330	992	--	930	2490
APR					
29...	1340	302	26.0	135	110
MAY					
19...	1520	472	19.0	220	280
SEP					
03...	1545	1030	22.5	577	1600

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL,

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	BED MAT. SIEVE DIAM. % FINER THAN (80164)	BED MAT. SIEVE DIAM. % FINER THAN (80165)	BED MAT. SIEVE DIAM. % FINER THAN (80166)	BED MAT. SIEVE DIAM. % FINER THAN (80167)	BED MAT. SIEVE DIAM. % FINER THAN (80168)	BED MAT. SIEVE DIAM. % FINER THAN (80169)	BED MAT. SIEVE DIAM. % FINER THAN (80170)	BED MAT. SIEVE DIAM. % FINER THAN (80171)
MAY											
19...	1520	472	19.0	27	42	61	88	94	97	98	100

DIVERSION FROM GILA RIVER

09475500 FLORENCE-CASA GRANDE CANAL, NEAR FLORENCE, AZ

LOCATION.--Lat 33°05'15", long 111°17'10", in NE¼NE¼ sec.14, T.4 S., R.10 E., Pinal County, Hydrologic Unit 15050100, on left bank at China Wash, 2.6 mi downstream from head at Ashurst-Hayden Dam and 7.5 mi northeast of Florence.

PERIOD OF RECORD.--January 1928 to current year (monthly diversions only). Published as a supplement to records for Gila River at Ashurst-Hayden Dam, 1928-80.

GAGE.--Water-stage recorder and Parshall flume. Prior to Jan. 12, 1937, water-stage recorder 900 ft downstream from Ashurst-Hayden Dam.

REMARKS.--Records show monthly diversion from the Gila River at Ashurst-Hayden Dam for irrigation of land under the 100,000 acre San Carlos Project. Diversion records are those at the canal gaging station at the flume 2.6 mi downstream from dam; values are adjusted for sluicing through the dam or from the canal and pumping of water into the canal between the dam and the flume, but are not adjusted for natural losses. Adjusted values show water available at Ashurst-Hayden Dam, except for spill over the dam or water sluiced through the dam during times of flood runoff.

COOPERATION.--Pumping records furnished by Bureau of Indian Affairs.

MONTHLY DIVERSIONS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Month	Discharge, in cubic feet per second			Diversions in acre-feet	Water sluiced above flume (acre-feet)
	Maximum	Minimum	Mean		
October.....	8.7	0	3.38	75	0
November.....	0	0	0	140	0
December.....	739	0	89.1	5,560	0
CAL YR 1990.....	739	0	83.6	56,510	0
January.....	785	36	121	7,580	0
February.....	75	31	38.9	1,960	0
March.....	984	109	601	37,540	0
April.....	456	269	334	20,850	0
May.....	746	264	420	25,480	0
June.....	846	630	740	42,990	0
July.....	1,050	836	953	57,800	0
August.....	1,120	993	1,028	63,000	0
September.....	995	115	480	28,550	0
WTR YR 1991.....	1,120	0	404	291,500	0

09479500 GILA RIVER NEAR LAVERN, AZ

LOCATION.--Lat 33°15'25", long 112°09'59", in SW¼NW¼ sec.16, T.2 S., R.2 E., Pinal County, Hydrologic Unit 15050100, in Gila River Indian Reservation, on left abutment of highway bridge, 2.1 mi upstream from Santa Cruz River, 2.6 mi south of Komatke, and 7.3 mi south of Laveen.

DRAINAGE AREA.--20,615 mi², of which 696 mi² is in Mexico.

PERIOD OF RECORD.--January 1940 to September 1946, December 1947 to current year.

GAGE.--Water-stage recorder above concrete diversion dam. Datum of gage is 1,018.90 ft above National Geodetic Vertical Datum of 1929. Since July 9, 1969, supplementary water-stage recorder on overflow channel at highway bridge 0.2 mi south at same datum. Oct. 16, 1940, to July 8, 1969, supplementary staff gage or water-stage recorder on overflow channel at datum 0.23 ft lower.

REMARKS.--Records fair. Records include flow over dam and in overflow channel. Large diversions above station for irrigation. Most low flow is waste water from irrigated lands and from Chandler, Arizona treatment plant (1979-83). Flow partly regulated by storage in San Carlos Reservoir. (See elsewhere in this report.)

AVERAGE DISCHARGE.--49 years (water years 1941-46, 1949-91), 32.5 ft³/s, 23,550 acre-ft/yr; median of yearly mean discharges, 10 ft³/s, 7,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s Oct. 4, 1983, gage height, 12.08 ft main gage, 12.34 ft overflow gage, result of flow routing computation; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 203 ft³/s, Mar. 6, gage height, 4.44 ft main gage; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.70	.78	10	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.36	.78	8.0	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.27	1.3	7.9	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.42	.97	5.8	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.50	39	5.8	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.78	61	5.8	.00	.00	.00	e.00	.00
7	.00	.00	.00	.00	.78	9.3	5.8	.00	.00	.00	e.00	.00
8	.00	.00	.00	.00	.78	3.6	4.4	.00	.00	.00	e.00	.00
9	.00	.00	.00	.00	.78	2.7	3.8	.00	.00	.00	e.00	.00
10	.00	.00	.00	.00	.78	5.1	5.8	.00	.00	.00	e.00	.00
11	.00	.00	.00	.00	.78	4.3	4.5	.00	.00	.00	e.00	.00
12	.00	.00	.00	.00	.78	2.8	3.6	.00	.00	.00	e.00	.00
13	.00	.00	.00	.00	.78	3.6	3.6	.00	.00	.00	e.00	.00
14	.00	.00	.00	.00	.78	3.4	3.6	.00	.00	.00	e.00	.00
15	.00	.00	.00	.00	.68	2.6	3.6	.00	.00	.00	e.00	.00
16	.00	.00	.00	.00	.42	6.5	3.6	.00	.00	.00	e.00	.00
17	.00	.00	2.3	.00	.42	5.3	3.6	.00	.00	.00	e.00	.00
18	.00	.00	.32	.00	.54	3.0	3.6	.00	.00	.00	e.00	.00
19	.00	.00	.00	.00	.78	3.2	3.6	.00	.00	.00	e.00	.00
20	.00	.00	.00	.00	.78	4.1	3.6	.00	.00	.00	e.00	.00
21	.00	.00	.00	.00	.78	5.6	3.6	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.78	4.1	3.6	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.78	3.6	3.6	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.78	3.3	3.6	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.78	2.6	3.6	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.78	4.1	3.6	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.78	6.7	3.6	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.78	10	3.6	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	9.3	3.2	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	7.8	.41	.00	.00	.00	.00	.00
31	.00	---	.00	.52	---	8.6	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	2.62	0.52	19.13	229.03	132.41	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.085	.017	.68	7.39	4.41	.000	.000	.000	.000	.000
MAX	.00	.00	2.3	.52	.78	61	10	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.27	.78	.41	.00	.00	.00	.00	.00
AC-FT	.00	.00	5.2	1.0	38	454	263	.00	.00	.00	.00	.00

CAL YR 1990	TOTAL	981.25	MEAN	2.69	MAX	388	MIN	.00	AC-FT	1950
WTR YR 1991	TOTAL	383.71	MEAN	1.05	MAX	61	MIN	.00	AC-FT	761

e Estimated

09480000 SANTA CRUZ RIVER NEAR LOCHIEL, AZ

LOCATION.--Lat 31°21'19", long 110°35'20", in SW¼ sec.11, T.24 S., R.17 E. (unsurveyed), Santa Cruz County, Hydrologic Unit 15050301, on southern border of Spanish land grant of San Rafael, near left bank on downstream side of pier of bridge on county road, 1.7 mi upstream from international boundary, and 2.5 mi northeast of Lochiel.

DRAINAGE AREA.--82.2 mi².

PERIOD OF RECORD.--January 1949 to current year.

REVISED RECORDS.--WSP 1733: 1951.

GAGE.--Water-stage recorder. Elevation of gage is 4,620 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Small diversions for irrigation of 200 acres above station, mostly by pumping from ground water.

AVERAGE DISCHARGE.--42 years, 3.84 ft³/s, 2,780 acre-ft/yr; median of yearly mean discharges, 1.8 ft³/s, 1,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s Oct. 9, 1977 and Aug. 15, 1984, gage height, 10.21 ft and 10.2 ft respectively, from rating curve extended above 1,600 ft³/s on basis of slope-area measurement at gage height 10.21 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 26	1330	*17	*2.16

No flow July 5-7, 12-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	1.2	.69	1.2	1.1	1.6	1.1	.26	.57	.43	.38	.46
2	3.1	1.2	.67	1.1	1.1	2.0	1.0	.15	.57	.35	.38	.53
3	2.3	1.1	.65	1.1	1.1	1.3	.98	.16	.57	.12	.38	.59
4	2.0	1.1	.65	1.2	1.1	1.2	.98	.38	.57	.01	.38	.50
5	1.9	1.1	.62	1.2	1.1	1.2	.96	.65	.57	.00	.36	.46
6	1.9	1.1	.61	1.3	1.1	1.2	.94	.74	.57	.00	.33	.46
7	1.9	1.2	.62	1.2	1.1	1.2	.94	.74	.57	.00	.30	.46
8	1.7	1.1	.65	1.2	1.1	1.1	.94	.74	.57	.03	.34	.44
9	1.6	1.1	.65	1.2	1.1	1.1	.94	.74	.57	.12	.43	.48
10	1.6	1.1	.69	1.2	1.1	1.1	.92	.74	.51	.14	.55	.49
11	1.7	1.0	.69	1.1	1.2	1.1	.89	.74	.49	.10	.63	.47
12	1.6	1.0	.71	1.1	1.7	1.1	.89	.74	.49	.00	.56	.47
13	1.6	.96	.74	1.1	1.4	1.1	.88	.74	.49	.00	.49	.48
14	1.6	.89	.74	1.1	1.2	1.0	.89	.67	.49	.00	.57	.49
15	1.6	.89	.79	1.1	1.2	1.0	.88	.63	.49	.03	.69	.50
16	1.6	.86	.94	1.1	1.2	1.0	.87	.72	.49	.09	.58	.44
17	1.6	.84	.86	1.2	1.2	1.0	.84	.59	.47	.10	.53	.47
18	1.5	.84	.84	1.2	1.2	1.0	.84	.49	.44	.09	.53	.62
19	1.5	.84	.85	1.2	1.2	1.0	.81	.49	.43	.13	1.0	.69
20	1.5	.84	.95	1.2	1.1	1.0	.79	.47	.45	.17	.59	.61
21	1.5	.83	1.1	1.1	1.1	1.1	.79	.49	.46	.18	.46	.61
22	1.5	.79	1.0	1.1	1.1	1.1	.79	.60	.43	.20	1.5	.63
23	1.5	.79	.94	1.1	1.1	1.1	.81	.59	.42	.27	2.0	.65
24	1.5	.76	.94	1.1	1.1	1.1	.79	.49	.39	.31	.48	.65
25	1.4	.76	.94	1.1	1.1	1.1	.79	.46	.38	.34	1.0	.56
26	1.4	.91	.94	1.1	1.1	1.1	.77	.52	.43	2.6	.76	.46
27	1.4	.81	1.1	1.1	1.1	1.1	.79	.46	.43	.67	.53	.49
28	1.3	.79	1.2	1.1	1.7	1.1	.77	.43	.39	.34	.49	.49
29	1.3	.70	1.2	1.1	---	1.1	.56	.45	.28	.32	.44	.49
30	1.3	.69	1.2	1.1	---	1.1	.39	.50	.42	.43	.53	.49
31	1.2	---	1.2	1.1	---	1.1	---	.56	---	.38	.46	---
TOTAL	53.3	28.09	26.37	35.4	33.0	35.4	25.53	17.13	14.40	7.95	18.65	15.63
MEAN	1.72	.94	.85	1.14	1.18	1.14	.85	.55	.48	.26	.60	.52
MAX	4.2	1.2	1.2	1.3	1.7	2.0	1.1	.74	.57	2.6	2.0	.69
MIN	1.2	.69	.61	1.1	1.1	1.0	.39	.15	.28	.00	.30	.44
AC-FT	106	56	52	70	65	70	51	34	29	16	37	31

CAL YR	1990	TOTAL	857.46	MEAN	2.35	MAX	178	MIN	.15	AC-FT	1700
WTR YR	1991	TOTAL	310.85	MEAN	.85	MAX	4.2	MIN	.00	AC-FT	617

09480500 SANTA CRUZ RIVER NEAR NOGALES, AZ

LOCATION.--Lat 31°20'40", long 110°51'03", in NW¼ sec.18, T.24 S., R.15 E. (unsurveyed), Santa Cruz County, Hydrologic Unit 15050301, in Spanish land grant of Maria Santisima del Carmen, on left bank 0.8 mi downstream from international boundary and 5.5 mi east of Nogales.

DRAINAGE AREA.--533 mi², of which 348 mi² is in Mexico.

PERIOD OF RECORD.--March to November 1907 and April 1909 to December 1912 (discharge measurements and fragmentary gage-height record), January 1913 to June 1922 (October 1915 to September 1916 monthly discharge only), May 1930 to December 1933, July 1935 to current year. Water-year estimates for 1913, 1915-16, 1920-22, 1930, 1934-35, published in WSP 1733.

REVISED RECORDS.--WSP 959: 1935(M). WSP 1213: 1915-16, 1930-32(M), 1934(M), 1936-37(M). WSP 1283: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,702.54 ft above National Geodetic Vertical Datum of 1929 (levels by International Boundary and Water Commission). Prior to June 30, 1922, nonrecording gage or water-stage recorder at various sites 5 to 6 mi downstream at different datums.

REMARKS.--Records poor. Diversions above station of about 4,300 acre-ft/yr for irrigation of about 2,150 acres in Mexico in 1977. Diversion 19 mi upstream for municipal supply of city of Nogales, Sonora, began in 1949; diversion in 1968 totaled 3,500 acre-ft/yr.

AVERAGE DISCHARGE.--72 years (water years 1913-22, 1930-91), 28.0 ft³/s, 20,290 acre-ft/yr; median of yearly mean discharges, 19 ft³/s, 13,800 acre-ft/yr.

EXTREMES FOR PERIOD 1930-91.--Maximum discharge, 31,000 ft³/s Oct. 9, 1977, gage height, 15.5 ft, from rating curve extended above 1,660 ft³/s on basis of slope-area measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	0615	*3,640	*7.49

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	8.6	9.1	9.9	30	684	68	13	1.8	.28	.92	.35
2	30	9.4	8.5	9.5	30	2020	58	13	1.8	.28	.80	.56
3	23	8.8	8.2	8.6	30	462	51	14	1.8	.00	.80	.56
4	19	8.3	7.6	8.7	29	235	45	13	1.4	.00	.80	.42
5	18	8.1	6.5	13	27	204	40	12	1.4	.00	.56	.56
6	17	8.3	5.9	164	29	185	36	12	1.4	.84	.56	.35
7	16	8.2	5.6	100	28	118	33	12	1.2	.12	.00	.14
8	16	7.9	5.6	62	26	91	31	11	1.2	.92	.00	.00
9	15	7.6	5.2	46	26	80	31	8.6	1.2	.49	.00	.00
10	14	7.4	4.9	35	26	68	36	8.0	1.4	.42	.00	.00
11	14	7.3	5.1	31	29	56	33	8.0	1.8	.28	.00	.00
12	14	7.3	5.4	30	442	47	29	8.6	1.8	.21	.00	.00
13	13	7.9	5.4	27	426	42	29	8.0	2.3	.35	.00	.00
14	13	8.2	5.0	24	200	36	27	6.9	2.3	.35	.00	1.2
15	14	8.1	5.0	23	148	32	27	6.9	1.4	.42	.00	.10
16	13	8.3	8.9	25	117	35	24	5.2	1.2	.42	.00	.00
17	13	8.7	8.3	89	96	31	20	3.5	.92	.35	.00	.00
18	12	9.0	6.3	102	87	27	21	3.2	.80	.28	.00	.00
19	12	9.3	6.3	86	81	25	20	2.6	.63	.35	.00	.00
20	11	10	6.4	72	72	24	17	2.3	.63	.28	.00	.00
21	10	10	7.2	61	65	34	16	1.8	.63	.14	.00	.00
22	9.0	11	8.0	55	63	45	18	1.8	.63	.07	.00	.00
23	10	11	7.3	50	61	43	18	1.8	.63	.00	.00	.00
24	9.9	12	7.0	43	55	37	17	1.8	.56	.00	.00	.00
25	9.4	12	6.7	40	51	37	18	1.4	.56	.00	.00	.00
26	8.7	14	7.4	39	52	38	18	1.4	.56	.00	.00	.00
27	8.6	13	8.2	36	51	55	17	1.4	.49	.00	.00	.00
28	8.2	12	13	34	440	92	17	1.4	.49	.28	.00	.00
29	8.2	8.7	15	34	---	108	17	1.4	.42	.42	.00	.00
30	8.4	8.5	14	31	---	101	16	1.4	.42	.49	.00	.00
31	8.1	---	11	30	---	86	---	1.8	---	.63	.35	---
TOTAL	421.5	278.9	234.0	1418.7	2817	5178	848	189.2	33.77	103.71	4.79	4.24
MEAN	13.6	9.30	7.55	45.8	101	167	28.3	6.10	1.13	3.35	.15	.14
MAX	30	14	15	164	442	2020	68	14	2.3	.84	.92	1.2
MIN	8.1	7.3	4.9	8.6	26	24	16	1.4	.42	.00	.00	.00
AC-FT	836	553	464	2810	5590	10270	1680	375	67	206	9.5	8.4
CAL YR 1990	TOTAL	8484.52	MEAN	23.2	MAX	924	MIN	.00	AC-FT	16830		
WTR YR 1991	TOTAL	11531.81	MEAN	31.6	MAX	2020	MIN	.00	AC-FT	22870		

09482500 SANTA CRUZ RIVER AT TUCSON, AZ

LOCATION.--Lat 32°13'19", long 110°58'52", in SE~~1~~⁴ sec.11, T.14 S., R.13 E., Pima County, Hydrologic Unit 15050301, on right bank, 300 ft downstream from Congress Street Bridge, in Tucson.

DRAINAGE AREA.--2,222 mi², of which 395 mi² is in Mexico, adjusted for 15.2 mi² of Tucson Arroyo drainage area contributing to this station effective July 1956.

PERIOD OF RECORD.--October 1905 to September 1981 (monthly discharge only, January 1907 to September 1912, January to September 1914), June 1986 to current year (discharge above 500 ft³/s only).

REVISED RECORDS.--WSP 859: 1915(M). WSP 1283: Drainage area. WSP 1313: 1939(M). WDR AZ-88-1: 1986-87(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,320.68 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 27, 1929, nonrecording gages or reference points for measuring to water surface at various places on Congress Street bridge at various datums. Nov. 27, 1929 to Sept. 30, 1981, water-stage recorder at Congress Street bridge: at datum 6.22 ft higher Nov. 27, 1929 to June 18, 1958; at datum 2.22 ft higher June 18, 1958 to May 21, 1963; at datum 3.48 ft lower May 21, 1963 to Oct. 27, 1970; at datum 2.86 ft lower Oct. 1, 1971 to Sept. 30, 1981. No gage Oct. 27, 1970 to Oct. 1, 1971, and Oct. 10, 1977, to Feb. 14, 1978.

REMARKS.--Records fair. Only daily discharges above 500 ft³/s are published. Irrigation above station of about 26,000 acres, including about 2,300 acres in Mexico, mostly by pumping from ground water. Ground water is also pumped above the station for municipal supply and mining. From October 1969 to September 1981, all flow past station was published, including waste water when known.

AVERAGE DISCHARGE.--76 years (water years 1906-81), 22.7 ft³/s, 16,450 acre-ft/yr; median of yearly mean discharges, 14 ft³/s, 10,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft³/s Oct. 10, 1977, gage height, 21.8 ft, from flood-marks, from rating curve extended above 4,000 ft³/s on basis of slope-area measurement of peak flow; no flow for most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1892, 52,700 ft³/s, from slope-area measurement of peak flow, Oct. 2, 1983; gage height, 22.2 ft, from floodmark, at site and datum used in 1981. Maximum discharge during the 1985 water year was 10,000 ft³/s Dec. 28, 1984; gage height, 12.5 ft, at site and datum used in 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 9	1845	*2,130	*4.61

No daily discharges above 500 ft³/s during the year.

09484000 SABINO CREEK NEAR TUCSON, AZ

LOCATION.--Lat 32°19'00", long 110°48'35", in SE¼NE¼ sec.9, T.13 S., R.15 E., Pima County, Hydrologic Unit 15050302, on left bank, 30 ft upstream from Lower Sabino Dam, 0.5 mi north of Coronado National Forest boundary and 12 mi northeast of Tucson City Hall.

DRAINAGE AREA.--35.5 mi².

PERIOD OF RECORD.--July 1904 to June 1912 (monthly discharge only); June 1932 to September 1974 (continuous record station); October 1974 to September 1989 (crest-stage partial-record station); October 1989 to current year.

REVISED RECORDS.--WSP 1213: 1938, 1946. WSP 1283: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,720 ft above National Geodetic Vertical Datum of 1929, from topographic map. July 1904 to June 1912, water-stage recorder and sharp-crested weir at site 0.7 mi upstream at different datum. June 1932 to September 1974 (water-stage recorder) and October 1974 to August 1981 (crest-stage gage) at site 1,000 ft upstream at different datum.

REMARKS.--Records good. No diversion above station except for domestic supply.

AVERAGE DISCHARGE.--51 years (water years 1905-11, 1933-74, 1990-91), 12.9 ft³/s, 9,350 acre-ft/yr; median of yearly mean discharges 8.8 ft³/s, 6,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,730 ft³/s Sept. 6, 1970, gage height 10.21 ft, from rating curve extended above 3,000 ft³/s on basis of slope-area measurement at gage height 9.65 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 16	1100	857	2.59	Feb. 28	1215	684	2.38
Dec. 28	0800	407	1.99	Mar. 1	1600	*2,600	*4.09
Jan. 5	2000	1,580	3.30	Mar. 27	2230	459	2.07

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	.00	.00	1.5	2.4	1180	237	13	3.1	e.00	.00	6.3
2	e1.3	.00	.00	.14	1.9	1580	242	11	1.9	e.00	.00	2.7
3	1.0	.00	.00	.04	2.1	1190	213	6.7	1.0	e.00	.00	1.7
4	.37	.00	.00	260	2.4	1030	204	6.8	.56	e.00	.00	1.2
5	.26	.00	.00	496	2.4	788	210	6.9	.31	e.00	.00	.78
6	.15	.00	.00	581	2.4	715	214	7.1	.13	e.00	.00	.78
7	.07	.00	.00	227	2.4	439	195	7.3	.02	e.00	.00	.53
8	.09	.00	.00	137	2.4	273	168	5.9	.00	e.00	.00	.39
9	.00	.00	.00	95	2.4	215	138	6.6	.00	.00	.00	.36
10	.00	.00	.00	69	2.5	139	121	5.6	.00	.00	.00	.26
11	.00	.00	.00	35	3.1	97	107	4.0	e.00	.00	.00	.26
12	.00	.00	.00	28	13	78	91	4.0	.00	.00	.00	.61
13	.00	.00	.00	20	42	65	79	9.4	.80	.00	.00	.55
14	.00	.00	.00	20	25	50	68	21	.29	.00	.00	.34
15	.00	.00	.00	13	16	41	60	18	.00	.00	.00	.14
16	.00	.00	421	9.6	13	46	53	10	.00	.00	.00	.07
17	.25	.00	108	12	14	32	49	8.4	.00	.00	.00	.05
18	.00	.00	24	11	31	29	50	7.2	.02	.00	.00	.00
19	.00	.00	11	10	18	32	59	7.3	e.00	.00	.00	.00
20	.00	.00	6.7	11	4.7	41	49	8.0	e.00	.00	.00	.00
21	.00	.00	11	10	.06	43	44	10	e.00	.00	.00	.00
22	.00	.00	13	8.5	.00	39	42	24	e.00	.00	.00	.00
23	.00	.00	9.0	7.7	.16	26	40	34	e.00	.00	.00	.00
24	.00	.00	9.3	7.7	.19	145	38	22	e.00	.00	.00	.00
25	.00	.00	12	6.8	8.5	176	31	19	e.00	.00	.00	.00
26	.00	.00	13	6.1	17	165	28	20	e.00	.00	.45	.00
27	.00	.00	11	6.3	12	243	26	16	e.00	.00	17	.00
28	.00	.00	184	4.1	269	145	23	12	e.00	.00	3.9	.00
29	.00	.00	293	3.3	---	130	19	9.1	e.00	.00	4.5	.00
30	.00	.00	83	2.4	---	222	16	6.8	e.00	.00	2.5	.00
31	.00	---	9.6	2.8	---	240	---	4.6	---	.00	6.7	---
TOTAL	5.09	0.00	1218.60	2101.98	510.01	9634	2914	351.7	8.13	0.00	35.05	17.02
MEAN	.16	.000	39.3	67.8	18.2	311	97.1	11.3	.27	.000	1.13	.57
MAX	1.6	.00	421	581	269	1580	242	34	3.1	.00	17	6.3
MIN	.00	.00	.00	.04	.00	26	16	4.0	.00	.00	.00	.00
AC-FT	10	.00	2420	4170	1010	19110	5780	698	16	.00	70	34

CAL YR	1990	TOTAL	6370.95	MEAN	17.5	MAX	478	MIN	.00	AC-FT	12640
WTR YR	1991	TOTAL	16795.58	MEAN	46.0	MAX	1580	MIN	.00	AC-FT	33310

e Estimated

GILA RIVER BASIN

201

09484500 TANQUE VERDE CREEK AT TUCSON, AZ

LOCATION.--Lat 32°15'57", long 110°50'27", in SE¼SE¼ sec.31, T.13 S., R.15 E., Pima County, Hydrologic Unit 15050302, at Sabino Canyon Road, 1 mi downstream from Sabino Creek, and 0.8 mi north of Tucson city limits.

DRAINAGE AREA.--219 mi².

PERIOD OF RECORD.--June 1940 to December 1945; water years 1966-81, 1988-90 (annual maximums only); October 1990 to September 1991. Prior to 1945, published as "Rillito Creek near Wrightstown."

GAGE.--Water-stage recorder. Elevation of gage is 2,470 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 1940 to December 1945, at same location at different datum. October 1965 to September 1981, nonrecording gage at same site at different datum. October 1987 to September 1990, nonrecording gage at same site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--6 years (water years 1941-45, 1991), 21.9 ft³/s, 15,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s, Dec. 18, 1978, gage height, 7.33 ft, by slope-area method; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 16	1245	509	5.93	Jan. 5	2245	2,880	8.45
Dec. 29	0030	1,170	7.09	Mar. 1	2030	*5,980	*9.92

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.00	e.00	70	.00	1950	187	.15	.00	.00	.00	.00
2	.00	e.00	e.00	50	.00	2150	189	.00	.00	.00	.00	.00
3	.00	.00	e.00	53	.00	630	154	.00	.00	.00	.00	.00
4	.00	.00	e.00	372	.00	305	145	.00	.00	.00	.00	.00
5	.00	.00	e.00	887	.00	237	144	.00	.00	.00	.00	.00
6	.00	.00	e.00	1420	.00	255	138	.00	.00	.00	.00	.00
7	.00	.00	e.00	401	.00	155	117	.00	.00	.00	.00	.00
8	.00	.00	e.00	124	.00	105	94	.00	.00	.00	.00	.00
9	.00	.00	e.00	86	.00	87	76	.00	.00	.00	.00	.00
10	.00	.00	e.00	62	.00	71	67	.00	.00	.00	.00	.00
11	.00	.00	e.00	42	.00	72	55	.00	.00	.00	.00	.00
12	.00	.00	e.00	33	e.00	61	41	.00	.00	.00	.00	.00
13	.00	.00	e.00	30	.44	52	31	.00	e.00	.00	.00	.00
14	.00	.00	.00	26	2.0	43	26	.00	.00	.00	.00	.00
15	.00	.00	.00	23	2.6	37	21	e.00	.00	.00	.00	.00
16	.00	.00	198	21	1.6	35	17	e.00	.00	.00	.00	.00
17	.00	.00	52	18	4.3	33	15	.00	.00	.00	.00	.00
18	.00	.00	.00	15	7.2	33	13	.00	.00	.00	.00	.00
19	.00	.00	.00	12	4.6	33	11	.00	.00	.00	.00	.00
20	.00	e.00	4.2	10	7.1	36	13	.00	.00	e.00	.00	.00
21	.00	e.00	.98	8.9	6.3	71	21	e.00	.00	.00	.00	.00
22	.00	e.00	.43	5.5	7.3	182	8.9	.00	.00	.00	.00	.00
23	.00	e.00	.00	2.4	6.3	224	9.3	.00	.00	.00	.00	.00
24	.00	e.00	.00	2.0	5.9	259	6.0	.00	.00	.00	.00	.00
25	.00	e.00	.00	.86	6.1	212	4.2	.00	.00	.00	.00	.00
26	.00	e.00	.00	.32	6.4	187	2.5	.00	.00	.00	.00	.00
27	.00	e.00	.18	.00	7.3	195	5.8	.00	.00	.00	.00	.00
28	.00	e.00	610	.00	210	228	3.4	.00	.00	.00	.00	.00
29	.00	e.00	920	.00	---	250	3.0	.00	.00	.00	.00	.00
30	.00	e.00	393	.00	---	231	1.4	.00	.00	e.00	.00	.00
31	.00	---	118	.00	---	180	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	2296.79	3774.98	285.44	8599	1619.5	0.15	0.00	0.00	0.00	0.00
MEAN	.000	.000	74.1	122	10.2	277	54.0	.005	.000	.000	.000	.000
MAX	.00	.00	920	1420	210	2150	189	.15	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	33	1.4	.00	.00	.00	.00	.00
AC-FT	.00	.00	4560	7490	566	17060	3210	.3	.00	.00	.00	.00

WTR YR 1991 TOTAL 16575.86 MEAN 45.4 MAX 2150 MIN .00 AC-FT 32880

e Estimated

09484600 PANTANO WASH NEAR VAIL, AZ

LOCATION.--Lat 32°02'09", long 110°40'37", in SW¼SE¼ sec.14, T.16 S., R.16 E., Pima County, Hydrologic Unit 15050302, on right bank 60 ft upstream from dam, 2.2 mi southeast of Vail, and 20 mi southeast of Tucson City Hall.

DRAINAGE AREA.--457 mi².

PERIOD OF RECORD.--January 1959 to September 1974, water years 1975-89 (annual maximums only), October 1989 to current year.

GAGE.--Water-stage recorder and concrete weir. Elevation of gage is 3,205 ft above National Geodetic Vertical Datum of 1929, from topographic map. January 1959 to September 1974 (water-stage recorder) and October 1974 to September 1989 (crest-stage gage) at same site and datum.

REMARKS.--Records poor. No known diversion above station. Records published herein represent flow by gage. Infiltration flow is not included. Base runoff past gage station consists of downvalley underflow that is brought to the surface by the concrete dam 60 ft downstream which extends to bedrock.

AVERAGE DISCHARGE.--17 years (water years 1960-74, 1990-91), 6.52 ft³/s, 4,720 acre-ft/yr; median of yearly mean discharges, 5.6 ft³/s, 4,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s Oct. 1 or 2, 1983, gage height, 15.25 ft, from inside high-water mark, from rating curve extended above 2,000 ft³/s on basis of slope-area measurements at gage heights 10.9 and 24 ft; no flow June 26 to July 13, Aug. 7, 1971, result of work on infiltration gallery, June 27 to July 13, 1973, result of ponding during construction work on dam, and May 28 to June 12, July 12, 13, 17, 18, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1930, about 38,000 ft³/s, Aug. 11, 1958, gage height, about 24 ft, from floodmark, from slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	1345	*129	*4.49

Minimum daily discharge, 0.44 ft³/s, Aug. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	1.4	1.5	2.2	2.2	4.4	31	1.7	2.2	2.2	e.90	.56
2	3.5	1.6	1.5	2.2	2.2	40	25	2.2	2.2	2.2	e.80	.56
3	2.7	1.5	1.5	2.2	2.2	9.2	12	2.2	1.9	2.2	e.80	.56
4	1.9	1.5	1.5	2.3	2.2	4.2	10	2.2	1.9	2.2	e.80	.56
5	1.7	1.5	1.5	2.8	2.2	2.2	11	2.2	2.2	1.9	e.80	.66
6	2.1	1.5	1.5	5.8	2.2	2.2	10	2.2	2.7	1.5	e.73	.79
7	2.3	1.5	1.5	1.5	2.2	2.2	9.0	2.2	2.7	1.5	e.70	.90
8	2.2	1.5	1.5	1.5	2.2	2.2	5.3	2.2	2.6	1.5	e.70	.86
9	1.5	1.5	1.5	1.5	2.2	2.2	3.4	2.2	2.2	1.5	e.70	.66
10	1.3	1.4	1.5	1.8	2.2	2.7	3.0	2.0	2.2	e1.5	e.80	.56
11	1.4	1.4	1.5	2.2	2.2	3.3	2.6	1.8	2.3	e1.5	e.70	.56
12	1.4	1.4	1.9	2.2	2.9	3.4	2.2	1.5	3.0	e1.5	e.70	.56
13	1.4	1.4	2.0	2.2	2.2	3.2	2.2	1.5	3.0	e1.5	e.70	.56
14	1.3	1.3	2.2	2.2	2.2	3.1	2.0	1.4	3.0	e1.4	e.70	.56
15	1.3	1.4	2.2	2.2	2.2	3.4	1.5	1.3	2.9	e1.4	.62	.56
16	1.3	1.4	2.2	2.2	2.2	3.8	1.4	1.3	2.7	e1.4	.56	.56
17	1.3	1.5	1.8	2.2	2.3	3.2	1.1	1.3	3.0	e1.4	.56	.56
18	1.2	1.5	1.5	2.2	3.1	3.0	.88	1.7	3.0	e1.3	.56	.56
19	1.2	1.5	1.5	2.2	2.6	3.3	.56	1.7	2.6	e1.3	.56	.56
20	1.1	1.5	1.7	2.2	2.3	3.4	.56	1.6	2.4	e1.3	.56	.56
21	1.1	1.5	2.4	2.2	3.0	4.4	.56	1.6	3.0	e1.3	.56	.56
22	1.1	1.5	2.3	2.2	3.0	3.7	.56	1.5	3.0	e1.3	.56	.56
23	.97	1.5	2.2	2.2	3.0	4.2	.60	1.5	3.0	e1.2	.56	.56
24	.92	1.5	2.2	2.2	3.0	5.6	1.1	1.5	3.0	e1.2	3.3	.56
25	.93	1.5	2.2	2.2	3.0	21	1.1	1.6	2.8	e1.2	4.8	.56
26	.98	1.6	2.2	2.1	3.1	12	1.3	2.2	2.2	e1.2	3.3	.56
27	.98	1.2	2.2	2.2	3.8	13	1.8	2.2	2.2	e1.1	.49	.56
28	1.0	1.5	2.4	2.2	4.2	19	2.2	2.2	2.2	e1.1	.44	.56
29	1.1	1.5	2.2	2.2	---	26	2.2	2.2	2.2	e1.1	.53	.56
30	1.1	1.5	2.2	2.2	---	37	2.0	1.9	2.2	e1.1	.56	.56
31	1.2	---	2.2	2.2	---	33	---	2.1	---	e1.1	.56	---
TOTAL	46.88	44.0	58.2	69.9	72.3	283.5	148.12	56.9	76.5	45.1	29.61	17.87
MEAN	1.51	1.47	1.88	2.25	2.58	9.15	4.94	1.84	2.55	1.45	.96	.60
MAX	3.5	1.6	2.4	5.8	4.2	40	31	2.2	3.0	2.2	4.8	.90
MIN	.92	1.2	1.5	1.5	2.2	2.2	.56	1.3	1.9	1.1	.44	.56
AC-FT	93	87	115	139	143	562	294	113	152	89	59	35

CAL YR	1990	TOTAL	2946.06	MEAN	8.07	MAX	595	MIN	.46	AC-FT	5840
WTR YR	1991	TOTAL	948.88	MEAN	2.60	MAX	40	MIN	.44	AC-FT	1880

e Estimated

09485000 RINCON CREEK NEAR TUCSON, AZ

LOCATION.--Lat 32°07'46", long 110°37'32", in NW¼NE¼ sec.17, T.15 S., R.17 E., Pima County, Hydrologic Unit 15050302, on left bank 0.2 mi north of Sentinel Butte, 9 mi upstream from mouth, and 22 mi southeast of Tucson City Hall.

DRAINAGE AREA.--44.8 mi².

PERIOD OF RECORD.--October 1952 to September 1974, October 1974 to September 1989, (crest-stage partial-record station); October 1989 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,120 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1952 to September 1974 (water-stage recorder) and October 1974 to September 1989 (crest-stage gage) at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--24 years (water years 1953-74, 1990-91), 5.61 ft³/s, 4,060 acre-ft/yr; median of yearly mean discharges, 4.0 ft³/s, 2,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,660 ft³/s Aug. 19, 1971, gage height, 10.5 ft, from inside high-water mark, from rating curve extended above 1,800 ft³/s on basis of slope-area measurement at gage heights 6.50 ft and 9.90 ft; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 5	a1915	692	b5.00
Mar. 2	a0045	*1,180	*b5.62

No flow for many days.

a About

b From high-water mark.

REVISIONS.--Revised daily discharges, in cubic feet per second, for Aug. 15 to Sept. 30, 1990, are given below. These figures supersede those published in the report for 1990.

Aug. 15.... 110	Aug. 27.... .47	Sept. 8.... .94	Sept. 20.... .13
16.... 65	28.... .40	9.... .87	21.... .12
17.... 35	29.... .29	10.... .67	22.... .13
18.... 18	30.... .19	11.... .55	23.... .12
19.... 9.6	31.... 9.6	12.... .42	24.... .10
20.... 6.0	Sept. 1.... 27	13.... .30	25.... .11
21.... 3.7	2.... 20	14.... .24	26.... .09
22.... 2.3	3.... 8.9	15.... .24	27.... .07
23.... 1.4	4.... 4.0	16.... .20	28.... .06
24.... .90	5.... 3.0	17.... .18	29.... .07
25.... .73	6.... 2.0	18.... .17	30.... .15
26.... .59	7.... 1.3	19.... .15	

	TOTAL	MEAN	MAX	MIN	AC-FT
August 1990	955.57	30.8	194	.19	1900
September 1990	72.28	2.41	27	.06	143
CAL YR 1990	3744.05	10.3	1160	.00	7430

GILA RIVER BASIN

09485000 RINCON CREEK NEAR TUCSON, AZ--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.04	.04	20	3.9	138	71	.77	.01	.00	.00	.00
2	.21	.09	.04	14	3.6	299	70	.70	.01	.00	.00	.00
3	.15	.04	.04	12	3.6	93	57	.68	.01	.00	.00	.00
4	.11	.04	.06	52	3.6	68	52	.63	.00	.00	.00	.00
5	.09	.04	.07	e276	3.4	60	48	.62	.00	.00	.00	.00
6	.07	.04	.05	247	3.1	67	42	.58	.00	.00	.00	.00
7	.07	.07	.06	78	2.8	47	36	.56	.00	.00	.00	.00
8	.06	.08	.07	48	2.8	33	27	.54	.00	.00	.00	.00
9	.05	.08	.09	32	2.7	26	20	.52	.00	.00	.00	.00
10	.06	.09	.09	23	2.2	21	15	.49	.00	.00	.00	.00
11	.06	.07	.09	17	2.1	21	12	.48	.00	.00	.00	.00
12	.07	.08	.09	13	54	17	9.3	.47	.00	.00	.00	.00
13	.07	.07	.16	10	50	14	7.6	.44	.00	.00	.00	.00
14	.07	.06	.11	8.7	27	11	6.0	.42	.00	.00	.00	.00
15	.07	.06	.09	7.3	18	8.2	5.0	.39	.00	.00	.00	.00
16	.06	.07	.13	6.3	14	9.9	4.2	.37	.00	.00	.00	.00
17	.06	.07	.06	33	14	11	3.6	.31	.00	.00	.00	.00
18	.06	.09	.04	22	22	10	3.2	.23	.00	.00	.00	.00
19	.06	.08	.04	18	24	10	2.8	.22	.00	.00	.00	.00
20	.05	.09	.08	16	19	8.6	2.4	.18	.00	.00	.00	.00
21	.06	.11	.29	14	17	23	2.0	.15	.00	.00	.00	.00
22	.07	.14	.21	12	15	42	1.8	.13	.00	.00	.00	.00
23	.06	.12	.14	12	13	88	1.6	.10	.00	.00	.00	.00
24	.05	.18	.13	10	11	102	1.3	.08	.00	.00	.00	.00
25	.04	.20	.13	9.4	9.4	92	1.0	.06	.00	.00	.00	.00
26	.06	.17	.12	8.6	8.2	89	.96	.04	.00	.04	.00	.00
27	.04	.05	.10	8.0	6.9	72	.91	.03	.00	.00	.00	.00
28	.04	.04	58	7.3	32	70	.87	.02	.00	.00	.00	.00
29	.05	.05	77	6.5	---	68	.82	.01	.00	.00	.00	.00
30	.06	.04	55	5.3	---	72	.80	.01	.00	.00	.00	.00
31	.04	---	32	4.7	---	65	---	.01	---	.00	.00	---
TOTAL	2.21	2.45	224.62	1051.1	388.3	1755.7	506.16	10.24	0.03	0.04	0.00	0.00
MEAN	.071	.082	7.25	33.9	13.9	56.6	16.9	.33	.001	.001	.000	.000
MAX	.21	.20	.77	276	54	299	71	.77	.01	.04	.00	.00
MIN	.04	.04	.04	4.7	2.1	8.2	.80	.01	.00	.00	.00	.00
AC-FT	4.4	4.9	446	2080	770	3480	1000	20	.06	.08	.00	.00

CAL YR	1990	TOTAL	3973.33	MEAN	10.9	MAX	1160	MIN	.00	AC-FT	7880
WTR YR	1991	TOTAL	3940.85	MEAN	10.8	MAX	299	MIN	.00	AC-FT	7820

e Estimated

09485450 PANTANO WASH AT BROADWAY BOULEVARD, AT TUCSON, AZ

LOCATION.--32°13'14", long 110°49'44", in NW¼NE¼ sec.17, T.14 S., R.15 E., Pima County, Hydrologic Unit 15050302, near right bank on downstream side of eastbound bridge on Broadway Blvd., 4.6 mi upstream from mouth, and 8.3 mi east of intersection with Stone Avenue in Tucson.

DRAINAGE AREA.--599 mi².

PERIOD OF RECORD.--Water years 1979-81, 1984, 1988-90 (annual maximums only), October 1990 to September 1991.

REVISED RECORDS.--WDR AZ-88-1: 1984(M).

GAGE.--Water-stage recorder. Datum of gage is 2,568.83 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s Oct. 1, 1983, gage height, 8.60 ft; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 12, 1958 reached a discharge of 20,000 ft³/s at Tanque Verde Road, 2.3 mi downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 5	0630	*140	*2.50

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.00	e.00	.00	.00	e5.1	.00	e.00	.00	.00	.00	.00
2	.00	e.00	e.00	.00	.00	e33	.00	e.00	.00	.00	.00	.00
3	.00	e.00	e.00	e.00	.00	.00	.00	e.00	.00	.00	.00	.00
4	.00	e.00	e.00	e.00	.00	.00	.00	e.00	.00	.00	.00	.00
5	.00	e.00	e.00	e.00	.00	.00	.00	e.00	.00	.00	.00	.00
6	.00	e.00	e.00	e.00	.00	.00	.00	e.00	.00	.00	.00	.00
7	.00	e.00	e.00	e.00	.00	.00	.00	e.00	.00	.00	.00	.00
8	.00	.00	e.00	e.00	.00	.00	.00	e.00	.00	.00	.00	.00
9	.00	.00	e.00	e.00	.00	.00	.00	e.00	.00	.00	.00	.00
10	.00	.00	e.00	e.00	.00	.00	.00	e.00	.00	.00	.00	.00
11	.00	.00	e.00	e.00	.00	.00	e.00	e.00	.00	.00	.00	.00
12	.00	.00	e.00	e.00	e10	.00	e.00	e.00	.00	.00	.00	.00
13	.00	.00	e.00	e.00	.00	.00	e.00	e.00	.00	.00	.00	.00
14	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00	.00	.00	.00
15	.00	.00	.00	e.00	.00	e.00	e.00	.00	.00	.00	.00	.00
16	.00	.00	.00	e.00	.00	e.00	e.00	.00	.00	.00	.00	.00
17	.00	.00	.00	e.00	.00	e.00	e.00	.00	.00	.00	.00	.00
18	.00	.00	.00	e.00	.00	e.00	e.00	.00	.00	.00	.00	.00
19	.00	.00	.00	e.00	.00	e.00	e.00	.00	.00	.00	.00	.00
20	.00	.00	e4.4	e.00	.00	e.00	e.00	.00	.00	.00	.00	.00
21	.00	.00	e12	e.00	.00	e.00	e.00	.00	.00	.00	.00	.00
22	.00	.00	e11	e.00	.00	e.00	e.00	.00	.00	.00	.00	.00
23	.00	.00	.00	e.00	.00	e.00	e.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
29	e.00	.00	.00	.00	---	.00	e.00	.00	.00	.00	.00	.00
30	e.00	.00	.00	.00	---	.00	e.00	.00	.00	.00	.00	.00
31	e.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	27.40	0.00	10.00	38.10	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.88	.000	.36	1.23	.000	.000	.000	.000	.000	.000
MAX	.00	.00	12	.00	10	33	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

WTR YR 1991 TOTAL 75.50 MEAN .21 MAX 33 MIN .00

e Estimated

GILA RIVER BASIN

09485700 RILLITO CREEK AT DODGE BOULEVARD, AT TUCSON, AZ

LOCATION.--Lat 32°16'17", long 110°54'50", in NW¼SE¼ sec.28, T.13 S., R.14 E., Pima County, Hydrologic Unit 15050302, at downstream side of bridge on Dodge Boulevard, 0.4 mi north of intersection of Ft. Lowell Road and Dodge Boulevard in Tucson.

DRAINAGE AREA.-- 871 mi².

PERIOD OF RECORD.--Water years 1988-90 (annual maximums only), October 1990 to September 1991.

GAGE.--Water-stage recorder. Elevation of gage is 2,380 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s July 24, 1990, gage height, 9.20 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2245	*5,680	*7.50

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	e.00	e.00	e40	e.00	e1940	e187	e.00	e.00	e.00	e.00	e.00
2	e.00	e.00	e.00	e20	e.00	e2160	e189	e.00	e.00	e.00	e.00	e.00
3	e.00	e.00	e.00	e23	e.00	e630	e154	e.00	e.00	e.00	e.00	e.00
4	e.00	e.00	e.00	e372	e.00	e228	e145	e.00	e.00	e.00	e.00	e.00
5	e.00	e.00	e.00	e938	e.00	e190	e140	e.00	e.00	e.00	e.00	e.00
6	e.00	e.00	e.00	e1430	e.00	e255	e132	e.00	e.00	e.00	e.00	e.00
7	e.00	e.00	e.00	e400	e.00	e155	e110	e.00	e.00	e.00	e.00	e.00
8	e.00	e.00	e.00	e122	e.00	e95	e80	e.00	e.00	e.00	e.00	e.00
9	e.00	e.00	e.00	e75	e.00	e70	e58	e.00	e.00	e.00	e.00	e.00
10	e.00	e.00	e.00	e35	e.00	e51	e45	e.00	e.00	e.00	e.00	e.00
11	e.00	e.00	e.00	e15	e.00	e50	e30	e.00	e.00	e.00	e.00	e.00
12	e.00	e.00	e.00	e8.0	e.00	e30	e10	e.00	e.00	e.00	e.00	e.00
13	e.00	e.00	e.00	e.00	e.00	e19	e4.0	e.00	e.00	e.00	e.00	e.00
14	e.00	e.00	e.00	e.00	e.00	e11	e2.0	e.00	e.00	e.00	e.00	e.00
15	e.00	e.00	e.00	e.00	e.00	e8.0	e1.0	e.00	e.00	e.00	e.00	e.00
16	e.00	e.00	e180	e.00	e.00	e5.0	e.00	e.00	e.00	e.00	e.00	e.00
17	e.00	e.00	e40	e.00	e.00	e4.0	e.00	e.00	e.00	e.00	e.00	e.00
18	e.00	e.00	e.00	e.00	e.00	e4.0	e.00	e.00	e.00	e.00	e.00	e.00
19	e.00	e.00	e.00	e.00	e.00	e4.0	e.00	e.00	e.00	e.00	e.00	e.00
20	e.00	e.00	e.00	e.00	e.00	e8.0	e.00	e.00	e.00	e.00	e.00	e.00
21	e.00	e.00	e.00	e.00	e.00	e87	e.00	e.00	e.00	e.00	e.00	e.00
22	e.00	e.00	e.00	e.00	e.00	e182	e.00	e.00	e.00	e.00	e.00	e.00
23	e.00	e.00	e.00	e.00	e.00	e224	e.00	e.00	e.00	e.00	e.00	e.00
24	e.00	e.00	e.00	e.00	e.00	e259	e.00	e.00	e.00	e.00	e.00	e.00
25	e.00	e.00	e.00	e.00	e.00	e212	e.00	e.00	e.00	e.00	e.00	e.00
26	e.00	e.00	e.00	e.00	e.00	e187	e.00	e.00	e.00	e.00	e.00	e.00
27	e.00	e.00	e.00	e.00	e.00	e200	e.00	e.00	e.00	e.00	e.00	e.00
28	e.00	e.00	e610	e.00	e189	e232	e.00	e.00	e.00	e.00	e.00	e.00
29	e.00	e.00	e920	e.00	---	e250	e.00	e.00	e.00	e.00	e.00	e.00
30	e.00	e.00	e393	e.00	---	e231	e.00	e.00	e.00	e.00	e.00	e.00
31	e.00	---	e85	e.00	---	e180	---	e.00	---	e.00	e.00	---
TOTAL	0.00	0.00	2228.00	3478.00	189.00	8161.0	1287.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	71.9	112	6.75	263	42.9	.000	.000	.000	.000	.000
MAX	.00	.00	920	1430	189	2160	189	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	4.0	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	4420	6900	375	16190	2550	.00	.00	.00	.00	.00

WTR YR 1991 TOTAL 15343.00 MEAN 42.0 MAX 2160 MIN .00 AC-FT 30430

e Estimated

LOCATION.--Lat 32°18'12", long 111°00'41", in SW¼SW¼NW¼ sec.15, T.13 S., R.13 E., Pima County, Hydrologic Unit 15050301, on right bank, 200 ft upstream from bridge on La Cholla Boulevard, 1.8 mi downstream from former gage, Rillito Creek near Tucson. 3.0 mi upstream from mouth, and 5.8 mi north of Tucson city hall.

PERIOD OF RECORD.--June 1990 to current year.

GAGE.--Water-stage recorder and crest-stage gages. Elevation of gage is 2,260 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Only daily discharges above 200 ft³/s are published. Several small diversions above station for irrigation and for municipal and domestic supply, mostly by pumping from ground water.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,800 ft³/s July 24, 1990, gage-height 8.67 ft; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 30	0800	2,350	5.00	Mar. 1	2030	*5,600	*5.76
Jan. 6	0500	2,440	5.03	Mar. 24	0415	542	3.81

No flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

[illegible]

09486100 CANADA DEL ORO NEAR ORACLE JUNCTION, AZ

LOCATION.--Lat 32°33'54", long 110°50'48", in NE¼SE¼NE¼ sec.13, T.10 S., R.14 E., Pinal County, Hydrologic Unit 15050301, on right bank 1.5 mi upstream from Golder Dam, 5.1 mi east of Oracle Junction, and 12 mi upstream from Big Wash.

DRAINAGE AREA.--42.3 mi².

PERIOD OF RECORD.--January 1984 to September 1991 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 9, 1986 at site 20 ft downstream at datum 1.34 ft lower.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--7 years, 5.70 ft³/s, 4,130 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,380 ft³/s July 7, 1990, gage height, 6.09 ft; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 2,800 ft³/s Oct. 2, 1983, gage height, 8.09 ft, from crest-stage gage.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 29	2200	78	1.97	Mar. 1	2015	*291	*3.12
Jan. 5	2045	195	2.78	Mar. 28	1845	181	2.37

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	.00	.37	29	.73	116	78	e13	.00	.00	.00	.00
2	1.0	.00	.30	24	.65	199	75	e13	.00	.00	.00	.00
3	.92	.06	.30	22	.56	105	73	e12	.00	.00	.00	.00
4	.74	.15	.30	60	.47	75	69	e11	.00	.00	.00	.00
5	.63	.15	.30	90	.41	63	66	e10	.00	.00	.00	.00
6	e.56	.16	.30	162	.30	64	65	e9.7	.00	.00	.00	.00
7	e.49	.25	.30	86	.19	52	62	e9.1	.00	.00	.00	.00
8	e.42	.25	.30	58	.15	40	53	e8.4	.00	.00	.00	.00
9	e.36	.25	.30	45	.11	32	45	e7.8	.00	.00	.00	.00
10	e.30	.25	.30	38	.03	26	38	e6.7	.00	.00	.00	.00
11	e.25	.25	.30	29	.00	23	32	e6.2	.00	.00	.00	.00
12	e.22	.25	.30	23	.82	21	30	e5.6	.00	.00	.00	.00
13	e.20	.22	.36	18	1.3	21	e29	e5.1	.00	.00	.00	.00
14	e.18	.20	.49	15	.98	20	e29	e4.3	.00	.00	.00	.00
15	e.15	.17	.40	12	.85	20	e29	e2.2	.00	.00	.00	.00
16	e.12	.13	7.8	11	.83	26	e28	1.1	.00	.00	.00	.00
17	e.10	.10	11	11	1.4	22	e27	.73	.00	.00	.00	.00
18	e.08	.10	5.4	8.3	5.4	21	e25	.46	.00	.00	.00	.00
19	e.05	.10	3.8	6.7	4.2	21	e24	.30	.00	.00	.00	.00
20	e.02	.29	3.5	5.6	2.8	21	e23	.22	.00	.00	.00	.00
21	e.00	.48	5.1	4.8	2.4	61	e22	.00	.00	.00	.00	.00
22	e.00	.55	5.7	4.1	2.1	77	e21	.00	.00	.00	.00	.00
23	e.00	.58	4.7	3.6	2.1	105	e21	.00	.00	.00	.00	.00
24	e.00	.60	5.0	2.8	2.1	106	e20	.00	.00	.00	.00	.00
25	e.00	.60	5.7	2.3	1.8	95	e19	.00	.00	.00	.00	.00
26	e.00	.56	6.6	1.9	1.8	107	e17	.00	.00	.00	.00	.00
27	.00	.43	7.0	1.6	1.5	107	e16	.00	.00	.00	.00	.00
28	.00	.40	38	1.4	31	132	e16	.00	.00	.00	.00	.00
29	.00	.40	62	1.2	---	136	e15	.00	.00	.00	.00	.00
30	.00	.40	55	.91	---	110	e14	.00	.00	.00	.00	.00
31	.00	---	36	.81	---	89	---	.00	---	.00	.00	---
TOTAL	8.49	8.33	267.22	779.02	66.98	2113	1081	126.91	0.00	0.00	0.00	0.00
MEAN	.27	.28	8.62	25.1	2.39	68.2	36.0	4.09	.000	.000	.000	.000
MAX	1.7	.60	62	162	31	199	78	13	.00	.00	.00	.00
MIN	.00	.00	.30	.81	.00	20	14	.00	.00	.00	.00	.00
AC-FT	17	17	530	1550	133	4190	2140	252	.00	.00	.00	.00

CAL YR	1990	TOTAL	1303.72	MEAN	3.57	MAX	129	MIN	.00	AC-FT	2590
WTR YR	1991	TOTAL	4450.95	MEAN	12.2	MAX	199	MIN	.00	AC-FT	8830

e Estimated

09486350 CANADA DEL ORO BELOW INA ROAD, NEAR TUCSON, AZ

LOCATION.--Lat 32°20'10", long 111°02'29", in NW¼NE¼NW¼ sec.5, T.13 S., R.13 E., Pima County, Hydrologic Unit 15050301, on left bank, 1/8 mi downstream from Ina Road, ¼ mi upstream from Thornydale Rd., 1.5 mi upstream from mouth, and 7.3 mi north of Tucson.

DRAINAGE AREA.--255 mi².

PERIOD OF RECORD.--May 1990 to current year.

GAGE.--Water-stage recorder and crest-stage gages. Elevation of gage is 2,240 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. Only daily discharges greater than 200 ft³/s are published. Lago del Oro - capacity 9,400 acre-ft - 19.6 mi upstream, has contained no storage since May 4, 1971, as gates were opened by court order; however, peak flows are regulated while passing through the lake. No daily discharges above 200 ft³/s for the period May 1990 to September 1991.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*) for the period May 1990 to September 1991:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 24, 1990	unknown	unknown	unknown	Mar. 1, 1991	1900	570	9.93
Sept. 18, 1990	unknown	unknown	*10.54				

No flow most of the period.

09486490 SANTA CRUZ RIVER AT INA ROAD, NEAR TUCSON, AZ

LOCATION.--Lat 32°20'17", long 111°04'50", in SE¼SE¼ sec. 35, T.12 S., R.12 E., Pima County, Hydrologic Unit 15050301, on left bank, 10 ft downstream from bridge on Ina Road, and 10.2 mi northwest of Tucson city hall.

DRAINAGE AREA.--3,489 mi².

PERIOD OF RECORD.--March to September 1991.

GAGE.--Water-stage recorder. Elevation of gage is 2,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. Most of base flow is effluent from municipal sewage treatment plant at Ina Road. Many diversions above station, mostly by pumping from ground water, for irrigation.

EXTREMES FOR CURRENT PERIOD.--March to September 1991: Peak discharges greater than base discharge of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2330	*6,360	12.98
Aug. 9	2115	--	*a14.16

a Backwater from dam.

Minimum daily discharge, 10 ft³/s Mar. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	1100	16	24	27	46	54	65
2	---	---	---	---	---	1320	19	28	33	43	58	62
3	---	---	---	---	---	e300	20	26	39	47	63	59
4	---	---	---	---	---	e224	23	37	40	50	56	60
5	---	---	---	---	---	e60	23	34	44	49	58	55
6	---	---	---	---	---	e50	23	35	46	52	49	51
7	---	---	---	---	---	e35	27	33	39	42	52	56
8	---	---	---	---	---	37	23	36	32	41	57	50
9	---	---	---	---	---	38	22	31	44	39	242	59
10	---	---	---	---	---	36	23	37	36	35	184	61
11	---	---	---	---	---	37	30	34	37	39	94	60
12	---	---	---	---	---	40	29	30	47	51	98	65
13	---	---	---	---	---	30	35	35	40	53	68	69
14	---	---	---	---	---	39	33	35	33	53	54	67
15	---	---	---	---	---	39	34	34	29	35	60	69
16	---	---	---	---	---	43	30	34	28	36	66	66
17	---	---	---	---	---	34	31	34	34	33	73	69
18	---	---	---	---	---	32	30	34	35	32	97	113
19	---	---	---	---	---	24	27	35	37	37	78	79
20	---	---	---	---	---	27	27	34	38	54	49	73
21	---	---	---	---	---	34	24	32	41	50	49	72
22	---	---	---	---	---	14	28	31	42	39	216	71
23	---	---	---	---	---	27	25	33	38	40	161	73
24	---	---	---	---	---	30	25	34	36	30	53	59
25	---	---	---	---	---	26	27	33	41	36	62	60
26	---	---	---	---	---	10	24	31	41	35	59	63
27	---	---	---	---	---	24	25	35	37	34	57	68
28	---	---	---	---	---	23	22	38	39	37	63	72
29	---	---	---	---	---	26	25	34	43	39	62	72
30	---	---	---	---	---	18	25	32	44	59	60	68
31	---	---	---	---	---	13	---	33	---	56	69	---
TOTAL	---	---	---	---	---	3790	775	1026	1140	1322	2521	1986
MEAN	---	---	---	---	---	122	25.8	33.1	38.0	42.6	81.3	66.2
MAX	---	---	---	---	---	1320	35	38	47	59	242	113
MIN	---	---	---	---	---	10	16	24	27	30	49	50
AC-FT	---	---	---	---	---	7520	1540	2040	2260	2620	5000	3940

e Estimated

09486500 SANTA CRUZ RIVER AT CORTARO, AZ

LOCATION.--Lat 32°21'04", long 111°05'38", in NW¼NW¼ sec.35, T.12 S., R.12 E., Pima County, Hydrologic Unit 15050302, at center column of bridge pier on left bank, 0.5 mi southwest of Cortaro, 1.0 mi downstream from Ina Road treatment plant, 2.6 mi downstream from Canada del Oro, and 3.7 mi downstream from Rillito Creek.

DRAINAGE AREA.--3,503 mi², of which 395 mi² is in Mexico.

PERIOD OF RECORD.--October 1939 to June 1947 (published as "at Rillito"), July 1950 to September 1984, March to June 1990, July to September 1990 (fragmentary record), October 1990 to September 1991.

REVISED RECORDS.--WSP 1283: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,100.00 ft, above National Geodetic Vertical Datum of 1929. Prior to June 30, 1947, at site 5.5 mi downstream at different datum. July 8, 1950 to Jan. 20, 1966 at present site at datum 19.11 ft lower. Jan. 20, 1966, to Sept. 30, 1984 at present site and datum 23.11 ft lower. Aug. 1 to Oct. 19, 1990, at site on right bank 600 ft downstream from bridge at datum 30.20 ft lower. Apr. 10 to May 17, 1991, at site on bridge, 200 ft toward right bank, at different datum. Supplementary water-stage recorder on downstream site on left bridge pier at datum 19.11 ft lower Aug. 29, 1969 to Sept. 30, 1984. Temporary water-stage recorder on right bank Oct. 27, 1983 to Sept. 30, 1984 at datum 20.80 ft lower.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Many diversions above station, mostly by pumping from ground water, for irrigation of about 34,000 acres. Waste water from irrigation and from sewage-disposal plants is included in flow past station in water years 1951, 1952, 1970-82, 1990-91.

AVERAGE DISCHARGE.--40 years (water years 1940-46, 1951-82, 1991), 45.9 ft³/s, 33,250 acre-ft/yr; median of yearly mean discharges, 33.0 ft³/s, 23,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,000 ft³/s Oct. 2, 1983, gage height 16.57 ft from floodmark, computed by flood-routing method from Santa Cruz River at Tucson and Rillito Creek at Tucson; no natural flow for most of each year. (See REMARKS)

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2345	*11,600	*9.98

No natural flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e33	43	49	e26	33	580	e25	22	24	41	42	50
2	e33	43	49	e26	35	e300	e22	24	28	35	43	50
3	e34	39	50	e25	38	e180	e24	24	31	29	43	48
4	e34	38	50	e90	39	e130	e26	23	28	27	38	45
5	e34	40	52	e480	39	e60	e21	22	24	32	44	45
6	e35	38	56	e200	40	e50	e23	23	24	36	35	45
7	e34	39	57	e25	40	e40	e28	23	22	39	40	48
8	e36	40	57	e26	41	e30	e26	24	19	33	69	43
9	e38	44	57	e26	44	e32	e21	24	22	31	115	53
10	e38	45	56	e26	42	e26	e19	24	23	30	78	57
11	e42	43	55	e27	45	e24	18	24	24	28	44	59
12	e47	42	53	e27	51	e22	20	23	31	30	49	64
13	e46	40	58	e27	68	e24	22	23	31	41	46	65
14	e48	39	58	e28	63	e23	23	23	28	39	48	64
15	e48	40	60	e28	44	e24	23	e23	28	29	54	63
16	e55	41	79	e26	44	e28	23	e24	27	24	47	61
17	e59	40	46	e27	46	e32	22	e24	29	26	51	69
18	e61	41	46	e29	53	e36	22	23	27	28	59	95
19	e61	41	50	e29	51	e34	22	26	30	32	51	72
20	65	43	e95	e30	53	e32	22	26	26	36	39	73
21	66	45	e45	e31	53	e38	22	28	28	39	46	68
22	72	46	e36	e30	53	e30	23	27	31	32	89	63
23	63	42	e24	e31	53	e28	23	26	29	31	89	68
24	52	42	e20	e32	53	e40	23	27	28	26	49	58
25	53	42	e19	e32	54	e60	23	26	34	30	50	61
26	48	45	e19	e32	57	e50	23	24	38	25	50	63
27	44	45	e20	33	54	e42	23	23	39	33	47	60
28	43	45	e280	35	52	e34	23	26	38	37	52	64
29	43	47	e200	31	---	e26	23	25	39	46	54	64
30	44	49	e40	31	---	e23	23	24	40	47	54	65
31	47	---	e28	32	---	e22	---	24	---	42	58	---
TOTAL	1456	1267	1864	1578	1338	2100	681	752	870	1034	1673	1803
MEAN	47.0	42.2	60.1	50.9	47.8	67.7	22.7	24.3	29.0	33.4	54.0	60.1
MAX	72	49	280	480	68	580	28	28	40	47	115	95
MIN	33	38	19	25	33	22	18	22	19	24	35	43
AC-FT	2890	2510	3700	3130	2650	4170	1350	1490	1730	2050	3320	3580
WTR YR 1991	TOTAL	16416	MEAN	45.0	MAX	580	MIN	18	AC-FT	32560		

e Estimated

09486510 SANTA CRUZ RIVER NEAR RILLITO, AZ

LOCATION.--Lat 32°23'46", long 111°08'58", in SE¼NW¼ sec.7, T.12 S., R.11 E., in Pima County, Hydrologic Unit 15050303, on Portland Cement Company conveyer bridge, 1,800 ft downstream from bridge on Avra Valley road, and 0.8 mi southeast of Rillito.

DRAINAGE AREA.--3,559 mi².

PERIOD OF RECORD.--April to September 1991.

GAGE.--Water-stage recorder. Elevation of gage is 2,055 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Many diversions above station, mostly by pumping from ground water. Most of base flow is effluent from municipal sewage treatment plants and irrigation return.

EXTREMES FOR CURRENT PERIOD.--April to September 1991: Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 23	0300	*470	*4.20

No flow Apr. 1-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e.00	e1.0	e10	9.6	19	25
2	---	---	---	---	---	---	e.00	e1.0	e12	7.0	18	45
3	---	---	---	---	---	---	e.00	e1.5	e15	14	15	46
4	---	---	---	---	---	---	e.00	e2.0	e12	10	13	43
5	---	---	---	---	---	---	e.00	e2.0	e10	14	14	34
6	---	---	---	---	---	---	e.00	e3.0	e10	18	11	34
7	---	---	---	---	---	---	e.00	e2.5	e9.0	23	9.3	32
8	---	---	---	---	---	---	e.00	e3.0	e10	20	13	37
9	---	---	---	---	---	---	e.00	e3.0	e12	15	15	38
10	---	---	---	---	---	---	e.00	e7.0	e13	13	68	45
11	---	---	---	---	---	---	e.00	e7.0	e14	13	5.4	47
12	---	---	---	---	---	---	e.00	e8.0	e14	12	9.1	48
13	---	---	---	---	---	---	e.00	e9.0	e16	19	7.5	38
14	---	---	---	---	---	---	e.00	e9.0	e17	15	8.9	43
15	---	---	---	---	---	---	e.00	e7.0	20	15	10	49
16	---	---	---	---	---	---	e.00	e7.0	16	15	9.2	42
17	---	---	---	---	---	---	e.00	e8.0	16	14	9.2	80
18	---	---	---	---	---	---	e.00	e9.0	19	14	7.3	31
19	---	---	---	---	---	---	e.00	e10	19	12	27	42
20	---	---	---	---	---	---	e.00	e11	11	14	17	46
21	---	---	---	---	---	---	e.00	e12	15	20	18	45
22	---	---	---	---	---	---	e.00	e12	17	18	29	45
23	---	---	---	---	---	---	e.00	e12	23	17	201	57
24	---	---	---	---	---	---	e.00	e11	14	16	8.0	41
25	---	---	---	---	---	---	e.00	e10	12	15	8.3	43
26	---	---	---	---	---	---	e.20	e9.0	14	15	6.0	46
27	---	---	---	---	---	---	e.50	e11	12	14	6.4	45
28	---	---	---	---	---	---	e.50	e12	15	18	9.0	49
29	---	---	---	---	---	---	e1.0	e10	11	22	13	51
30	---	---	---	---	---	---	e1.0	e10	7.8	24	20	61
31	---	---	---	---	---	---	---	e9.0	---	19	21	---
TOTAL	---	---	---	---	---	---	3.20	229.0	415.8	484.6	645.6	1328
MEAN	---	---	---	---	---	---	.11	7.39	13.9	15.6	20.8	44.3
MAX	---	---	---	---	---	---	1.0	12	23	24	201	80
MIN	---	---	---	---	---	---	.00	1.0	7.8	7.0	5.4	25
AC-FT	---	---	---	---	---	---	6.3	454	825	961	1280	2630

e Estimated

09486515 SANTA CRUZ RIVER AT SANDERS ROAD, NEAR MARANA, AZ

LOCATION.--Lat 32°26'06", long 111°14'00, in SW¼NE¼ sec. 32, T.11 S., R.11 E., Pima County, Hydrologic Unit 15050303, on downstream side of Sanders Road Bridge 0.25 mi southwest of Marana.

DRAINAGE AREA.--3,629 mi².

PERIOD OF RECORD.--February to September 1991.

GAGE.--Water stage recorder. Elevation of gage is 1,970 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions upstream include ground-water pumpage for irrigation. Wastewater treatment plant releases provides normal flow, with occasional irrigation return.

EXTREMES FOR CURRENT PERIOD.--February to September 1991: Peak discharges greater than base discharge of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	0645	*5,410	*9.43

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	176	.00	.00	e.80	.16	6.3	14
2	---	---	---	---	---	2370	.00	.00	e1.0	.00	5.7	14
3	---	---	---	---	---	540	.00	.00	e1.5	.21	5.6	17
4	---	---	---	---	---	167	.00	.00	e1.8	.63	5.2	12
5	---	---	---	---	---	50	.00	.00	e2.8	1.4	3.6	11
6	---	---	---	---	---	.00	.00	.00	e.50	.34	4.6	10
7	---	---	---	---	---	.00	.00	.00	e1.0	6.6	2.3	12
8	---	---	---	---	---	.00	.00	.00	e1.5	5.3	5.3	16
9	---	---	---	---	---	.00	.00	.00	e2.0	2.1	6.5	14
10	---	---	---	---	---	.00	.00	.00	e2.5	3.4	33	17
11	---	---	---	---	---	.00	.00	.00	e3.0	3.3	1.1	19
12	---	---	---	---	---	.00	.00	.00	e6.0	2.8	.27	22
13	---	---	---	---	---	.00	.00	e.50	17	2.6	.14	23
14	---	---	---	---	---	.00	.00	e1.0	7.6	4.9	2.2	22
15	---	---	---	---	---	.00	.00	e1.5	4.0	2.9	3.7	21
16	---	---	---	---	---	.00	.00	e1.8	1.3	9.5	4.5	19
17	---	---	---	---	---	.00	.00	e.50	1.9	9.8	4.6	18
18	---	---	---	---	e10	.00	.00	e.70	1.7	13	4.8	37
19	---	---	---	---	17	.00	.00	e1.0	.05	13	9.8	20
20	---	---	---	---	18	.00	.00	e1.5	.00	11	10	22
21	---	---	---	---	15	.00	.00	e2.0	.00	16	8.9	19
22	---	---	---	---	14	.00	.00	e2.2	.10	11	10	21
23	---	---	---	---	13	.00	.00	e2.5	.56	2.8	65	26
24	---	---	---	---	16	.00	.00	e2.5	.14	3.6	33	22
25	---	---	---	---	15	.00	.00	e1.8	1.1	2.4	32	25
26	---	---	---	---	18	.00	.00	e1.3	1.6	3.9	18	24
27	---	---	---	---	21	.00	.00	e1.0	1.3	4.4	16	27
28	---	---	---	---	18	.00	.00	e1.5	1.2	2.1	12	21
29	---	---	---	---	.00	.00	.00	e1.8	.26	3.5	13	24
30	---	---	---	---	.00	.00	.00	e2.2	.16	5.8	14	33
31	---	---	---	---	.00	.00	.00	e1.4	---	7.6	15	---
TOTAL	---	---	---	---	---	3303.00	0.00	28.70	64.37	156.04	356.11	602
MEAN	---	---	---	---	---	107	.000	.93	2.15	5.03	11.5	20.1
MAX	---	---	---	---	---	2370	.00	2.5	17	16	65	37
MIN	---	---	---	---	---	.00	.00	.00	.00	.00	.14	10
AC-FT	---	---	---	---	---	6550	.00	57	128	310	706	1190

e Estimated

09486520 SANTA CRUZ RIVER AT TRICO ROAD, NEAR MARANA, AZ

LOCATION.--Lat 32°28'17", long 111°18'25", in NE&SE¼ sec.15, T.11 S., R.10 E., in Pima County, Hydrologic Unit 15050303, on left bank 350 ft downstream from Trico Road bridge, 5 mi west of Marana, and 24 mi northwest of Tucson.

DRAINAGE AREA.--3,641 mi².

PERIOD OF RECORD.--April 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,910 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Most of base flow is effluent from municipal sewage treatment plant at Ina Road, 17.6 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft³/s July 24, 1990, gage height, 13.05 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	0745	*4,810	*10.19

No flow for most of the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	14	21	.00	.00	5.0	.00	.00	.00	.00	.00	.00
2	53	13	18	.00	.00	1660	.00	.00	.00	.00	.00	.00
3	.00	14	17	.00	.00	656	.00	.00	.00	.00	.00	.00
4	.00	12	17	.00	.00	192	.00	.00	.00	.00	.00	.00
5	.00	12	17	75	.00	31	.00	.00	.00	.00	.00	.00
6	.00	13	19	532	.00	.03	.00	.00	.00	.00	.00	.00
7	.00	15	23	166	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	9.6	22	18	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	14	27	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	20	23	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	18	21	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	20	18	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.03	18	19	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	2.0	12	27	.00	18	.00	.00	.00	.00	.00	.00	.00
15	3.0	11	23	.00	5.2	.00	.00	.00	.00	.00	.00	.00
16	2.4	9.3	74	.00	1.7	.00	.00	.00	.00	.00	.00	.00
17	1.6	9.5	40	.00	1.8	.00	.00	.00	.00	.00	.00	.00
18	3.2	8.2	10	.00	3.3	.00	.00	.00	.00	.00	.00	.00
19	4.6	11	15	.00	3.9	.00	.00	.00	.00	.00	.00	.00
20	5.0	11	12	.00	4.1	.00	.00	.00	.00	.00	.00	.00
21	6.2	13	85	.00	5.2	.00	.00	.00	.00	.00	.00	.10
22	8.6	17	19	.00	4.8	.00	.00	.00	.00	.00	.00	.00
23	7.1	17	11	.00	4.4	.00	.00	.00	.00	.00	56	.00
24	12	14	6.9	.00	3.0	.00	.00	.00	.00	.00	.00	.57
25	16	13	8.6	.00	3.0	.00	.00	.00	.00	.00	5.9	.00
26	15	13	6.2	.00	4.5	.00	.00	.00	.00	.00	.00	.00
27	7.7	20	10	.00	5.4	.00	.00	.00	.00	.00	.00	.03
28	6.6	16	28	.00	3.3	.00	.00	.00	.00	.00	.00	.00
29	4.4	19	293	.00	---	.00	.00	.00	.00	.00	.00	.42
30	6.8	22	182	.00	---	.00	.00	.00	.00	.00	.00	1.1
31	12	---	23	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	179.33	428.6	1135.7	791.00	71.60	2544.03	0.00	0.00	0.00	0.00	61.90	2.22
MEAN	5.78	14.3	36.6	25.5	2.56	82.1	.0000	.0000	.0000	.0000	2.00	.074
MAX	53	22	293	532	18	1660	.00	.00	.00	.00	56	1.1
MIN	.00	8.2	6.2	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	356	850	2250	1570	142	5050	.00	.00	.00	.00	123	4.4
CAL YR 1990	TOTAL	18670.58	MEAN	51.2	MAX	4310	MIN	.00	AC-FT	37030		
WTR YR 1991	TOTAL	5214.38	MEAN	14.3	MAX	1660	MIN	.00	AC-FT	10340		

09488650 VEKOL WASH NEAR STANFIELD, AZ

LOCATION.--Lat 32°50'30", long 112°15'04", in SW¼SW¼ sec.3, T.7 S., R.1 E., Maricopa County, Hydrologic Unit 15050303 on upstream side of Interstate Highway 8 westbound bridge, 18 mi west of Stanfield, 29 mi west of Casa Grande, and 28 mi east of Gila Bend.

DRAINAGE AREA.--150 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder since June 12, 1990. Elevation of gage is 1,625 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,610 ft³/s July 17, 1990, gage height 6.41; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--No flow for entire year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	e.00	e.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	e.00	e.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	e.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 291.10 MEAN .80 MAX 120 MIN .00 AC-FT 577
WTR YR 1991 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00

e Estimated

09489000 SANTA CRUZ RIVER NEAR LAVERN, AZ

LOCATION.--Lat 33°13'56", long 112°10'08", in NE¼NE¼ sec.29, T.2 S., R.2 E., Pinal County, Hydrologic Unit 15050303, in Gila River Indian Reservation, on downstream side of highway bridge, 3.4 mi upstream from mouth, 4.3 mi south of Komatke, and 9 mi south of Laveen.

DRAINAGE AREA.--8,581 mi².

PERIOD OF RECORD.--January 1940 to September 1946, December 1947 to current year.

REVISED RECORDS.--WSP 1283: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,020.86 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Many diversions above station, mostly by pumping from ground water, for municipal uses and for irrigation of about 240,000 acres, not including San Carlos Project. Much of the low flow passing this station is drainage and wasteway return from irrigated lands upstream and pumpage from ground water.

AVERAGE DISCHARGE.--49 years (water years 1941-46, 1949-91), 20.6 ft³/s, 14,920 acre-ft/yr; median of yearly mean discharges, 10 ft³/s, 7,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft³/s Oct. 4, 1983, gage height, 19.74 ft, from flow-routing computation; no flow for most of time in recent years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 5	2030	*257	*10.37

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.1	.39	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	4.6	.21	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.96	.10	.00	.00	.00	.00	.00
4	.00	.00	.00	.21	.00	.05	.03	.00	.00	.00	.00	.00
5	.00	.00	.00	2.5	.00	171	.07	.00	.00	.00	.00	.00
6	.00	.00	.00	7.0	.00	131	.14	.00	.00	.00	.00	.00
7	.00	.00	.00	1.7	.00	17	.03	.00	.00	.00	.00	.00
8	.00	.00	.00	.26	.00	2.6	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	23	.00	.85	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	15	.00	.40	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	2.3	.00	.24	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.32	.00	.14	.28	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.03	.33	.00	.00	.00	.00	.00
14	.00	.00	.00	.52	.00	.00	.15	.00	.00	.00	.00	.00
15	.00	.00	.00	.56	.00	.04	.02	.00	.00	.00	.00	.00
16	.00	.00	.00	.06	.00	.22	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.02	.00	.02	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.43	1.2	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.01	9.9	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	24	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	4.3	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.51	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.27	.00	.00	.00	.00	.00	e.00
26	.00	.00	.00	.00	.00	9.2	.00	.00	.00	.00	.00	e.00
27	.00	.00	.00	.00	.00	25	.00	.00	.00	.00	.00	e.00
28	.00	.00	.00	.00	.43	40	.00	.00	.00	.00	.00	e.00
29	.00	.00	.00	.00	---	12	.00	.00	.00	.00	.00	e.00
30	.00	.00	.00	.00	---	2.7	.00	.00	.00	.00	.00	e.00
31	.00	---	.00	.00	---	.94	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	53.45	0.87	461.38	1.75	0.00	0.00	0.00	0.00	0.00
MEAN	.0000	.0000	.0000	1.72	.031	14.9	.058	.0000	.0000	.0000	.0000	.0000
MAX	.00	.00	.00	23	.43	171	.39	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	106	1.7	915	3.5	.00	.00	.00	.00	.00

CAL YR 1990	TOTAL	9941.69	MEAN	27.2	MAX	1430	MIN	.00	AC-FT	19720
WTR YR 1991	TOTAL	517.45	MEAN	1.42	MAX	171	MIN	.00	AC-FT	1030

e Estimated

09489082 NORTH FORK THOMAS CREEK NEAR ALPINE, AZ

LOCATION.--Lat 33°40'31", long 109°16'13", in NW¼SW¼ sec.20, T.4 N., R.30 E., Greenlee County, Hydrologic Unit 15060101, on left bank, in Apache Sitgreaves National Forest, 3.0 mi upstream from confluence with Beaver Creek and 14 mi southwest of Alpine.

DRAINAGE AREA.--0.73 mi².

PERIOD OF RECORD.--October 1985 to September 1991 (discontinued). October 1965 to September 1985, in reports of Rocky Mountain Forest and Range Experiment Station.

GAGE.--Water stage recorder and V-notch weir. Elevation of gage is 8,380 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--6 years, 0.118 ft³/s, 85 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2.3 ft³/s Apr. 18, 19, 20, 1987, Apr. 7, 8, 1991; maximum gage height, 0.77 ft Apr. 7, 8, 1991; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2.3 ft³/s Apr. 7, 8, gage height, 0.77 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.00	.01	.02	.02	.23	.43	1.1	.10	.00	.00	.04
2	.22	.01	.01	.02	.02	.21	.60	1.2	.10	.00	.01	.06
3	.24	.01	.01	.02	.02	.19	.84	1.2	.10	.00	.00	.06
4	.18	.01	.01	.04	.02	.21	1.1	1.1	.07	.00	.00	.06
5	.14	.01	.01	.09	.02	.32	1.5	1.1	.06	.00	.00	.07
6	.12	.01	.01	.12	.03	.75	1.9	1.0	.06	.00	.00	.07
7	.11	.01	.01	.12	.03	.81	2.2	1.1	.05	.00	.00	.06
8	.09	.01	.01	.12	.03	.67	2.3	1.1	.04	.00	.00	.05
9	.07	.01	.01	.10	.04	.60	2.2	1.2	.04	.00	.00	.05
10	.06	.01	.00	.10	.04	.59	2.1	1.2	.04	.00	.00	.05
11	.06	.00	.00	.10	.05	.69	2.0	1.1	.03	.00	.00	.05
12	.05	.00	.00	.10	.07	.70	1.9	1.0	.03	.00	.00	.05
13	.04	.00	.02	.10	.09	.65	1.6	.89	.03	.00	.01	.05
14	.03	.00	.02	.09	.14	.56	1.4	.76	.02	.00	.01	.05
15	.03	.00	.02	.09	.19	.47	1.2	.67	.02	.00	.00	.04
16	.02	.00	.04	.09	.21	.41	1.2	.58	.03	.00	.00	.04
17	.02	.00	.08	.08	.29	.36	1.2	.49	.02	.00	.00	.04
18	.01	.00	.07	.08	.29	.33	1.3	.42	.02	.00	.01	.03
19	.01	.00	.06	.07	.24	.34	1.5	.39	.02	.00	.01	.03
20	.01	.01	.05	.06	.21	.34	1.6	.35	.02	.00	.01	.03
21	.01	.01	.05	.06	.19	.34	1.8	.31	.01	.00	.01	.03
22	.01	.01	.04	.06	.20	.31	1.8	.28	.01	.00	.01	.03
23	.01	.01	.04	.05	.23	.30	1.8	.24	.01	.00	.01	.02
24	.01	.01	.04	.05	.27	.31	1.7	.21	.01	.01	.01	.01
25	.00	.01	.04	.04	.30	.35	1.6	.19	.01	.00	.01	.01
26	.00	.01	.03	.04	.30	.38	1.6	.17	.01	.00	.02	.02
27	.00	.01	.03	.04	.29	.37	1.5	.16	.01	.00	.01	.02
28	.00	.01	.03	.03	.27	.36	1.5	.14	.01	.00	.02	.02
29	.00	.01	.03	.03	---	.34	1.3	.13	.01	.00	.04	.03
30	.00	.01	.03	.03	---	.34	1.2	.12	.00	.00	.05	.03
31	.00	---	.02	.03	---	.36	---	.11	---	.00	.04	---
TOTAL	1.67	0.20	0.83	2.07	4.10	13.19	45.87	20.01	0.99	0.01	0.29	1.20
MEAN	.054	.007	.027	.067	.15	.43	1.53	.65	.033	.000	.009	.040
MAX	.24	.01	.08	.12	.30	.81	2.3	1.2	.10	.01	.05	.07
MIN	.00	.00	.00	.02	.02	.19	.43	.11	.00	.00	.00	.01
AC-FT	3.3	.4	1.6	4.1	8.1	26	91	40	2.0	.02	.6	2.4
CAL YR 1990	TOTAL	9.80	MEAN	.027	MAX	.44	MIN	.00	AC-FT	19		
WTR YR 1991	TOTAL	90.43	MEAN	.25	MAX	2.3	MIN	.00	AC-FT	179		

09489500 BLACK RIVER BELOW PUMPING PLANT, NEAR POINT OF PINES, AZ

LOCATION.--Lat 33°28'36", long 109°45'48", in W sec.32, T.2 N., R.25 E. (unsurveyed), Graham County, Hydrologic Unit 15060101, in San Carlos Indian Reservation, on left bank 0.9 mi downstream from Phelps Dodge Corp. pumping plant, 1.3 mi downstream from Freezeout Creek, 8 mi northwest of Point of Pines, and 63 mi upstream from confluence with White River.

DRAINAGE AREA.--560 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 5,725 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Water is diverted at pumping plant 0.9 mi upstream and pumped into headwaters of Willow Creek (tributary of Eagle Creek) for mining, metallurgical treatment of ores, and domestic supply in vicinity of Morenci. (See sta 09445000.)

AVERAGE DISCHARGE (adjusted for diversion to Willow Creek).--38 years, 224 ft³/s, 162,300 acre-ft/yr; median of yearly mean discharges, 190 ft³/s, 138,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,900 ft³/s Oct. 19, 1972, gage height, 18.0 ft, from flood-marks, from rating curve extended above 5,000 ft³/s; minimum daily, 2.6 ft³/s July 5, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 17	0045	603	3.62	Mar. 1	2345	2,770	6.67
Dec. 29	1900	1,630	5.15	Mar. 6	1200	*2,790	*6.69
Jan. 6	0330	1,340	4.72	Apr. 8	0615	2,470	6.33
Feb. 17	0730	542	3.53	Sept. 5	2345	1,400	4.87

Minimum daily discharge, 35 ft³/s Nov. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	93	35	60	287	94	2080	877	735	115	40	53	102		
2	138	52	60	251	88	1610	1090	732	117	39	56	97		
3	165	91	53	214	89	1090	1220	705	116	39	62	113		
4	139	83	54	349	89	1040	1380	656	107	42	79	123		
5	112	67	49	980	88	1140	1620	606	99	44	78	300		
6	92	59	47	1140	90	2270	1880	571	94	44	113	791		
7	79	59	e48	907	93	1900	2160	558	88	43	78	390		
8	72	61	50	708	102	1320	2210	568	81	47	63	244		
9	65	60	e49	571	104	1150	2120	600	75	51	65	179		
10	59	58	43	468	108	1090	2100	615	77	48	60	145		
11	55	58	43	378	112	1220	2040	592	83	43	73	126		
12	52	58	43	313	143	1120	1840	535	88	41	80	115		
13	50	57	53	274	240	995	1560	476	116	42	73	108		
14	48	56	136	263	289	868	1320	425	109	44	67	106		
15	45	54	204	239	342	735	1250	392	93	42	70	92		
16	44	52	303	227	382	644	1320	363	81	42	60	82		
17	43	52	513	204	494	529	1360	328	73	46	69	73		
18	43	50	294	182	470	589	1450	301	67	46	73	69		
19	41	50	209	165	384	666	1440	274	62	40	92	65		
20	41	50	180	157	342	592	1450	257	58	40	91	61		
21	42	60	172	159	380	615	1490	244	57	41	75	59		
22	42	68	140	146	402	546	1410	231	54	42	67	61		
23	41	64	157	129	444	679	1340	215	52	53	66	61		
24	41	58	215	115	470	800	1190	198	49	60	90	57		
25	39	57	254	110	478	934	1160	184	48	71	94	53		
26	39	61	234	111	464	824	1130	170	45	87	120	52		
27	38	71	236	110	437	763	1040	158	44	94	129	53		
28	37	68	280	106	789	889	935	146	43	86	124	56		
29	37	54	881	95	---	803	834	131	42	62	108	54		
30	42	54	743	105	---	827	767	128	41	56	107	52		
31	40	---	432	101	---	802	---	121	---	50	112	---		
TOTAL	1914	1777	6235	9564	8007	31130	42983	12215	2274	1565	2547	3939		
MEAN	61.7	59.2	201	309	286	1004	1433	394	75.8	50.5	82.2	131		
MAX	165	91	881	1140	789	2270	2210	735	117	94	129	791		
MIN	37	35	43	95	88	529	767	121	41	39	53	52		
AC-FT	3800	3520	12370	18970	15880	61750	85260	24230	4510	3100	5050	7810		
(*)	71.1	69.1	208	314	291	1008	1439	406	89.1	64.5	96.3	145		
(**)	4380	4110	12800	19250	16130	62020	85610	24940	5300	3960	5920	8670		
CAL YR 1990	TOTAL	25626	MEAN	70.2	MAX	881	MIN	19	AC-FT	50830	(*)	78.0	(**)	56720
WTR YR 1991	TOTAL	124150	MEAN	340	MAX	2270	MIN	35	AC-FT	246300	(*)	350	(**)	253100

e Estimated

(*) Mean, adjusted for Willow Creek diversion from Black River near Morenci.

(**) AC-FT, adjusted for Willow Creek diversion from Black River near Morenci.

09490500 BLACK RIVER NEAR FORT APACHE, AZ

LOCATION.--Lat 33°42'46", long 110°12'40", in NW¼ sec.12, T.4 N., R.20 E. (unsurveyed), Gila County, Hydrologic Unit 15060101, on downstream side of first pier from right bank on highway bridge, 5 mi upstream from confluence with White River and 14 mi west of Fort Apache.

DRAINAGE AREA.--1,232 mi².

PERIOD OF RECORD.--October 1912 to December 1915, September 1916, October 1917 to January 1918, April 1918, October 1957 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1914-15, drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,345 ft above National Geodetic Vertical Datum of 1929, from river-profile map. November 1912 to July 1918, nonrecording gages or water-stage recorders at several sites within 1 mi of present site at various datums.

REMARKS.--Records good except for estimated daily discharges, which are fair. One transbasin diversion for industrial and municipal use (see record of Willow Creek diversion from Black River, near Morenci). Negligible storage in several small recreational lakes.

AVERAGE DISCHARGE.--37 years (water years 1913-15, 1958-91), 416 ft³/s, 301,400 acre-ft/yr; median of yearly mean discharges, 360 ft³/s, 261,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,200 ft³/s Oct. 2, 1983, gage height, 24.80 ft, from rating curve extended above 8,500 ft³/s on basis of slope-area measurements at gage heights 22.33 ft and 24.80 ft; minimum daily, 11 ft³/s July 6, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*), from rating curve extended above 8,500 ft³/s on the basis of slope-area measurement at gage height of 22.33 ft and 24.80 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 29	1915	14,000	14.47	Mar. 23	2330	4,760	8.89
Jan. 6	0700	6,450	10.11	Apr. 7	1545	4,190	8.44
Mar. 2	0215	*29,100	*20.59	Apr. 21	1945	2,560	6.89
Mar. 6	2015	4,860	8.97	Sept. 6	0815	3,460	7.77

Minimum daily discharge, 46 ft³/s, July 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	63	106	853	156	19400	1410	1030	207	54	71	175
2	161	75	106	555	162	13100	1650	1020	205	52	75	138
3	219	77	110	437	e167	3800	1880	1030	208	51	74	123
4	242	128	100	1340	e173	2490	2120	973	195	50	72	167
5	213	141	90	4650	e178	2370	2600	895	175	52	78	292
6	182	117	90	4830	e186	3460	3230	838	159	59	83	1680
7	159	106	84	2590	e190	4000	3720	810	150	63	112	900
8	143	105	74	1490	e194	2660	3800	814	138	58	100	503
9	129	111	80	1120	e198	2050	3660	855	130	60	83	351
10	117	110	85	882	e209	1800	3520	905	124	58	120	271
11	108	104	83	720	e229	1880	3460	890	124	59	125	222
12	99	101	82	587	e257	1910	3200	826	132	56	90	197
13	93	100	85	506	e307	1680	2680	736	152	52	89	173
14	87	98	379	e450	e357	1440	2180	664	175	48	90	158
15	83	96	240	e429	e429	1230	1850	619	167	49	91	150
16	80	93	967	e388	483	1080	1880	580	141	54	94	133
17	77	90	1360	e369	550	942	2000	539	123	52	88	119
18	74	87	283	e333	705	922	2130	497	109	50	87	109
19	72	86	454	e286	800	994	2250	466	99	58	97	101
20	70	86	377	e270	587	1070	2220	441	92	54	108	95
21	68	94	327	e260	545	1090	2290	421	87	47	120	92
22	68	111	272	e243	579	1150	2260	400	83	46	103	86
23	69	127	e199	e227	546	2080	2070	380	79	46	88	89
24	68	122	e160	216	579	3020	1860	357	76	54	84	91
25	66	113	e185	203	588	2380	1680	331	72	73	103	86
26	63	111	e210	196	574	2170	1650	307	68	97	115	80
27	62	116	e186	188	554	2340	1550	286	63	98	186	76
28	61	121	252	180	1560	2400	1370	266	60	98	253	74
29	60	124	7250	173	---	2520	1220	247	58	98	172	76
30	59	110	4990	163	---	1670	1090	230	56	93	149	75
31	59	---	1620	156	---	1430	---	216	---	79	179	---
TOTAL	3232	3123	20886	25290	12042	90528	68480	18869	3707	1918	3379	6882
MEAN	104	104	674	816	430	2920	2283	609	124	61.9	109	229
MAX	242	141	7250	4830	1560	19400	3800	1030	208	98	253	1680
MIN	59	63	74	156	156	922	1090	216	56	46	71	74
AC-FT	6410	6190	41430	50160	23890	179600	135800	37430	7350	3800	6700	13650

CAL YR 1990	TOTAL	57536	MEAN	158	MAX	7250	MIN	20	AC-FT	114100
WTR YR 1991	TOTAL	258336	MEAN	708	MAX	19400	MIN	46	AC-FT	512400

e Estimated

09492400 EAST FORK WHITE RIVER NEAR FORT APACHE, AZ

LOCATION.--Lat 33°49'20", long 109°48'50", in SE¼ sec.16, T.5 N., R.24 E. (unsurveyed), Apache County, Hydrologic Unit 15060102, in Fort Apache Indian Reservation, on left bank 600 ft downstream from highway bridge, 0.1 mi upstream from Rock Creek, and 10 mi east of Fort Apache.

DRAINAGE AREA.--38.8 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 6,050 ft above National Geodetic Vertical Datum of 1929, by barometer. Prior to Dec. 29, 1960, at site 600 ft upstream at datum 12.78 ft higher. Dec. 29, 1960, to Sept. 28, 1962, at site 600 ft upstream at datum 12.92 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--34 years, 36.4 ft³/s, 26,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,700 ft³/s Oct. 1, 1983, gage height, 5.40 ft, from rating curve extended above 1,000 ft³/s; minimum daily, 4.0 ft³/s Nov. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 24	1215	120	1.79	Apr. 21	2345	167	2.02
Mar. 6	1015	102	1.76	May 10	0130	*212	*2.20
Apr. 7	0145	179	2.07	Sept. 6	0330	118	1.78

Minimum daily discharge, 9.8 ft³/s July 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	11	16	14	e18	57	58	105	78	19	12	20
2	38	21	14	13	e15	41	78	130	68	19	12	20
3	36	16	e16	12	e13	36	86	137	58	18	12	20
4	32	13	e15	29	14	46	102	130	50	17	11	23
5	28	13	e16	48	16	50	130	125	47	18	14	43
6	27	13	e15	42	17	93	148	133	48	16	14	89
7	25	14	e16	32	17	76	173	148	49	15	11	58
8	24	13	e16	25	18	59	167	169	51	15	11	45
9	22	13	e14	23	18	52	156	199	52	14	11	38
10	20	13	13	20	17	53	157	211	53	13	12	34
11	19	14	13	18	18	61	154	203	54	13	19	30
12	19	14	12	17	22	53	131	185	56	13	14	27
13	18	13	19	17	24	47	110	173	59	12	13	24
14	17	13	21	18	28	42	94	171	56	12	12	22
15	16	13	17	19	33	37	88	170	51	14	16	20
16	16	13	25	18	35	34	94	158	47	12	18	19
17	15	14	19	17	35	36	100	152	45	11	18	18
18	15	14	e20	17	29	30	110	155	43	12	25	18
19	14	14	e20	e18	e24	34	121	160	42	11	20	17
20	15	16	17	e17	e22	34	142	159	42	9.8	18	17
21	14	18	9.9	15	24	34	163	154	39	10	17	16
22	14	13	14	e13	26	33	160	149	36	11	17	18
23	13	14	15	e13	29	36	154	141	32	18	17	16
24	13	13	47	e15	30	42	137	130	29	16	16	15
25	12	15	46	e15	31	44	141	123	27	14	25	14
26	12	17	34	e15	31	41	146	122	25	17	20	15
27	12	12	33	e14	30	39	134	120	24	14	24	15
28	11	e16	31	e16	44	40	116	111	23	13	19	14
29	11	e18	27	18	---	39	101	99	22	12	23	13
30	11	18	22	24	---	40	97	91	20	12	20	13
31	11	---	16	25	---	44	---	85	---	12	26	---
TOTAL	583	432	628.9	617	678	1403	3748	4498	1326	432.8	517	751
MEAN	18.8	14.4	20.3	19.9	24.2	45.3	125	145	44.2	14.0	16.7	25.0
MAX	38	21	47	48	44	93	173	211	78	19	26	89
MIN	11	11	9.9	12	13	30	58	85	20	9.8	11	13
AC-FT	1160	857	1250	1220	1340	2780	7430	8920	2630	858	1030	1490

CAL YR	1990	TOTAL	6950.2	MEAN	19.0	MAX	74	MIN	5.7	AC-FT	13790
WTR YR	1991	TOTAL	15614.7	MEAN	42.8	MAX	211	MIN	9.8	AC-FT	30970

e Estimated

09494000 WHITE RIVER NEAR FORT APACHE, AZ

LOCATION.--Lat 33°44'11", long 110°09'58", in SE¼ sec.32, T.4 N., R.21 E. (unsurveyed), Gila County, Hydrologic Unit 15060102, in Fort Apache Indian Reservation, on right bank 2,200 ft downstream from highway bridge, 4.5 mi upstream from confluence with Black River, and 11 mi west of Fort Apache.

DRAINAGE AREA.--632 mi².

PERIOD OF RECORD.--October 1917 to September 1918 (published as "at Wanslee's Ranch"), October 1957 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WRD Ariz. 1971: 1967(M).

GAGE.--Water-stage recorder. Datum of gage is 4,365.99 ft above National Geodetic Vertical Datum of 1929. Oct. 12, 1917, to Aug. 31, 1918, nonrecording gage at site 2,100 ft upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Small diversions above station for irrigation of about 1,460 acres. Negligible storage above station in several small recreational lakes.

AVERAGE DISCHARGE.--35 years, 206 ft³/s, 149,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,600 ft³/s Dec. 18, 1978, gage height, 15.71 ft, from rating curve extended above 7,800 ft³/s on basis of slope-area measurement of peak flow; no flow July 18-21, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 5	0430	1,250	4.80	Apr. 8	0300	1,660	5.47
Mar. 1	2030	2,340	6.41	Aug. 27	1945	*2,980	*7.19
Mar. 6	1215	1,080	4.49	Sept. 5	2100	1,200	4.72

Minimum daily discharge, 35 ft³/s, Oct. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e101	39	55	178	e69	1330	602	679	350	69	67	78
2	e99	63	57	156	e72	1120	769	727	316	63	116	77
3	93	76	51	146	e78	643	828	728	281	63	82	76
4	85	63	47	229	79	620	938	695	265	61	73	81
5	73	53	43	954	81	670	1140	669	253	64	65	177
6	62	51	48	756	84	941	1350	669	240	69	61	305
7	59	56	46	456	90	820	1510	695	234	66	59	182
8	55	58	46	328	94	648	1510	766	229	68	50	132
9	54	51	49	265	98	603	1410	880	230	66	72	112
10	54	54	49	228	102	595	1400	919	228	56	59	104
11	50	52	45	196	108	664	1380	890	240	57	92	97
12	47	51	47	171	132	605	1240	809	242	49	78	94
13	46	50	60	161	169	566	1060	745	264	48	60	89
14	45	49	96	157	196	504	900	734	247	46	65	84
15	44	48	103	151	220	442	848	714	237	45	50	81
16	45	49	181	145	231	427	903	667	223	50	71	79
17	45	49	174	133	265	351	955	641	e183	45	71	76
18	43	50	114	124	256	404	1060	643	e167	42	72	73
19	42	50	92	109	213	456	1090	651	e152	50	83	71
20	42	51	110	117	190	403	1150	645	145	42	67	70
21	44	67	90	117	190	460	1230	622	140	39	61	69
22	45	69	e70	106	191	404	1190	605	129	39	54	75
23	44	57	e60	e84	205	454	1140	572	119	57	57	68
24	41	53	e60	e67	220	560	1010	532	109	77	68	67
25	39	53	e60	e67	228	639	1020	508	98	72	65	65
26	38	60	e60	e69	232	601	1020	502	88	77	140	62
27	37	69	e60	e83	224	518	897	485	81	78	308	e63
28	35	50	e60	e70	336	593	807	456	76	64	159	e69
29	38	43	e169	e67	---	522	728	420	73	59	81	e73
30	39	47	444	e57	---	548	683	381	73	57	84	e67
31	39	---	226	e66	---	521	---	355	---	59	82	---
TOTAL	1623	1631	2872	6013	4653	18632	31768	20004	5712	1797	2572	2816
MEAN	52.4	54.4	92.6	194	166	601	1059	645	190	58.0	83.0	93.9
MAX	101	76	444	954	336	1330	1510	919	350	78	308	305
MIN	35	39	43	57	69	351	602	355	73	39	50	62
AC-FT	3220	3240	5700	11930	9230	36960	63010	39680	11330	3560	5100	5590

CAL YR	1990	TOTAL	25932.7	MEAN	71.0	MAX	444	MIN	7.2	AC-FT	51440
WTR YR	1991	TOTAL	100093	MEAN	274	MAX	1510	MIN	35	AC-FT	198500

e Estimated

09495000 FORESTDALE CREEK DIVERSION FROM SHOW LOW CREEK, NEAR SHOW LOW, AZ

LOCATION.--Lat 34°10'40", long 110°00'56", in SE¼NW¼ sec.16, T.9 N., R.22 E., Navajo County, Hydrologic Unit 15020005, in Sitgreaves National Forest, on right bank 170 ft downstream from terminal structure of Show Low Creek diversion works, 4,350 ft west of pumping plant on Show Low Lake, and 5 mi south of Show Low.

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

GAGE.--Water-stage recorders and V-notch sharp-crested weir. Datum of gage is 6,621.57 ft above National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--No estimated daily discharges. Records excellent. Entire flow consists of water pumped from Show Low Lake in Little Colorado River basin, into headwaters of Forestdale Creek in Gila River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 28 ft³/s June 2, 3, 5, 1973, Mar. 17-25, 27-30, Apr. 2-15, Apr. 18 to May 5, 1975; no flow for most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	7.5	12	12	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	12	12	12	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	12	12	12	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	12	12	12	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	12	12	12	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	12	12	11	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	12	12	7.3	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	12	12	12	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	12	12	14	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	12	12	14	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
29	.00	.00	.00	.00	---	.00	.00	12	12	15	.00	.00
30	.00	.00	.00	.00	---	.00	.00	12	12	15	.00	.00
31	.00	---	.00	.00	---	.00	---	12	---	9.9	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	367.5	360	428.2	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	11.9	12.0	13.8	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	12	12	15	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	7.5	12	7.3	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	729	714	849	.00	.00
CAL YR 1990	TOTAL	487.20	MEAN	1.33	MAX	12	MIN	.00	AC-FT	966		
WTR YR 1991	TOTAL	1155.70	MEAN	3.17	MAX	15	MIN	.00	AC-FT	2290		

09496500 CARRIZO CREEK NEAR SHOW LOW, AZ

LOCATION.--Lat 33°59'09", long 110°16'52", in sec.24, T.7 N., R.19 E. (unsurveyed), Gila County, Hydrologic Unit 15060104, in Fort Apache Indian Reservation, on right bank 500 ft upstream from bridge on U.S. Highway 60, 1 mi downstream from Corduroy Creek, 23 mi southwest of Show Low, and 24 mi upstream from mouth.

DRAINAGE AREA.--439 mi².

PERIOD OF RECORD.--June 1951 to June 1961, June 1967 to June 1976, October 1975 to June 1976 (monthly discharges only), April 1977 to current year.

REVISED RECORDS.--WRD Ariz. 1968: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,749.52 ft above National Geodetic Vertical Datum of 1929. Prior to June 1976 at site on bridge pier 400 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Diversions for irrigation above station of less than 300 acres. Records include trans basin diversion from Show Low Creek. (See sta 09495000.)

AVERAGE DISCHARGE.--31 years (water years 1952-60, 1968-75, 1978-91), 51.6 ft³/s, 37,380 acre-ft/yr; median of yearly mean discharges, 31 ft³/s, 22,500 acre-ft/yr, unadjusted for transbasin diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,500 ft³/s Jan. 18, 1952, gage height, 12.08 ft, at site then in use, from rating curve extended above 2,000 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 15.1 ft Dec. 18, 1978, from high-water mark; minimum daily discharge, 0.2 ft³/s July 12, 1951, Sept. 21, 1959, at site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1951, about 23,000 ft³/s Dec. 30, 1965, gage height, 13.0 ft, from floodmark at previous site, from rating curve extended above 2,000 ft³/s on basis of slope-area measurement at gage height 12.08 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 5	0045	1,140	4.27	Mar. 1	2330	*4,490	*7.45
Jan. 6	0330	1,380	4.57	Mar. 24	2145	1,260	4.43

Minimum daily discharge, 2.8 ft³/s Oct. 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	5.0	5.2	e57	9.0	2070	353	18	27	13	17	4.8
2	4.7	17	5.2	e37	8.6	2080	318	18	25	13	34	4.8
3	4.4	8.5	5.2	e30	8.5	908	224	27	22	14	13	4.8
4	4.4	6.7	5.1	304	8.4	605	176	29	20	19	7.4	4.7
5	4.5	6.4	5.3	793	8.0	604	134	29	19	20	6.1	13
6	4.2	6.0	5.6	931	7.9	650	109	29	19	20	5.5	15
7	4.3	6.4	5.3	340	7.8	304	88	28	17	15	4.8	8.6
8	4.3	5.8	5.3	175	7.8	171	72	27	17	10	4.4	6.3
9	4.1	5.2	5.4	114	7.8	116	58	26	16	13	8.2	5.6
10	3.6	5.2	5.4	83	7.8	92	51	25	17	15	13	5.7
11	3.7	5.0	5.5	62	7.8	80	47	24	18	17	11	5.6
12	3.2	5.0	5.5	46	8.9	71	42	24	20	19	8.6	5.3
13	3.0	5.0	6.6	39	9.2	59	37	25	21	17	6.4	4.9
14	3.0	5.0	6.5	34	12	52	35	24	18	17	5.5	4.7
15	2.8	5.0	8.2	29	14	48	33	23	17	17	5.2	4.5
16	2.8	5.0	34	26	14	46	31	23	16	16	5.6	4.1
17	3.0	5.0	29	22	15	43	29	23	16	16	8.0	4.0
18	3.0	5.0	15	18	16	40	27	21	16	15	6.4	3.9
19	3.2	5.0	11	15	16	46	26	21	15	16	6.0	4.3
20	3.9	6.9	17	15	14	63	24	20	15	16	5.6	4.7
21	3.9	8.3	e15	16	12	116	23	21	15	17	5.5	4.6
22	3.8	6.3	e11	16	10	131	22	21	15	17	5.1	4.9
23	3.6	5.7	e8.8	14	9.6	248	22	20	14	20	5.0	9.8
24	3.8	5.7	e8.5	12	9.4	730	21	20	14	17	26	7.7
25	4.7	5.7	e9.6	11	8.8	810	21	20	14	19	6.4	5.7
26	6.1	6.1	e8.8	11	8.1	791	20	19	14	17	5.5	5.4
27	5.0	7.0	e9.6	11	8.1	600	20	18	13	16	6.2	5.6
28	5.0	6.2	16	9.9	67	636	19	18	13	16	5.6	5.5
29	4.9	5.7	295	9.2	---	597	19	18	13	16	5.1	5.2
30	4.8	5.4	292	9.8	---	568	19	18	13	16	4.8	5.1
31	4.9	---	e92	9.5	---	386	---	21	---	18	5.0	---
TOTAL	124.8	186.2	957.6	3299.4	341.5	13761	2120	698	509	507	261.9	178.8
MEAN	4.03	6.21	30.9	106	12.2	444	70.7	22.5	17.0	16.4	8.45	5.96
MAX	6.1	17	295	931	67	2080	353	29	27	20	34	15
MIN	2.8	5.0	5.1	9.2	7.8	40	19	18	13	10	4.4	3.9
AC-FT	248	369	1900	6540	677	27290	4210	1380	1010	1010	519	355

CAL YR	1990	TOTAL	2984.91	MEAN	8.18	MAX	295	MIN	.84	AC-FT	5920
WTR YR	1991	TOTAL	22945.2	MEAN	62.9	MAX	2080	MIN	2.8	AC-FT	45510

e Estimated

09497500 SALT RIVER NEAR CHRYSOTILE, AZ

LOCATION.--Lat 33°47'53", long 110°29'57", in sec.25, T.5 N., R.17 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, in San Carlos Indian Reservation, on left bank 1,200 ft upstream from bridge on U.S. Highway 60, 5.7 mi northeast of Chrysotile, 8 mi upstream from Cibecue Creek, and 33 mi downstream from confluence of Black and White Rivers.

DRAINAGE AREA.--2,849 mi².

PERIOD OF RECORD.--September 1924 to current year (monthly discharge only July to December 1954).

REVISED RECORDS.--WSP 859: 1926-27, 1929-30, 1934, 1936. WSP 899: 1927, 1932, 1937, 1938(M). WSP 1313: 1925-26(M), 1929-30(M), 1935-36(M), 1944(M). WSP 1343: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,354.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several diversions for irrigation above station of about 3,100 acres, one diversion into the basin (see record of Forestdale Creek diversion from Show Low Creek, near Show Low), and one diversion out of the basin (see record of Willow Creek diversion from Black River, near Morenci).

AVERAGE DISCHARGE.--67 years, 659 ft³/s, 477,400 acre-ft/yr; median of yearly mean discharges, 550 ft³/s, 398,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,400 ft³/s Dec. 18, 1978, gage height, 17.35 ft, from rating curve extended above 52,000 ft³/s; minimum, 49 ft³/s July 6, 7, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood peak of 74,000 ft³/s occurred prior to 1924 and is believed to be the peak of the flood of Jan. 19, 1916, gage height, 18 ft, from floodmarks, from rating curve extended above 52,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 30	0030	16,000	9.48	Mar. 7	0300	6,600	6.55
Jan. 6	1315	9,580	7.69	Mar. 24	0645	6,090	6.33
Mar. 2	0630	*38,800	*13.71	Sept. 6	0030	6,200	6.38

Minimum daily discharge, 132 ft³/s July 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282	181	236	1450	298	23800	2370	1650	572	176	194	295
2	306	207	240	1040	326	23500	2700	1660	549	169	188	260
3	379	283	240	819	325	7030	3030	1690	523	161	268	248
4	423	251	233	1120	312	3790	3230	1640	e495	160	203	233
5	412	282	224	6940	306	3420	3710	1540	e471	167	183	368
6	369	268	212	7560	306	4240	4420	1470	e456	168	180	2080
7	333	251	216	4550	310	5640	5090	1450	e443	174	178	1400
8	309	238	205	2500	318	3610	5340	1500	e429	176	204	782
9	284	238	198	1780	325	2630	5080	1630	e415	169	183	546
10	271	237	209	1410	342	2290	4810	1760	e405	162	192	431
11	261	236	210	1160	350	2300	4740	1750	e396	153	297	364
12	249	230	207	968	375	2410	4410	1630	e386	156	258	322
13	241	228	214	825	417	2150	3760	1480	e377	151	206	296
14	229	226	233	741	542	1900	3130	1370	e368	147	183	269
15	221	222	300	698	665	1620	2640	1310	e358	138	195	252
16	217	220	641	647	755	1430	2610	1230	e344	138	171	241
17	216	220	2030	613	827	1280	2810	1160	e331	148	202	222
18	209	214	1130	571	1010	1160	2970	1110	e321	143	192	208
19	209	213	735	519	1120	1280	3200	1090	e313	137	216	198
20	204	216	607	476	940	1410	3210	1060	e299	150	217	190
21	197	223	579	475	830	1640	3340	1020	283	142	216	185
22	200	244	476	462	841	1790	3380	976	271	132	215	191
23	202	259	386	442	870	2380	3160	933	255	135	191	194
24	200	259	301	395	917	4790	2900	886	243	188	188	183
25	195	250	287	373	954	4530	2630	831	229	186	257	182
26	188	251	362	357	959	3740	2600	794	214	197	224	173
27	185	260	352	358	935	4410	2450	762	202	214	324	169
28	181	261	385	358	1430	3610	2160	724	192	216	602	166
29	180	246	6020	341	---	4330	1940	677	185	205	334	170
30	182	241	8860	323	---	3060	1750	624	180	202	273	169
31	179	---	2640	282	---	2530	---	584	---	198	273	---
TOTAL	7713	7155	29168	40553	17905	133700	99570	37991	10505	5158	7207	10987
MEAN	249	238	941	1308	639	4313	3319	1226	350	166	232	366
MAX	423	283	8860	7560	1430	23800	5340	1760	572	216	602	2080
MIN	179	181	198	282	298	1160	1750	584	180	132	171	166
AC-FT	15300	14190	57850	80440	35510	265200	197500	75360	20840	10230	14300	21790
CAL YR 1990	TOTAL	117381	MEAN	322	MAX	8860	MIN	79	AC-FT	232800		
WTR YR 1991	TOTAL	407612	MEAN	1117	MAX	23800	MIN	132	AC-FT	808500		

e Estimated

GILA RIVER BASIN

225

09497800 CIBECUE CREEK NEAR CHRYSOTILE, AZ

LOCATION.--Lat 33°50'35", long 110°33'25", in E½ sec.8, T.5 N., R.17 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, in Fort Apache Indian Reservation, on right bank 0.5 mi upstream from mouth and 7 mi north of Chrysotile.

DRAINAGE AREA.--295 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 3,200 ft above National Geodetic Vertical of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Small diversions for irrigation in the vicinity of the village of Cibecue.

AVERAGE DISCHARGE.--32 years, 45.2 ft³/s, 32,750 acre-ft/yr; median of yearly mean discharges, 34 ft³/s, 24,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,200 ft³/s Sept. 2, 1977, gage height, 17.3 ft, on basis of slope-area measurement of peak flow; minimum daily, 4.1 ft³/s Aug. 17-19, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2200	*6,750	*8.67	Aug. 26	1945	1,200	4.42
Mar. 26	1745	1,090	4.28	Sept. 23	1100	1,270	4.50

Minimum daily discharge, 7.7 ft³/s Dec. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	17	34	37	2800	180	33	17	13	19	e20
2	17	36	17	32	36	1260	222	38	15	12	24	e50
3	16	22	17	31	36	270	209	37	16	13	17	e35
4	16	18	17	154	36	179	211	35	17	13	15	e25
5	15	17	17	110	35	195	209	34	18	13	16	e25
6	15	17	17	158	35	292	211	33	21	19	15	e100
7	15	18	17	67	35	180	198	33	22	14	13	e60
8	15	18	17	61	36	146	171	34	23	27	13	e40
9	15	17	16	58	36	132	149	33	22	14	34	e35
10	15	17	16	56	35	118	130	30	23	13	27	e25
11	15	17	16	53	37	112	112	31	17	13	51	e25
12	15	17	17	51	39	107	101	31	16	13	21	21
13	15	17	18	49	39	102	96	31	17	13	17	21
14	15	17	17	48	42	95	89	29	16	13	15	20
15	15	17	18	45	47	87	81	25	16	13	17	20
16	15	17	64	45	50	80	68	23	17	13	16	20
17	15	17	17	45	54	63	57	23	17	13	38	20
18	15	17	9.1	44	53	55	53	23	17	12	37	20
19	15	17	8.3	43	52	66	51	23	17	12	22	20
20	18	18	e17	42	51	75	48	23	17	12	20	20
21	17	19	e11	42	48	158	46	22	18	13	17	20
22	16	18	e9.2	41	45	202	43	21	15	13	20	37
23	16	18	e7.7	39	44	366	41	21	15	13	17	e257
24	16	18	e18	38	42	222	40	20	15	13	17	e50
25	16	18	e18	38	42	188	38	18	15	12	17	e40
26	16	32	e18	38	42	388	37	17	15	12	105	e30
27	16	25	e18	38	42	287	36	16	15	11	e50	e30
28	16	18	51	37	70	342	33	16	15	12	e40	e25
29	16	18	363	37	---	219	31	16	15	13	e30	e20
30	16	17	86	32	---	182	30	17	14	13	e20	e20
31	16	---	40	38	---	162	---	17	---	13	e20	---
TOTAL	485	568	1009.3	1644	1196	9130	3021	803	513	416	800	1151
MEAN	15.6	18.9	32.6	53.0	42.7	295	101	25.9	17.1	13.4	25.8	38.4
MAX	18	36	363	158	70	2800	222	38	23	27	105	257
MIN	15	16	7.7	31	35	55	30	16	14	11	13	20
AC-FT	962	1130	2000	3260	2370	18110	5990	1590	1020	825	1590	2280

CAL YR	1990	TOTAL	8008.3	MEAN	21.9	MAX	515	MIN	6.3	AC-FT	15880
WTR YR	1991	TOTAL	20736.3	MEAN	56.8	MAX	2800	MIN	7.7	AC-FT	41130

e Estimated

09497980 CHERRY CREEK NEAR GLOBE, AZ

LOCATION.--Lat 33°49'40", long 110°51'20", in SW¼ sec.30, T.6 N., R.15 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, in Tonto National Forest, on right bank 0.2 mi upstream from Devils Chasm, 13 mi upstream from mouth, and 30 mi north of Globe.

DRAINAGE AREA.--200 mi².

PERIOD OF RECORD.--May 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,200 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 17, 1979, at site 125 ft downstream at datum 2.95 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--26 years, 38.5 ft³/s, 27,890 acre-ft/yr; median of yearly mean discharges, 23 ft³/s, 16,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s Jan. 17, 1979, gage height, unknown, from slope-area measurement of peak flow; minimum daily, 2.4 ft³/s Sept. 17, 22, 25, 29, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1845	*4,640	*9.42	Mar. 26	1645	1,180	5.99
Mar. 23	2045	1,060	5.80				

Minimum daily discharge, 3.9 ft³/s Sept. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	5.0	6.3	33	8.2	2540	316	13	8.2	5.9	5.6	4.0
2	5.2	8.9	6.2	25	8.2	1470	291	13	7.9	5.8	5.8	8.9
3	5.0	6.3	6.0	22	8.2	386	219	12	7.4	5.7	5.8	9.0
4	4.7	5.7	6.0	179	7.9	260	180	12	7.1	5.7	5.4	5.9
5	4.7	5.5	6.1	369	7.9	225	145	12	6.9	6.1	5.1	4.7
6	4.8	5.5	6.0	442	7.9	207	121	11	7.1	5.8	5.1	5.3
7	4.8	5.6	6.0	207	7.9	136	100	11	6.6	5.7	4.9	4.4
8	4.7	5.5	6.0	124	7.9	96	82	10	6.4	5.6	4.9	4.2
9	4.6	5.4	6.2	86	7.6	75	69	9.8	6.6	5.6	5.1	4.1
10	4.7	5.3	6.2	66	7.7	63	61	9.3	6.8	5.4	5.6	4.2
11	4.8	5.3	6.3	54	7.9	55	54	9.4	7.3	5.4	10	4.2
12	4.7	5.3	6.7	45	7.9	47	48	9.4	7.3	5.5	6.5	4.1
13	4.7	5.5	8.3	38	7.8	41	44	9.2	7.5	5.4	5.8	4.1
14	4.7	5.5	6.8	33	7.6	37	40	9.0	7.1	6.0	5.3	4.1
15	4.7	5.4	7.3	30	7.5	35	38	8.7	6.7	5.7	5.3	4.0
16	4.7	5.3	19	27	7.6	38	35	8.6	6.4	5.4	5.1	4.0
17	4.7	5.5	13	24	8.7	33	31	8.3	6.3	5.3	5.0	3.9
18	4.8	5.5	8.8	21	9.6	29	29	8.2	6.2	5.4	28	4.0
19	5.0	5.5	7.9	19	7.7	55	27	8.1	6.1	5.2	8.8	4.1
20	5.9	7.4	16	17	7.5	93	24	8.1	5.9	5.9	5.6	4.2
21	5.0	7.5	17	16	7.6	257	22	8.0	6.0	6.6	4.7	4.2
22	5.0	5.9	13	15	7.4	274	21	7.8	6.3	5.7	4.9	15
23	4.9	5.8	e10	14	7.5	441	19	7.7	6.2	5.5	4.6	7.4
24	4.8	5.8	e7.6	12	7.3	494	18	7.5	6.2	5.4	5.3	5.2
25	4.8	5.8	e6.9	11	7.4	410	17	7.1	6.1	5.3	25	4.5
26	4.8	9.2	e6.9	11	7.6	569	17	7.1	6.1	5.7	12	4.3
27	4.8	8.7	e7.6	10	7.6	429	16	7.0	6.1	5.6	19	4.4
28	4.8	6.4	25	9.5	183	410	15	6.8	6.1	5.6	10	4.5
29	4.9	6.3	83	9.6	---	373	15	6.8	6.0	5.8	6.5	4.6
30	4.9	6.3	75	8.8	---	367	14	6.7	6.0	5.4	4.9	4.4
31	5.0	---	46	8.3	---	314	---	7.9	---	5.6	4.2	---
TOTAL	150.6	182.6	459.1	1986.2	394.6	10259	2128	280.5	198.9	174.7	239.8	153.9
MEAN	4.86	6.09	14.8	64.1	14.1	331	70.9	9.05	6.63	5.64	7.74	5.13
MAX	5.9	9.2	83	442	183	2540	316	13	8.2	6.6	28	15
MIN	4.6	5.0	6.0	8.3	7.3	29	14	6.7	5.9	5.2	4.2	3.9
AC-FT	299	362	911	3940	783	20350	4220	556	395	347	476	305

CAL YR	1990	TOTAL	2680.1	MEAN	7.34	MAX	83	MIN	3.8	AC-FT	5320
WTR YR	1991	TOTAL	16607.9	MEAN	45.5	MAX	2540	MIN	3.9	AC-FT	32940

e Estimated

09498400 PINAL CREEK AT INSPIRATION DAM, NEAR GLOBE, AZ

LOCATION.--Lat 33°34'23", long 110°54'02", in NE¼NW¼SE¼ sec.26, T.3 N., R.14 E., Gila County, Hydrologic Unit 15060103, in Tonto National Forest, on right bank 20 ft upstream from Inspiration Dam, 3.8 mi upstream from mouth, and 14 mi northwest of Globe.

DRAINAGE AREA.--195 mi², of which about 33 mi² is partly or entirely noncontributing due to mining operations (1988).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 2,740 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Feb. 12, 1991 at datum 1.0 ft higher.

AVERAGE DISCHARGE.--11 years (water years 1981-91), 11.0 ft³/s, 7,970 acre-ft/yr; median of yearly mean discharges, 9.2 ft³/s, 6,700 acre-ft/yr.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,920 ft³/s July 9, 1981 (from weather records), gage height, 5.05 ft, from high-water mark; minimum daily, 0.99 ft³/s Aug. 13, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 16	0415	354	2.41	Mar. 1	1915	*1,430	*4.52
Dec. 20	1645	343	2.38	Aug. 11	0745	224	2.67
Dec. 29	1430	260	2.14				

Minimum daily discharge, 1.1 ft³/s Jan. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	3.0	e5.0	15	8.5	569	12	12	9.9	7.4	5.3	5.0
2	7.1	12	e5.0	13	5.4	e312	13	12	9.1	7.1	5.4	e10
3	7.1	8.8	e5.0	8.5	8.6	e15	12	12	8.1	6.6	5.3	e8.0
4	4.1	7.6	e5.0	55	6.3	e8.0	11	11	8.2	6.8	5.3	e7.0
5	3.7	8.2	4.4	102	e6.0	e7.0	11	11	8.2	7.0	5.3	e6.0
6	4.4	7.1	4.6	55	e6.0	e7.0	12	11	8.2	6.8	5.2	e5.0
7	5.3	6.5	5.9	8.3	e6.0	6.2	12	11	8.1	6.7	5.1	e5.0
8	6.0	5.3	5.9	8.4	e6.0	6.2	12	11	7.9	6.7	5.1	e5.0
9	6.9	4.1	6.0	6.6	e6.0	6.5	11	11	7.8	6.6	5.4	e5.0
10	15	4.2	6.3	5.7	e6.0	6.7	10	11	7.9	6.4	5.3	e5.0
11	11	4.3	6.3	4.7	e6.0	6.7	10	11	7.9	6.3	18	e5.0
12	9.3	3.9	6.2	5.9	e6.0	7.0	10	12	8.3	6.1	4.0	e5.0
13	9.4	4.3	6.8	8.2	6.5	7.4	11	12	8.1	6.0	3.9	e5.0
14	10	3.9	6.9	4.3	6.0	7.6	10	11	8.0	5.9	3.7	e5.0
15	9.9	3.4	6.6	4.0	6.0	8.6	11	11	7.8	5.8	3.6	e5.0
16	9.2	e4.0	35	4.3	6.0	8.5	11	11	7.6	5.8	3.6	e5.0
17	8.7	e5.0	5.7	4.2	6.4	8.4	11	11	7.5	5.8	3.6	e5.0
18	9.0	e5.0	4.8	e4.0	6.7	8.9	11	12	7.5	5.3	3.6	e5.0
19	7.2	e6.0	4.7	3.3	6.9	11	11	12	7.4	5.2	3.5	e5.0
20	6.2	6.4	39	1.9	6.6	11	10	12	7.4	5.3	3.5	e5.0
21	6.1	6.9	20	1.8	6.6	35	10	11	7.4	5.4	3.5	e5.0
22	6.6	6.9	18	1.4	6.9	26	10	11	7.4	5.4	3.5	e5.0
23	7.1	7.6	17	1.7	6.8	16	11	10	7.3	5.3	3.4	e5.0
24	6.6	7.9	15	1.1	6.7	15	12	9.9	7.5	5.1	4.8	e5.0
25	6.4	9.3	14	2.8	6.7	13	12	11	7.4	5.2	8.1	e5.0
26	7.8	e9.0	15	2.3	6.7	29	12	9.8	7.2	5.2	4.8	5.1
27	6.8	e8.0	14	1.9	6.8	24	12	11	7.3	5.1	6.2	5.2
28	5.3	e7.0	30	2.0	8.0	20	12	11	7.4	5.2	5.6	5.2
29	4.4	e6.0	148	4.3	---	15	12	10	7.6	5.2	5.2	5.2
30	3.1	e5.0	44	2.8	---	12	12	9.7	7.5	5.4	5.1	5.3
31	3.1	---	19	4.0	---	13	---	10	---	5.4	5.0	---
TOTAL	219.2	186.6	529.1	348.4	183.1	1246.7	337	342.4	234.9	183.5	158.9	162.0
MEAN	7.07	6.22	17.1	11.2	6.54	40.2	11.2	11.0	7.83	5.92	5.13	5.40
MAX	15	12	148	102	8.6	569	13	12	9.9	7.4	18	10
MIN	3.1	3.0	4.4	1.1	5.4	6.2	10	9.7	7.2	5.1	3.4	5.0
AC-FT	435	370	1050	691	363	2470	668	679	466	364	315	321

CAL YR 1990 TOTAL 3667.2 MEAN 10.0 MAX 199 MIN 3.0 AC-FT 7270
WTR YR 1991 TOTAL 4131.8 MEAN 11.3 MAX 569 MIN 1.1 AC-FT 8200

e Estimated

09498400 FINAL CREEK AT INSPIRATION DAM, NEAR GLOBE, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1979 to current year.

REMARKS.--An earthen dam located approximately 1.5 mi upstream of the gage was impounding water when the January sample was collected. There was no continuous surface-water flow between the dam and the gage.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV 28...	1500	7.0	3470	7.9	14.0	17.5	11	695	8.4	98	90	44
JAN 24...	1610	0.70	3500	7.8	11.0	14.0	1.5	691	8.4	92	25	K1
MAR 20...	1445	11	3400	7.9	17.0	21.0	18	683	7.2	91	71	K9
MAY 15...	1615	11	3380	7.7	27.0	24.0	1.6	685	7.0	94	84	K9
JUL 24...	1630	4.4	3400	7.9	37.0	30.0	1.5	686	6.5	97	99	K2
SEP 25...	1725	4.7	3320	7.8	25.0	25.0	2.1	689	7.1	96	82	73
DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD CO3 (00452)	HY- DROXIDE WATER DIS IT FIELD OH (71834)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
NOV 28...	130	2100	2000	600	150	86	0.8	4.8	138	0	0	113
JAN 24...	K16	2000	1900	590	130	92	0.9	5.1	187	0	0	153
MAR 20...	61	1800	1700	480	150	93	0.9	5.5	145	0	0	119
MAY 15...	34	2200	2100	620	150	92	0.9	5.6	134	0	0	110
JUL 24...	100	2100	2000	600	140	96	0.9	5.3	118	0	0	97
SEP 25...	230	2100	2000	600	140	93	0.9	5.2	123	0	0	101
DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)
NOV 28...	2300	100	0.40	3480	3370	4.73	26	--	<0.010	<0.100	0.120	0.08
JAN 24...	2100	110	0.70	3230	3130	4.39	7	--	<0.010	<0.100	0.060	--
MAR 20...	2200	130	0.50	3490	3170	4.75	41	--	<0.010	0.094	0.090	0.21
MAY 15...	2000	100	0.60	3360	3070	4.57	33	0.076	0.010	0.086	0.060	--
JUL 24...	2300	120	0.80	3400	3370	4.62	7	--	<0.010	<0.050	0.310	0.0
SEP 25...	2200	94	0.80	3360	3230	4.57	32	--	<0.010	<0.050	0.110	--

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

09498400 PINAL CREEK AT INSPIRATION DAM, NEAR GLOBE, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BORON, DIS- SOLVED (UG/L AS B) (01020)
NOV 28...	0.20	--	--	0.050	0.06	0.020	<1	2	<1	<100	<10	90
JAN 24...	<0.20	--	--	0.030	0.12	0.040	--	1	<1	<100	--	60
MAR 20...	0.30	0.39	1.7	0.090	0.18	0.060	--	2	<1	<100	--	70
MAY 15...	<0.20	--	--	0.100	0.06	0.020	--	1	<1	<100	--	70
JUL 24...	0.30	--	--	0.050	0.09	0.030	--	1	<1	<100	--	80
SEP 25...	<0.20	--	--	0.080	0.09	0.030	--	1	<1	100	--	80

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
NOV 28...	3	3.0	3	1	65	4	1500	40	1	<1	170	58000
JAN 24...	2	2.0	1	1	40	9	1100	<10	2	<1	100	*10000
MAR 20...	3	4.0	5	3	12	7	4100	<10	2	<1	160	40000
MAY 15...	4	4.0	1	<1	50	7	1400	<10	<1	<1	160	41000
JUL 24...	4	4.0	3	2	19	6	--	20	<1	<1	190	49000
SEP 25...	3	3.0	6	2	41	4	1300	<10	<1	<1	190	40000

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 28...	56000	<0.10	<1	300	320	<1	<1	<1.0	30	20	55	1.0
JAN 24...	10000	<0.10	3	--	*120	<1	<1	<1.0	20	10	31	0.06
MAR 20...	36000	<0.10	6	--	300	<1	<1	<1.0	40	30	300	8.9
MAY 15...	39000	<0.10	4	--	340	<1	<1	<1.0	20	20	78	2.3
JUL 24...	46000	<0.10	4	--	400	<1	<1	<1.0	<10	20	6	0.06
SEP 25...	40000	<0.10	4	--	*310	<1	<1	<1.0	20	<10	58	0.73

* Value verified.

< Actual value is known to be less than value shown.

GILA RIVER BASIN

09498500 SALT RIVER NEAR ROOSEVELT, AZ
(National stream-quality accounting network station)

LOCATION.--Lat 33°37'10", long 110°55'15", in SE¼NE¼ sec.9, T.3 N., R.14 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, in Tonto National Forest on left bank 100 ft downstream from bridge on State Highway 288, 0.3 mi downstream from Final Creek, 1 mi upstream from diversion dam for power canal, 14 mi east of village of Roosevelt, and 17 mi upstream from Roosevelt Dam.

DRAINAGE AREA.--4,306 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1913 to current year (monthly discharge only January to September 1913, published in WSP 1313).

REVISED RECORDS.--WSP 1049: 1914, 1916, 1918-19, 1926. WSP 1343: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,177.14 ft above National Geodetic Vertical Datum of 1929. Prior to 1925, nonrecording gage at diversion dam about 1 mi downstream at different datum. Nonrecording gage at present site and datum 1925 to Jan. 17, 1935. May 20, 1955, to July 30, 1959, supplementary water-stage recorder at diversion dam.

REMARKS.--No estimated daily discharges. Records good. Several small diversions for irrigation of about 4,000 acres above station and two trans basin diversions above station, one into basin from Show Low Creek and one out of basin to Willow Creek. Records show inflow to Roosevelt Lake. Tonto Creek also contributes to Roosevelt Lake; see records elsewhere in this report.

AVERAGE DISCHARGE.--78 years, 895 ft³/s, 648,400 acre-ft/yr; median of yearly mean discharges, 710 ft³/s, 514,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 117,000 ft³/s Mar. 14, 1941, gage height, 24.4 ft, from rating curve extended above 55,000 ft³/s on basis of velocity-area studies and float-area measurements at 66,000 ft³/s and 102,000 ft³/s; maximum gage height, 29.35 ft Dec. 19, 1978; minimum discharge, 59 ft³/s all or part of each day, July 1-4, 7-12, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of about 42 ft³/s was reported Aug. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 30	0630	21,300	15.75	Mar. 1	2400	*71,300	*24.64
Jan. 6	1900	13,100	13.55	Mar. 27	0045	8,410	12.61

Minimum daily discharge, 180 ft³/s July 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	253	202	289	2770	286	29000	3590	2160	916	250	241	305
2	252	221	281	1800	312	46700	3700	2100	902	241	240	348
3	280	279	284	1200	333	13200	3840	2120	866	231	245	325
4	351	318	283	1050	334	6130	3890	2100	833	224	312	308
5	387	294	276	7620	318	4670	4120	2030	766	227	251	301
6	374	318	262	11000	316	4880	4600	1950	721	233	225	1110
7	341	313	252	7070	323	6530	5180	1900	685	225	215	2050
8	314	299	253	3770	333	4730	5520	1900	652	225	213	1180
9	286	291	252	2710	347	3570	5290	1960	616	235	237	789
10	267	291	234	2120	367	3150	4930	2060	611	223	286	602
11	249	287	246	1760	401	2920	4770	2100	600	216	361	491
12	242	291	255	1470	436	2980	4530	2050	604	204	435	412
13	230	283	258	1230	482	2820	4060	1940	620	207	318	373
14	220	283	265	1060	572	2630	3560	1830	649	200	253	346
15	215	283	282	955	778	2360	3140	1760	635	199	224	316
16	211	280	573	883	912	2160	2980	1700	608	196	228	300
17	209	276	2010	823	1010	1960	3040	1600	564	191	209	288
18	209	282	1600	768	1220	1780	3120	1510	535	196	315	265
19	205	283	809	707	1370	1820	3300	1440	500	195	275	244
20	193	286	580	655	1390	2060	3340	1390	465	192	263	238
21	193	294	573	610	1050	2780	3400	1340	435	210	260	239
22	186	298	468	586	951	3080	3500	1280	416	201	255	240
23	192	309	366	552	943	3580	3380	1220	394	180	264	308
24	199	319	278	483	977	6300	3230	1160	362	181	230	465
25	194	314	219	402	1030	6090	2990	1120	340	225	258	294
26	196	298	236	374	1060	5140	2930	1100	319	229	309	287
27	196	327	350	361	1050	6640	2860	1100	300	240	459	262
28	194	315	396	359	1100	4930	2650	1110	283	256	528	250
29	193	304	2980	357	---	5730	2470	1080	272	263	626	246
30	190	291	15700	338	---	4460	2300	1010	256	246	379	239
31	196	---	5180	312	---	3880	---	950	---	247	317	---
TOTAL	7417	8729	36290	56155	20001	198660	110210	50070	16725	6788	9231	13421
MEAN	239	291	1171	1811	714	6408	3674	1615	557	219	298	447
MAX	387	327	15700	11000	1390	46700	5520	2160	916	263	626	2050
MIN	186	202	219	312	286	1780	2300	950	256	180	209	238
AC-FT	14710	17310	71980	111400	39670	394000	218600	99310	33170	13460	18310	26620
CAL YR	1990	TOTAL	139324	MEAN	382	MAX	15700	MIN	78	AC-FT	276300	
WTR YR	1991	TOTAL	533697	MEAN	1462	MAX	46700	MIN	180	AC-FT	1059000	

09498500 SALT RIVER NEAR ROOSEVELT, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1958 to October 1965, January 1976 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: April 1958 to October 1965.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS. / 100 ML) (31625)	
OCT 23...	0930	202	3500	8.4	15.0	14.5	12	704	8.8	95	30	K22	
NOV 27...	1215	300	3000	8.4	9.0	9.5	10	706	10.6	101	25	K8	
DEC 11...	0920	255	3280	8.5	5.0	7.0	4.5	709	10.4	93	21	K2	
JAN 23...	1245	556	1540	8.3	12.0	7.0	4.4	705	11.4	102	15	<1	
FEB 13...	1105	467	1940	8.5	14.0	12.0	2.4	708	9.7	98	19	K2	
MAR 19...	1215	1740	735	8.1	10.0	10.5	7.2	699	10.4	102	<10	<1	
APR 18...	1100	3250	326	8.0	27.0	13.5	15	699	9.7	101	11	<1	
MAY 14...	1215	1790	626	8.2	26.0	19.0	3.5	697	8.4	99	16	K2	
JUN 27...	1230	249	2370	8.4	33.0	22.5	1.6	699	8.1	103	25	K10	
JUL 23...	1205	183	3610	8.4	37.5	27.0	0.90	703	7.7	106	42	K13	
AUG 22...	1150	258	2560	8.4	39.0	27.5	54	705	6.8	94	10	170	
SEP 26...	1110	278	1480	8.2	32.0	23.0	430	705	7.5	95	33	1100	
DATE		STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD CO3 (00452)	HY- DROXIDE WATER DIS IT FIELD OH (71834)	ALKA- LINITY WAT DIS TOT IT FIELD CACO3 (39086)
OCT 23...	K23	340	160	86	31	550	13	12	217	5	0	186	
NOV 27...	27	340	150	88	28	440	10	9.4	207	7	0	181	
DEC 11...	K6	340	130	88	29	520	12	11	237	6	0	204	
JAN 23...	K4	210	79	58	16	220	7	5.6	156	2	0	131	
FEB 13...	K4	250	81	67	19	300	8	7.2	185	8	0	165	
MAR 19...	21	130	44	37	9.9	93	4	2.7	109	0	0	89	
APR 18...	K5	83	25	23	6.1	50	2	1.7	71	0	0	58	
MAY 14...	K19	100	28	28	7.3	81	4	2.5	88	0	0	72	
JUN 27...	K10	300	130	80	24	360	9	8.2	187	8	0	167	
JUL 23...	K14	370	220	94	33	580	13	12	177	5	0	154	
AUG 22...	K47	280	110	72	24	440	11	9.7	193	7	0	170	
SEP 26...	1100	220	97	63	16	210	6	5.0	154	0	0	126	

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

GILA RIVER BASIN

09498500 SALT RIVER NEAR ROOSEVELT, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT												
23...	150	840	0.30	21	1940	1810	2.64	25	<0.010	<0.010	<0.100	<0.100
NOV												
27...	140	710	0.10	--	1560	1530	2.12	14	<0.010	--	<0.100	--
DEC												
11...	130	810	0.70	20	1760	1730	2.39	4	0.020	<0.010	<0.100	<0.100
JAN												
23...	73	350	0.30	--	824	802	1.12	7	0.010	--	<0.100	--
FEB												
13...	84	490	0.60	18	1090	1090	1.48	10	<0.010	<0.010	<0.100	<0.100
MAR												
19...	45	150	0.10	--	409	392	0.56	7	<0.010	--	<0.050	--
APR												
18...	7.8	75	<0.10	17	218	216	0.30	28	0.010	<0.010	<0.050	<0.050
MAY												
14...	34	130	0.10	--	356	326	0.48	9	0.020	--	<0.050	--
JUN												
27...	130	570	0.30	20	1290	1290	1.75	13	<0.010	<0.010	<0.050	<0.050
JUL												
23...	160	980	0.30	--	2030	1950	2.76	8	<0.010	--	<0.050	--
AUG												
22...	100	700	0.30	16	1460	1470	1.99	46	<0.010	<0.010	<0.050	<0.050
SEP												
26...	99	330	0.20	--	824	800	1.12	664	0.030	--	<0.050	--
DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
OCT												
23...	0.010	0.030	--	<0.20	--	0.010	--	0.020	<0.010	0.010	0.03	<10
NOV												
27...	0.050	--	--	<0.20	--	0.020	--	--	<0.010	--	--	--
DEC												
11...	0.020	0.020	--	<0.20	--	0.010	--	0.020	<0.010	<0.010	--	--
JAN												
23...	0.010	--	--	<0.20	--	0.040	0.15	--	0.050	--	--	--
FEB												
13...	0.020	<0.010	0.18	0.20	--	0.010	--	0.030	<0.010	0.020	0.06	<10
MAR												
19...	0.010	--	0.39	0.40	--	0.050	0.12	--	0.040	--	--	--
APR												
18...	0.010	<0.010	--	<0.30	--	0.080	0.12	0.030	0.040	0.020	0.06	<10
MAY												
14...	0.020	--	--	<0.20	--	0.070	0.06	--	0.020	--	--	--
JUN												
27...	0.030	<0.010	1.5	1.5	--	0.030	0.09	0.020	0.030	0.010	0.03	--
JUL												
23...	0.080	--	0.32	0.40	--	0.040	--	--	<0.010	--	--	--
AUG												
22...	<0.010	<0.010	--	0.30	0.20	0.070	--	0.020	<0.010	<0.010	--	<10
SEP												
26...	0.030	--	--	<0.20	--	0.070	0.12	--	0.040	--	--	--

< Actual value is known to be less than value shown.

09498500 SALT RIVER NEAR ROOSEVELT, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
OCT 23...	6	5	<100	<10	320	9	<1.0	18	<1	1	47	4
NOV 27...	5	4	<100	--	240	<1	<1.0	<1	<1	--	7	2
DEC 11...	5	6	<100	--	280	<1	<1.0	<1	<1	--	8	1
JAN 23...	3	3	45	--	120	<1	<1.0	<1	<1	--	5	1
FEB 13...	3	3	46	<0.5	170	<1	1.0	<1	<1	<3	2	1
MAR 19...	2	1	30	--	60	<1	<1.0	2	<1	--	11	2
APR 18...	1	1	17	<0.5	30	<1	<1.0	4	<1	<3	4	1
MAY 14...	2	2	20	--	50	<1	1.0	<1	<1	--	5	3
JUN 27...	5	5	100	--	200	<1	<1.0	1	<1	--	3	2
JUL 23...	5	6	<100	--	330	<1	<1.0	<1	<1	--	4	2
AUG 22...	6	6	100	<10	250	--	<1.0	--	<1	3	--	2
SEP 26...	5	4	96	--	140	<1	<1.0	17	<1	--	17	2

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)
OCT 23...	220	<10	19	<1	350	--	1400	<0.10	<0.1	2	7	<1
NOV 27...	310	30	<1	<1	--	1100	1100	<0.10	--	--	--	<1
DEC 11...	280	<10	2	<1	--	990	990	<0.10	--	--	--	<1
JAN 23...	290	5	1	1	--	480	450	<0.10	--	--	--	<1
FEB 13...	70	<3	*<1	<1	190	450	410	<0.10	<0.1	<10	3	<1
MAR 19...	840	32	6	1	--	290	190	<0.10	--	--	--	<1
APR 18...	1500	8	3	<1	31	130	79	<0.10	<0.1	<10	<1	<1
MAY 14...	480	20	7	1	--	210	160	<0.10	--	--	--	<1
JUN 27...	30	<10	2	<1	--	1100	970	<0.10	--	--	--	<1
JUL 23...	--	40	2	<1	--	*1500	*1500	0.10	--	--	--	<1
AUG 22...	--	<10	--	<1	280	--	370	<0.10	<0.1	1	2	<1
SEP 26...	7600	<3	10	<1	--	1100	590	<0.10	--	--	--	<1

* Value verified.

< Actual value is known to be less than value shown.

09498500 SALT RIVER NEAR ROOSEVELT, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 23...	<1	<1.0	1100	19	70	<10	--	--	99	34	19
NOV 27...	<1	<1.0	--	--	<10	10	--	--	97	21	17
DEC 11...	<1	<1.0	--	--	<10	<10	--	--	94	16	11
JAN 23...	<1	<1.0	--	--	<10	<3	--	--	95	8	12
FEB 13...	<1	<1.0	610	<6	<10	<3	--	--	85	14	18
MAR 19...	<1	<1.0	--	--	10	<3	--	--	46	39	183
APR 18...	<1	<1.0	170	<6	<10	<3	3.5	2.9	49	67	588
MAY 14...	<1	<1.0	--	--	<10	12	--	--	75	19	92
JUN 27...	<1	<1.0	--	--	<10	<10	--	--	86	9	6.1
JUL 23...	<1	<1.0	--	--	<10	<10	--	--	96	3	1.5
AUG 22...	<1	<1.0	790	14	--	<10	--	--	98	73	51
SEP 26...	<1	<1.0	--	--	40	3	--	--	100	872	655

< Actual value is known to be less than value shown.

09498503 SOUTH FORK PARKER CREEK NEAR ROOSEVELT, AZ

LOCATION.--Lat 33°47'50", long 110°57'35", in NE¼ sec.7, T.5 N., R.14 E., Gila County, Hydrologic Unit 15060103, in Tonto National Forest, 1.5 mi upstream from confluence with Pocket Creek, and 12 mi northeast of Roosevelt.

DRAINAGE AREA.--1.09 mi².

PERIOD OF RECORD.--November 1985 to current year. Prior to November 1985, station operated by the U.S. Forest Service (records unpublished).

GAGE.--Water-stage recorder and two sharp-crested weirs. Elevation of gage is 5,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--5 years, 0.33 ft³/s, 239 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68 ft³/s, Mar. 1, 1991, gage height, 3.84 ft; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, since 1934, 270 ft³/s, Dec. 23, 1945 as reported by the U.S. Forest Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 68 ft³/s, Mar. 1, gage height, 3.84 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.00	.01	.52	e.01	45	8.6	.27	.09	.00	.00	.00
2	.02	.03	.01	.38	e.01	18	8.9	.26	.09	.00	.00	.00
3	.02	.03	.01	.29	e.01	6.9	10	.25	.08	.00	.00	.00
4	.01	.02	.01	12	e.01	5.2	11	.25	.08	.00	.00	.00
5	.01	.02	.01	8.6	e.01	4.5	9.8	.23	.07	.00	.00	.00
6	.00	.01	.01	6.5	e.01	4.2	7.3	.21	.07	.00	.00	.00
7	.00	.01	.01	2.6	e.01	2.2	4.9	.20	.06	.00	.00	.00
8	.00	.01	.01	1.2	e.01	1.5	3.4	.19	.06	.00	.00	.00
9	.00	.01	.01	.82	e.01	1.1	2.7	.18	.05	.00	.00	.00
10	.00	.01	.01	.60	e.01	.85	2.2	.17	.04	.00	.00	.00
11	.00	.01	.01	.44	e.02	.69	1.8	.16	.04	.00	.01	.00
12	.00	.00	.02	.35	e.02	.59	1.3	.15	.04	.00	.00	.00
13	.00	.00	.03	.26	e.02	.53	1.3	.15	.04	.00	.00	.00
14	.00	.00	.02	.18	e.02	.45	1.2	.15	.04	.00	.00	.00
15	.00	.00	.03	.12	e.02	.39	1.1	.14	.03	.00	.00	.00
16	.00	.00	.18	.07	e.03	.45	.98	.13	.03	.00	.00	.00
17	.00	.00	.54	.07	e.04	.53	.79	.13	.02	.00	.00	.00
18	.00	.00	.32	.07	e.06	.75	.74	.12	.01	.00	.00	.00
19	.00	.00	.23	.02	e.06	1.2	.68	.12	.01	.00	.00	.00
20	.00	.03	.21	.02	e.06	1.5	.58	.12	.00	.00	.00	.00
21	.00	.04	.17	.02	e.07	2.0	.48	.12	.00	.00	.00	.00
22	.00	.02	.15	e.01	e.07	1.7	.44	.11	.00	.00	.00	.00
23	.00	.01	.12	e.01	e.07	2.4	.47	.11	.00	.00	.00	.00
24	.00	.01	.13	e.01	e.07	4.1	.44	.09	.00	.00	.00	.00
25	.00	.01	.13	e.01	e.07	4.6	.42	.09	.00	.00	.00	.00
26	.00	.02	.13	e.01	e.07	3.9	.39	.09	.00	.00	.00	.00
27	.00	.02	.13	e.01	e.07	3.3	.35	.09	.00	.00	.00	.00
28	.00	.02	1.1	e.01	3.0	2.9	.33	.08	.00	.00	.00	.00
29	.00	.01	6.9	e.01	---	2.9	.32	.08	.00	.00	.00	.00
30	.00	.01	2.4	e.01	---	4.3	.30	.08	.00	.00	.00	.00
31	.00	---	.88	e.01	---	5.8	---	.09	.00	.00	.00	---
TOTAL	0.08	0.36	13.93	35.23	3.94	134.43	83.21	4.61	0.95	0.00	0.01	0.00
MEAN	.003	.012	.45	1.14	.14	4.34	2.77	.15	.032	.000	.000	.000
MAX	.02	.04	6.9	12	3.0	45	11	.27	.09	.00	.01	.00
MIN	.00	.00	.01	.01	.01	.39	.30	.08	.00	.00	.00	.00
AC-FT	.2	.7	28	70	7.8	267	165	9.1	1.9	.00	.02	.00

CAL YR 1990 TOTAL 54.96 MEAN .15 MAX 6.9 MIN .00 AC-FT 109
WTR YR 1991 TOTAL 276.75 MEAN .76 MAX 45 MIN .00 AC-FT 549

e Estimated

09499000 TONTO CREEK ABOVE GUN CREEK, NEAR ROOSEVELT, AZ

LOCATION.--Lat 33°58'48", long 111°18'10", in SW¼NE¼ sec.2, T.7 N., R.10 E., Gila County, Hydrologic Unit 15060105, in Tonto National Forest, on left bank 600 ft upstream from Gun Creek, 17 mi upstream from high-water line of Roosevelt Lake, and 24 mi northwest of Roosevelt.

DRAINAGE AREA.--675 mi².

PERIOD OF RECORD.--December 1940 to current year.

REVISED RECORDS.--WSP 1283: Drainage area. WDR AZ-80-1: 1978(M), WDR AZ-88-1: 1979(P).

GAGE.--Water-stage recorder. Datum of gage is 2,523.14 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--50 years (water years 1942-91), 153 ft³/s, 110,800 acre-ft/yr; median of yearly mean discharges, 92 ft³/s, 66,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,400 ft³/s Feb. 15, 1980, gage height, 17.0 ft; maximum gage height, 18.2 ft Sept. 5, 1970; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 6	0715	3,370	7.43	Mar. 23	2300	3,520	6.77
Mar. 1	1745	*43,500	*15.00	Mar. 26	1900	5,280	7.55

Minimum daily discharge, 2.2 ft³/s Sept. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	9.2	13	119	26	27200	1540	69	24	5.6	7.0	10
2	9.6	9.2	13	82	24	12100	1420	66	27	5.1	6.9	11
3	9.1	8.8	12	59	24	1830	1170	63	26	5.0	7.9	13
4	8.8	11	12	469	23	1070	1070	60	24	5.0	18	18
5	8.4	11	12	1910	23	868	944	58	24	5.0	12	13
6	8.6	11	12	2070	23	783	860	54	24	5.6	8.7	16
7	6.9	10	12	768	24	547	789	52	23	5.4	7.7	20
8	7.8	11	12	331	26	391	658	50	21	5.9	7.5	15
9	6.3	11	11	189	28	307	528	51	20	5.7	7.2	7.5
10	5.9	11	12	134	28	256	451	49	20	6.1	7.2	6.4
11	7.2	9.1	11	107	31	228	401	46	20	5.7	14	6.9
12	7.2	9.8	11	89	34	192	323	44	21	5.5	26	5.7
13	7.4	8.8	11	79	39	164	269	43	22	5.4	25	4.7
14	6.4	9.9	10	76	46	152	229	43	22	5.8	17	3.9
15	5.0	11	12	69	54	146	205	40	20	5.4	13	3.2
16	5.1	10	17	62	55	159	211	39	18	5.3	11	2.8
17	5.1	11	24	54	56	150	207	37	16	5.3	11	2.4
18	5.9	12	26	47	63	162	195	36	15	5.3	9.8	2.2
19	5.9	12	23	44	53	253	182	35	13	5.1	9.0	2.7
20	6.3	14	39	41	44	541	169	34	12	5.4	6.8	2.7
21	6.8	14	40	40	37	1740	158	33	11	5.9	6.9	3.0
22	8.3	14	37	38	33	1590	150	31	9.9	5.7	7.5	3.0
23	8.7	14	29	35	31	1840	139	30	9.2	6.1	7.8	3.5
24	7.8	13	25	33	31	1850	129	29	8.7	6.1	7.9	3.9
25	8.3	13	25	32	35	1500	120	29	8.0	5.8	e28	5.9
26	8.7	37	25	31	34	2450	116	27	7.2	5.7	e37	4.0
27	8.2	20	23	30	34	2760	110	26	6.9	5.7	e67	4.8
28	8.4	14	25	29	130	2690	95	24	6.4	6.0	e40	5.6
29	8.3	12	61	27	---	2540	78	24	6.4	6.6	20	6.0
30	8.5	11	336	27	---	2220	73	25	5.8	6.9	15	8.3
31	8.5	---	209	25	---	1640	---	23	---	7.1	12	---
TOTAL	231.7	372.8	1140	7146	1089	70319	12989	1270	491.5	176.2	481.8	215.1
MEAN	7.47	12.4	36.8	231	38.9	2268	433	41.0	16.4	5.68	15.5	7.17
MAX	9.6	37	336	2070	130	27200	1540	69	27	7.1	67	20
MIN	5.0	8.8	10	25	23	146	73	23	5.8	5.0	6.8	2.2
AC-FT	460	739	2260	14170	2160	139500	25760	2520	975	349	956	427
CAL YR 1990	TOTAL	7780.27	MEAN	21.3	MAX	336	MIN	.00	AC-FT	15430		
WTR YR 1991	TOTAL	95922.1	MEAN	263	MAX	27200	MIN	2.2	AC-FT	190300		

e Estimated

09501000 RESERVOIR SYSTEM ON SALT RIVER AT AND BELOW ROOSEVELT DAM, AZ

LOCATION.--This system comprises four storage reservoirs created by four separate dams on Salt River, Hydrologic Unit 15060106: Roosevelt Lake, formed by Roosevelt Dam in sec.20, T.4 N., R.12 E. (unsurveyed), on State Highway 88; Apache Lake, formed by Horse Mesa Dam, 17 mi downstream from Roosevelt Dam; Canyon Lake, formed by Mormon Flat Dam, 27 mi downstream from Roosevelt Dam; Saguaro Lake, formed by Stewart Mountain Dam, 37 mi downstream from Roosevelt Dam. Contents given herein are combined usable contents of the four reservoirs.

DRAINAGE AREA.--6,211 mi², at Stewart Mountain Dam.

PERIOD OF RECORD.--April 1910 to current year. Prior to October 1934, monthend contents only, published in WSP 1313. Evaporation: April 1958 to June 1963.

REVISED RECORDS.--WSP 1283: Drainage area. WRD Ariz. 1975: 1974.

GAGES.--Roosevelt Lake, water-stage indicator in powerplant connected to long distance transmitter on lake (water-stage recorder prior to Jan. 1, 1967); Apache Lake, water-stage indicator in powerplant connected to long distance transmitter on lake since April 1949 (prior to that date, nonrecording gage or reference mark); Canyon and Saguaro Lakes, mercury column gages.

REMARKS.--Total capacity of the four reservoirs as of 1981 was 1,710,000 acre-ft, divided as follows: Roosevelt Lake, 1,337,000 acre-ft; Apache Lake, 245,000 acre-ft; Canyon Lake, 58,000 acre-ft; Saguaro Lake, 70,000 acre-ft. Dead storage negligible. Dams forming these reservoirs were built as follows: Roosevelt 1905-11; Horse Mesa 1924-27; Mormon Flat 1923-26; Stewart Mountain 1928-30. The four dams forming these reservoirs completely develop the fall in the Salt River from Roosevelt Lake to Stewart Mountain Dam. Elevation of water surface varies from 1,422.0 ft, sill of lowest outlet in Stewart Mountain Dam, to 2,136 ft, top of spillway gates in raised position on Roosevelt Dam. See 1978 to 1980 reports for dates of spill prior to 1981 water year. Records given herein represent usable contents. Prior to Oct. 1, 1972, contents were given at 2400 hrs. Water from this system is used for irrigation of Salt River Valley, power generation, municipal purposes, and recreation.

COOPERATION.--Records of daily contents furnished by Salt River Valley Water Users' Association.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents of system, 1,764,000 acre-ft May 22, 1941; minimum, 20,680 acre-ft Sept. 16, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum contents of system, 1,664,000 acre-ft May 13-18; minimum, 714,700 acre-ft Nov. 1.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 08:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	724500	714700	725800	790900	912500	948100	1487000	1655000	1645000	1560000	1451000	1365000
2	723900	715400	726200	794100	913100	1123000	1497000	1655000	1641000	1557000	1447000	1363000
3	723600	715600	726700	797100	912200	1195000	1507000	1657000	1640000	1553000	1443000	1360000
4	723200	715800	726900	800000	914200	1216000	1517000	1660000	1639000	1549000	1440000	1359000
5	723000	716200	726900	806400	915100	1228000	1526000	1660000	1637000	1546000	1437000	1357000
6	722500	716700	727000	826800	917100	1234000	1536000	1661000	1636000	1541000	1433000	1355000
7	722600	717000	726700	851000	916400	1243000	1546000	1661000	1634000	1538000	1433000	1357000
8	722100	717100	727700	864100	919800	1255000	1558000	1661000	1631000	1535000	1430000	1360000
9	721600	717500	727900	871400	922600	1263000	1569000	1662000	1629000	1532000	1426000	1357000
10	720900	717700	727900	876700	918100	1267000	1579000	1662000	1626000	1526000	1425000	1356000
11	720500	718000	728400	881100	919600	1271000	1587000	1663000	1623000	1523000	1423000	1355000
12	720400	718400	728900	884500	920300	1275000	1596000	1662000	1620000	1519000	1420000	1353000
13	719100	719900	729400	887500	921000	1280000	1602000	1664000	1618000	1516000	1418000	1351000
14	718400	719000	729400	889700	922000	1285000	1607000	1664000	1615000	1512000	1415000	1350000
15	719600	718700	730500	892200	922800	1288000	1612000	1664000	1612000	1509000	1412000	1348000
16	717500	719000	731700	893900	924300	1291000	1615000	1664000	1610000	1505000	1408000	1346000
17	718700	720300	732700	895500	926100	1294000	1617000	1664000	1608000	1501000	1405000	1344000
18	717400	720400	736300	897300	928100	1298000	1621000	1664000	1606000	1500000	1401000	1343000
19	717300	720800	739000	899100	929300	1300000	1623000	1663000	1602000	1494000	1399000	1341000
20	716900	721300	741600	900300	930600	1304000	1626000	1662000	1599000	1490000	1395000	1338000
21	716800	722300	746100	901500	932200	1314000	1629000	1662000	1595000	1486000	1392000	1336000
22	716600	722800	744300	902800	933000	1329000	1632000	1661000	1591000	1483000	1389000	1334000
23	716600	723000	744800	904300	934000	1341000	1636000	1660000	1588000	1480000	1386000	1333000
24	716400	723400	745300	904400	934900	1357000	1639000	1658000	1584000	1477000	1383000	1332000
25	716100	724000	746000	906100	936000	1375000	1643000	1658000	1581000	1474000	1381000	1330000
26	715900	723900	748900	907500	936800	1389000	1645000	1655000	1577000	1470000	1379000	1328000
27	715600	724400	747700	908000	938000	1411000	1648000	1654000	1574000	1466000	1376000	1327000
28	715300	725300	748100	909000	940200	1430000	1649000	1651000	1570000	1463000	1374000	1325000
29	715200	725500	750000	909700	---	1447000	1651000	1649000	1567000	1460000	1372000	1323000
30	715200	725600	761100	910000	---	1462000	1653000	1648000	1564000	1457000	1370000	1321000
31	715000	---	783900	913100	---	1475000	---	1645000	---	1453000	1368000	---
MAX	724500	725600	783900	913100	940200	1475000	1653000	1664000	1645000	1560000	1451000	1365000
MIN	715000	714700	725800	790900	912200	948100	1487000	1645000	1564000	1453000	1368000	1321000
(*)	-9800	+11100	+65100	+121600	+35600	+538900	+168000	-10000	-85000	-109000	-86000	-46000
CAL YR 1990	MAX	999800	MIN	714700	(*)	-167700						
WTR YR 1991	MAX	1664000	MIN	714700	(*)	+594500						

(*) Change in contents in acre-ft (from 0800 first of month).
NOTE.--Contents at 0800 Oct. 1, 1991, 1,319,000 acre-ft.

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ

LOCATION.--Lat 33°33'10", long 111°34'33", in NW¼NW¼ sec.6, T.2 N., R.8 E. (unsurveyed), Maricopa County, Hydrologic Unit 15060106, on left bank 3.5 mi downstream from Stewart Mountain Dam and 6 mi upstream from Verde River.

DRAINAGE AREA.--6,232 mi², of which 21 mi² is below Stewart Mountain Dam.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1930 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Stewart Mountain Dam" 1934-41.

REVISED RECORDS.--WSP 1343: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,370 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 27, 1934, at site 3.2 mi upstream at different datum. Sept. 27, 1934, to Jan. 20, 1950, at site 2.8 mi upstream at datum 1,396.33 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by four reservoirs above station. (See elsewhere in this report.) Entire flow (except during infrequent periods of extreme flooding) is diverted at Granite Reef Dam, 10 mi downstream, for irrigation in Salt River Valley and for municipal use by the city of Phoenix.

AVERAGE DISCHARGE.--61 years, 970 ft³/s, 702,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,200 ft³/s Feb. 15, 1980, gage height, 25.0 ft, from highwater mark inside gage well, from rating curve then in use, extended above 10,000 ft³/s defined by known release rates from Stewart Mountain Dam and recorded gage heights; maximum daily discharge, 64,000 ft³/s Feb. 16, 1980; no flow at times in recent years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,870 ft³/s Mar. 2; no flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	424	217	6.6	3.9	1.6	942	499	1280	1690	1820	2090	1630
2	391	98	6.8	4.0	1.3	2870	361	640	1440	2020	2110	1460
3	440	12	6.9	3.7	1.8	1800	290	681	1320	2200	2000	1400
4	360	8.6	6.9	5.4	1.8	1610	918	1260	1380	2120	2080	1310
5	356	7.7	6.7	5.9	1.8	1660	1550	1050	1570	2110	1940	1300
6	414	6.5	6.5	6.4	2.0	931	1940	1210	1750	1990	1990	1250
7	405	5.9	6.0	5.1	1.2	790	1210	1290	1900	1980	1860	1040
8	340	5.1	6.1	4.6	.75	1020	1200	1250	1850	1830	1770	1050
9	457	4.9	6.0	4.3	1.7	1070	1210	1390	1830	1880	1760	1080
10	472	4.3	6.1	4.3	1.0	1190	1910	1590	1820	1760	1760	1110
11	465	3.5	5.7	4.3	3.6	830	1320	1400	1810	1850	1680	1120
12	393	2.1	6.5	4.3	6.9	572	821	1310	1860	1960	1630	1140
13	390	1.0	6.3	4.2	11	434	1530	1300	1940	2000	1680	1280
14	455	.29	6.3	4.1	6.9	735	1510	1350	1810	2040	1830	1120
15	454	.00	6.8	4.0	2.3	875	1440	1380	1680	1890	1970	1080
16	264	.00	8.4	4.1	6.9	519	1530	1450	1680	1950	2100	1170
17	207	.00	7.2	4.0	74	345	1660	1500	1730	2080	1940	1260
18	161	.00	6.9	3.9	223	330	1650	1420	1940	2170	1930	1170
19	217	.00	6.6	3.9	403	328	1610	1420	2130	2160	1820	1180
20	169	.00	8.4	3.9	371	528	1600	1420	2150	2000	1870	1220
21	134	.00	7.5	4.1	440	597	1670	1320	2220	1820	1850	1130
22	161	.00	6.8	3.9	480	539	1530	1510	2150	1730	1750	1120
23	220	.00	6.7	3.9	539	507	1380	1670	1950	1770	1620	1060
24	167	.00	6.4	3.9	474	479	1320	1880	1910	1830	1640	1150
25	233	.00	6.3	4.0	376	770	1360	1910	1990	1850	1490	1070
26	244	.00	6.5	4.1	569	1930	1450	1710	1970	1900	1680	1100
27	234	.00	6.5	4.1	595	2540	1300	1720	1950	2010	1740	1250
28	211	.00	7.6	4.2	403	2330	1250	1730	1990	1920	1610	1170
29	150	.00	7.6	4.1	---	929	1230	1700	1850	1880	1580	1170
30	156	4.2	5.6	4.1	---	503	1200	1700	1800	1970	1610	1200
31	282	---	4.0	4.3	---	491	---	1740	---	2030	1710	---
TOTAL	9426	381.09	205.2	133.0	4999.55	30994	39449	44181	55060	60520	56090	35790
MEAN	304	12.7	6.62	4.29	179	1000	1315	1425	1835	1952	1809	1193
MAX	472	217	8.4	6.4	595	2870	1940	1910	2220	2200	2110	1630
MIN	134	.00	4.0	3.7	.75	328	290	640	1320	1730	1490	1040
AC-FT	18700	756	407	264	9920	61480	78250	87630	109200	120000	111300	70990

CAL YR	1990	TOTAL	198280.73	MEAN	543	MAX	2040	MIN	.00	AC-FT	393300
WTR YR	1991	TOTAL	337228.84	MEAN	924	MAX	2870	MIN	.00	AC-FT	668900

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1950 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1982, March 1983 to September 1990.

WATER TEMPERATURES: December 1950 to September 1982, March 1983 to September 1990.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
OCT 24...	0830	182	1480	8.1	18.0	20.0	1.8	726	7.0	82	22
DEC 12...	0740	5.8	1340	8.2	12.0	14.0	2.7	726	8.2	84	15
FEB 26...	1030	650	1450	8.3	23.0	13.0	2.6	727	9.6	96	19
APR 16...	0840	1610	1250	8.3	17.0	14.0	3.0	722	8.9	92	20
JUN 18...	0820	1980	1450	8.2	31.5	19.0	3.0	722	9.2	106	26
SEP 04...	1040	1260	1230	8.1	29.0	22.0	3.0	723	8.2	99	21
DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC- CI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
OCT 24...	K5	K4	200	61	54	16	210	6	5.8	170	0
DEC 12...	K14	120	230	94	62	19	190	5	5.5	169	0
FEB 26...	K10	25	210	71	57	17	210	6	6.0	172	0
APR 16...	K2	K4	180	56	48	15	180	6	5.0	143	5
JUN 18...	K8	180	200	60	52	16	200	6	5.7	166	0
SEP 04...	390	63	180	65	47	14	170	6	4.9	134	0
DATE	HY- DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDEED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)
OCT 24...	0	139	69	320	0.20	810	759	1.10	8	--	<0.010
DEC 12...	0	139	68	320	0.50	766	748	1.04	12	--	<0.010
FEB 26...	0	141	74	340	0.30	804	789	1.09	16	--	<0.010
APR 16...	0	126	63	270	0.30	672	657	0.91	3	--	<0.010
JUN 18...	0	136	69	340	0.50	776	765	1.06	11	--	<0.010
SEP 04...	0	110	59	270	0.20	660	631	0.90	4	0.090	0.010

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
OCT 24...	<0.100	0.040	0.36	0.40	--	--	0.020	0.06	0.020	4	5
DEC 12...	<0.100	0.030	--	<0.20	--	--	0.030	--	<0.010	2	2
FEB 26...	<0.100	0.040	0.26	0.30	--	--	0.020	--	<0.010	3	3
APR 16...	<0.050	<0.010	--	0.30	--	--	0.050	0.03	0.010	3	3
JUN 18...	<0.050	0.030	0.37	0.40	--	--	0.030	0.03	0.010	3	4
SEP 04...	0.100	0.030	0.27	0.30	0.40	1.8	0.040	--	<0.010	3	3
DATE	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
OCT 24...	72	140	<1	<1.0	1	<1	3	4	210	<3	1
DEC 12...	59	120	<1	<1.0	<1	<1	5	2	200	3	1
FEB 26...	73	140	<1	<1.0	<1	<1	3	2	140	<3	1
APR 16...	56	120	<1	<1.0	<1	<1	6	3	180	<3	3
JUN 18...	70	130	<1	<1.0	<1	<1	7	3	110	4	6
SEP 04...	63	110	<1	<1.0	1	<1	4	3	130	5	2
DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 24...	<1	70	18	<0.10	<1	<1	<1.0	20	4	53	26
DEC 12...	1	80	39	<0.10	<1	<1	<1.0	<10	4	7	0.11
FEB 26...	<1	40	8	<0.10	<1	<1	1.0	10	<3	16	28
APR 16...	<1	20	4	<0.10	<1	<1	<1.0	<10	<3	5	23
JUN 18...	<1	50	10	<0.10	<1	<1	<1.0	<10	5	14	76
SEP 04...	<1	50	19	<0.10	<1	<1	<1.0	10	<3	5	17

< Actual value is known to be less than value shown.

09503700 VERDE RIVER NEAR PAULDEN, AZ

LOCATION.--Lat 34°53'40", long 112°20'32", in SW¼SE¼ sec.39, T.18 N., R.1 W., Yavapai County, Hydrologic Unit 15060202, in Prescott National Forest, on right bank 0.3 mi upstream from Verde Valley Ranch, 7 mi east of Paulden, 8 mi upstream from Hell Canyon, 8 mi downstream from Granite Creek, and 10 mi downstream from Sullivan Lake.

DRAINAGE AREA.--2,507 mi² (includes 357 mi² in Aubrey Valley Playa, a closed basin).

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

REVISED RECORDS.--WDR AZ-83-1: 1981. WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,117 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records excellent below 50 ft³/s and good above. Diversions and storage above station for irrigation and municipal use.

AVERAGE DISCHARGE.--28 years, 40.8 ft³/s, 29,560 acre-ft/yr; median of yearly mean discharges, 29 ft³/s, 21,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s Feb. 20, 1980, gage height, 12.72 ft, from rating curve extended above 7,600 ft³/s on basis of slope-conveyance and step-backwater analysis; maximum gage height, 12.89 ft Sept. 24, 1983; minimum daily discharge, 15 ft³/s May 13-23, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	0630	*6,320	*9.07

Minimum daily discharge, 21 ft³/s for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	25	25	25	25	25	115	23	24	22	22	24
2	25	25	25	25	25	2760	153	23	23	21	22	24
3	25	25	25	25	25	275	91	23	23	21	22	24
4	25	25	25	25	25	80	49	23	23	21	22	23
5	25	25	25	25	25	44	31	23	23	22	22	23
6	25	25	25	25	25	39	26	23	23	22	22	24
7	25	25	25	25	25	e36	24	23	23	23	22	24
8	25	25	25	25	25	e30	24	23	22	22	22	23
9	25	25	25	25	25	e30	24	23	23	22	22	23
10	25	25	25	25	25	e30	23	23	23	21	23	23
11	25	25	25	25	25	e28	23	23	23	21	25	23
12	25	25	25	25	25	e27	23	23	23	21	23	23
13	25	25	25	25	25	e27	23	23	22	21	23	23
14	25	25	25	25	25	e27	23	23	22	21	22	23
15	25	25	25	25	25	27	23	23	22	21	22	23
16	25	25	25	25	25	27	23	23	22	21	22	23
17	25	25	25	25	25	27	23	23	22	21	22	23
18	25	25	25	25	25	26	23	23	22	22	23	24
19	25	25	25	25	25	27	23	23	22	22	23	24
20	25	25	25	25	25	27	23	23	22	23	23	25
21	25	25	25	25	25	27	23	23	22	22	23	24
22	25	25	25	25	25	27	23	23	22	22	23	24
23	25	25	25	25	25	26	23	23	22	22	23	24
24	25	25	25	25	25	42	23	23	22	22	24	24
25	25	25	25	25	25	59	23	23	22	22	23	24
26	25	25	25	25	25	56	23	22	22	22	24	24
27	25	25	25	25	25	132	23	23	22	22	24	25
28	25	25	25	25	25	97	23	23	22	22	23	27
29	25	25	25	25	---	174	23	23	22	23	23	23
30	25	25	25	25	---	274	23	23	22	23	23	23
31	25	---	25	25	---	190	---	23	---	23	23	---
TOTAL	775	750	775	775	700	4723	1020	712	672	676	705	711
MEAN	25.0	25.0	25.0	25.0	25.0	152	34.0	23.0	22.4	21.8	22.7	23.7
MAX	25	25	25	25	25	2760	153	23	24	23	25	27
MIN	25	25	25	25	25	25	23	22	22	21	22	23
AC-FT	1540	1490	1540	1540	1390	9370	2020	1410	1330	1340	1400	1410

CAL YR	1990	TOTAL	9539	MEAN	26.1	MAX	68	MIN	24	AC-FT	18920
WTR YR	1991	TOTAL	12994	MEAN	35.6	MAX	2760	MIN	21	AC-FT	25770

e Estimated

GILA RIVER BASIN

09504000 VERDE RIVER NEAR CLARKDALE, AZ

LOCATION.--Lat 34°51'08", long 112°03'55", in SE¼NW¼SE¼ sec.17, T.17 N., R.3 E., Yavapai County, Hydrologic Unit 15060202, in Prescott National Forest, on left bank 1.7 mi downstream from Sycamore Creek and 5.6 mi north of Clarkdale.

DRAINAGE AREA.--3,503 mi², of which 364 mi² is noncontributing including 357 mi² in Aubrey Valley Playa, a closed basin.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1915 to October 1916, May 1917 to July 1921, April 1965 to current year.

REVISED RECORDS.--WSP 1213: 1917, 1920. WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,500 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 1915 to June 1921, at site 2.5 mi downstream at different datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--30 years (water years 1916, 1918-20, 1966-91), 187 ft³/s, 135,500 acre-ft/yr; median of yearly mean discharges, 160 ft³/s, 116,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,600 ft³/s Feb. 21, 1920, gage height, 19.1 ft, site and datum then in use, from rating curve extended above 2,500 ft³/s on basis of float-area measurement at 35,000 ft³/s; minimum daily, 55 ft³/s Aug. 31, Sept. 1, 1920.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	1100	*6,490	*7.80

Minimum daily discharge, 74 ft³/s Aug. 8, 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	79	84	83	83	142	1790	79	83	78	171	79
2	91	80	83	84	83	3480	1810	79	84	77	79	79
3	83	79	82	85	83	1190	1630	79	81	77	77	79
4	81	80	82	94	82	767	1520	80	79	77	77	78
5	81	80	82	89	82	1550	1210	79	79	76	76	77
6	81	80	82	87	82	1690	951	80	79	78	75	78
7	81	81	82	84	82	695	901	80	78	96	75	119
8	80	81	83	84	82	456	578	80	78	199	74	84
9	79	81	82	85	82	378	338	81	78	82	75	78
10	79	81	82	85	82	365	223	81	79	78	75	77
11	79	82	82	85	82	e300	168	82	79	78	80	77
12	79	82	84	84	82	e250	135	83	78	77	79	77
13	79	82	84	84	81	e190	112	83	78	76	78	77
14	79	81	83	84	81	e140	96	83	78	76	77	77
15	79	81	83	83	81	132	90	83	77	75	76	77
16	79	82	82	83	82	127	88	83	77	75	76	77
17	80	82	82	83	82	108	84	82	77	75	77	77
18	80	82	82	83	81	95	82	81	77	77	84	77
19	80	82	82	83	81	308	82	81	77	77	75	77
20	80	84	83	83	81	296	81	81	77	76	75	78
21	80	83	82	83	81	237	81	81	77	78	74	78
22	80	82	82	84	82	213	81	81	77	78	75	84
23	80	83	82	84	83	199	81	80	77	76	75	81
24	79	82	82	84	83	375	81	80	77	75	76	78
25	79	82	82	84	83	689	80	80	77	75	126	78
26	79	84	84	84	84	700	80	79	77	78	100	77
27	79	84	84	84	84	457	80	79	77	76	162	77
28	79	83	84	84	98	433	79	79	77	75	81	84
29	79	83	84	83	---	746	79	79	78	75	79	83
30	79	84	84	82	---	1350	80	79	78	76	78	79
31	79	---	82	83	---	1350	---	79	---	139	78	---
TOTAL	2497	2452	2563	2614	2315	19408	12771	2496	2345	2581	2635	2398
MEAN	80.5	81.7	82.7	84.3	82.7	626	426	80.5	78.2	83.3	85.0	79.9
MAX	95	84	84	94	98	3480	1810	83	84	199	171	119
MIN	79	79	82	82	81	95	79	79	77	75	74	77
AC-FT	4950	4860	5080	5180	4590	38500	25330	4950	4650	5120	5230	4760
CAL YR 1990	TOTAL	32578	MEAN	89.3	MAX	533	MIN	69	AC-FT	64620		
WTR YR 1991	TOTAL	57075	MEAN	156	MAX	3480	MIN	74	AC-FT	113200		

e Estimated

09504000 VERDE RIVER NEAR CLARKDALE, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1976 to October 1979, January 1980 to August 1983, October 1986 to current year.

REMARKS.--Precise concentrations for dissolved carbonate and bicarbonate unavailable for Apr. 17, May 29, and June 25 due to insufficient data.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

		DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)		
OCT												
18...	1300	79	507	8.1	25.5	18.0	20	678	9.6	114	<10	
NOV												
29...	1515	82	506	8.1	9.5	12.0	5.8	682	10.9	113	<10	
DEC												
19...	1445	82	517	8.0	8.5	11.0	4.0	666	10.7	111	<10	
JAN												
29...	1215	82	548	8.1	8.0	10.0	11	675	11.7	117	26	
FEB												
22...	1230	82	525	8.4	20.0	13.0	14	678	11.0	118	<10	
APR												
02...	1045	1880	103	8.3	16.0	8.5	52	680	11.0	105	31	
17...	0900	87	495	8.3	17.5	14.5	2.5	675	9.5	106	<10	
MAY												
29...	1130	79	505	8.4	32.0	19.5	3.1	--	--	--	10	
JUN												
25...	1030	77	475	8.4	29.5	19.5	2.7	665	8.8	110	<10	
AUG												
06...	1010	75	506	8.3	28.5	21.5	22	675	8.1	104	10	
27...	1205	112	284	8.0	27.5	22.5	70	670	7.0	92	12	
SEP												
24...	1155	77	506	8.3	29.0	21.0	23	675	8.4	107	<10	
DATE		COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
OCT												
18...	K8	180	220	0	50	23	25	0.7	2.0	325	0	
NOV												
29...	K5	51	230	0	54	24	26	0.7	2.0	337	0	
DEC												
19...	K2	26	240	0	56	25	26	0.7	1.9	333	0	
JAN												
29...	K4	K3	230	0	54	24	26	0.7	1.8	325	0	
FEB												
22...	K3	K33	230	0	51	24	26	0.8	1.8	297	8	
APR												
02...	K34	220	51	0	14	3.8	3.7	0.2	1.0	63	0	
17...	K4	K20	230	0	54	23	23	0.7	2.1	<331	M0	
MAY												
29...	K14	K16	220	0	49	24	26	0.8	2.1	<289	M0	
JUN												
25...	K8	K20	220	0	51	23	22	0.6	2.0	<306	M0	
AUG												
06...	48	120	220	0	52	22	22	0.6	1.9	329	0	
27...	K8000	--	140	0	36	11	11	0.4	2.8	177	0	
SEP												
24...	63	140	220	0	52	23	24	0.7	2.1	329	0	

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

M Presence of material verified but not quantified.

GILA RIVER BASIN

09504000 VERDE RIVER NEAR CLARKDALE, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 18...	266	9.1	12	0.20	205	281	0.28	34	--	<0.010	0.200
NOV 29...	276	15	15	0.30	267	302	0.36	6	--	<0.010	0.200
DEC 19...	273	13	15	0.40	262	301	0.36	1	--	<0.010	0.200
JAN 29...	266	8.4	14	<0.10	284	288	0.39	31	0.210	0.010	0.220
FEB 22...	257	9.6	14	<0.20	306	281	0.42	<11	--	0.020	<0.100
APR 02...	52	2.9	2.3	<0.10	74	59	0.10	85	0.017	0.040	0.057
17...	271	7.9	11	<0.10	267	274	0.36	4	--	<0.010	0.120
MAY 29...	237	9.7	15	0.30	267	278	0.36	4	--	0.010	<0.050
JUN 25...	251	9.2	16	0.20	286	274	0.39	6	--	<0.010	<0.050
AUG 06...	270	8.0	15	0.20	267	265	0.36	37	0.072	0.010	*0.082
27...	145	4.3	7.4	0.10	165	160	0.22	423	0.300	0.010	0.310
SEP 24...	270	7.9	14	0.20	283	285	0.38	61	--	<0.010	0.110
DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
OCT 18...	0.030	0.37	0.40	0.60	2.7	0.050	0.03	0.010	17	19	170
NOV 29...	0.010	--	<0.20	--	--	0.030	0.06	0.020	18	18	180
DEC 19...	0.020	--	<0.20	--	--	0.020	--	<0.010	17	16	190
JAN 29...	<0.010	--	<0.20	--	--	0.050	0.06	0.020	19	18	180
FEB 22...	0.020	--	<0.20	--	--	0.020	0.03	0.010	16	17	180
APR 02...	0.050	0.45	0.50	0.56	2.5	0.210	0.31	0.100	2	2	49
17...	<0.010	--	<0.20	--	--	0.030	--	<0.010	16	14	170
MAY 29...	<0.010	--	0.30	--	--	0.020	--	<0.010	18	18	180
JUN 25...	<0.010	--	0.20	--	--	<0.010	--	<0.010	16	17	180
AUG 06...	<0.010	--	0.20	0.28	1.2	0.070	0.09	0.030	16	17	180
27...	<0.010	--	0.70	1.0	4.5	0.550	--	<0.010	9	11	74
SEP 24...	0.030	--	<0.20	--	--	0.040	0.03	0.010	15	14	170

* Value verified.

< Actual value is known to be less than value shown.

09504000 VERDE RIVER NEAR CLARKDALE, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
OCT 18...	160	<1	<1.0	2	3	4	1	730	7	2	<1
NOV 29...	160	<1	<1.0	17	2	4	<1	300	6	1	1
DEC 19...	170	<1	<1.0	2	2	2	1	210	8	<1	<1
JAN 29...	<160	<1	1.0	6	3	5	2	390	5	2	<2
FEB 22...	170	<1	<1.0	1	<1	3	2	560	4	<2	<1
APR 02...	30	<1	<1.0	10	<1	6	2	4500	150	4	<1
17...	150	<1	<1.0	6	2	2	<1	120	6	1	<1
MAY 29...	170	<1	<1.0	4	2	3	<1	160	7	2	<1
JUN 25...	160	<1	<1.0	2	<1	2	1	100	5	2	<1
AUG 06...	160	<1	<1.0	5	<1	5	<1	700	4	--	<1
27...	80	1	1.0	*18	<1	*23	3	*11000	51	*31	<1
SEP 24...	170	<1	<1.0	*22	<1	6	<1	*760	7	3	<1

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 18...	20	9	--	<1	<1	<1.0	<10	5	60	13
NOV 29...	20	6	<0.10	<1	<1	<1.0	<10	<3	20	4.5
DEC 19...	20	7	<0.10	<1	<1	<1.0	10	4	37	8.2
JAN 29...	20	8	0.10	<1	<1	<1.0	30	5	51	11
FEB 22...	20	6	<0.10	<1	<1	<1.0	*50	5	36	8.0
APR 02...	110	5	<0.10	<1	<1	<1.0	10	7	173	878
17...	10	6	<0.10	<1	<1	<1.0	<10	4	11	2.6
MAY 29...	10	4	<0.10	<1	<1	<1.0	<10	<3	32	6.8
JUN 25...	<10	4	<0.10	<1	<1	<1.0	<10	9	11	2.3
AUG 06...	40	8	<0.10	<1	<1	<1.0	<10	<3	49	9.9
27...	*420	1	<0.10	<1	<1	<1.0	80	5	495	150
SEP 24...	40	7	<0.10	<1	<1	<1.0	<10	<3	88	18

* Value verified.

< Actual value is known to be less than value shown.

09504430 OAK CREEK AT SEDONA, AZ

LOCATION.--Lat 34°51'42", long 111°45'40", in NE¼NE¼NE¼ sec.18, T.17 N., R.6 E., Coconino County, Hydrologic Unit 15060202, on left bank 290 ft downstream from State Highway 179 bridge in Sedona, 28 mi southwest of Flagstaff, and 35.1 mi upstream from mouth.

DRAINAGE AREA.--233 mi².

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 4,169.20 ft above National Geodetic Vertical Datum of 1929 (Arizona Department of Transportation bench mark).

REMARKS.--Records good except for estimated daily discharges, which are fair. Many diversions above and below station for irrigation.

AVERAGE DISCHARGE.--10 years, 81.4 ft³/s, 58,970 acre-ft/yr; median of yearly mean discharges, 78.0 ft³/s, 56,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,700 ft³/s Mar. 12, 1982, gage height, 15.64 ft, from outside floodmark, from rating curve extended above 5,000 ft³/s on the basis of slope-conveyance study; minimum daily, 19 ft³/s June 12, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1700	*5,240	*9.32
Apr. 2	2145	1,550	6.32

Minimum daily discharge, 27 ft³/s Oct. 3-9, 25, 26, 31, Nov. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	27	30	30	32	1800	851	35	32	29	29	30
2	28	28	30	30	32	1340	912	34	31	29	29	30
3	27	28	30	31	32	735	938	33	30	28	30	29
4	27	28	31	213	31	716	916	33	30	28	29	29
5	27	29	30	297	32	1400	905	32	30	28	29	30
6	27	29	30	244	31	1010	863	33	30	29	29	30
7	27	28	31	166	31	481	915	33	29	29	29	30
8	27	29	31	114	32	268	572	33	29	29	29	29
9	27	29	31	83	31	229	282	32	29	29	29	29
10	28	29	31	66	32	e200	182	32	29	29	30	29
11	28	29	31	60	32	e180	140	32	29	28	31	29
12	28	29	31	47	32	e140	93	32	30	29	30	29
13	28	29	33	40	31	e110	71	32	30	28	30	29
14	28	29	30	37	32	e100	61	32	29	28	29	29
15	28	29	30	35	32	69	56	32	29	29	29	30
16	28	30	31	34	32	60	54	32	29	29	29	30
17	28	30	33	33	32	48	54	31	29	29	29	30
18	28	30	31	32	31	94	52	31	28	28	28	30
19	30	30	30	31	31	149	49	30	28	28	29	40
20	34	33	31	30	30	105	47	30	29	32	29	32
21	28	31	30	30	29	110	44	30	29	31	28	31
22	28	29	30	30	29	91	42	30	29	30	29	35
23	28	30	30	30	29	97	41	30	29	29	29	32
24	28	30	29	30	29	207	41	30	28	29	29	31
25	27	30	30	30	29	282	39	30	29	29	29	31
26	27	31	30	30	28	256	38	29	28	29	29	31
27	28	31	30	30	29	144	37	30	28	35	29	34
28	28	30	31	30	78	153	37	30	29	31	30	32
29	28	30	32	29	---	216	36	30	29	29	29	32
30	28	30	30	30	---	364	35	29	29	30	29	32
31	27	---	30	31	---	534	---	30	---	30	29	---
TOTAL	868	884	948	1983	911	11688	8403	972	876	907	904	924
MEAN	28.0	29.5	30.6	64.0	32.5	377	280	31.4	29.2	29.3	29.2	30.8
MAX	34	33	33	297	78	1800	938	35	32	35	31	40
MIN	27	27	29	29	28	48	35	29	28	28	28	29
AC-FT	1720	1750	1880	3930	1810	23180	16670	1930	1740	1800	1790	1830
CAL YR 1990	TOTAL	12759	MEAN	35.0	MAX	289	MIN	23	AC-FT	25310		
WTR YR 1991	TOTAL	30268	MEAN	82.9	MAX	1800	MIN	27	AC-FT	60040		

e Estimated

GILA RIVER BASIN

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09504440 OAK CREEK AT RED ROCK CROSSING, NEAR SEDONA, AZ

LOCATION.--Lat 34°49'28", long 111°48'20", NE&SW¼ sec.26, T.17 N., R.5 E., Yavapai County, Hydrologic Unit 15060202 in Coconino National Forest, at Red Rock (Baldwins) crossing, 5.0 mi downstream from Sedona, and 31 mi upstream from mouth.

DRAINAGE AREA.--252 mi².

PERIOD OF RECORD.--October 1978 to August 1983, October 1986 to current year.

REMARKS.--Precise concentrations for dissolved carbonate and bicarbonate unavailable for May, June, and August samples due to insufficient data.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	
OCT 17...	1550	22	304	8.2	24.5	15.5	2.1	667	8.7	100	<10	
NOV 28...	1700	24	305	8.1	10.0	7.0	1.8	674	10.2	95	<10	
DEC 18...	1655	27	297	7.9	4.0	6.0	1.0	662	10.5	97	<10	
JAN 30...	1300	26	337	8.0	9.5	3.5	1.0	670	11.7	100	28	
FEB 21...	1300	29	330	8.6	22.5	10.5	1.0	672	10.4	106	10	
MAR 27...	1315	137	178	8.4	8.0	5.0	15	661	12.8	116	21	
APR 18...	1155	42	283	8.5	18.0	13.0	1.1	663	9.1	100	11	
MAY 30...	1130	23	310	8.6	25.5	18.0	1.5	660	8.6	105	17	
JUN 26...	0920	18	305	8.5	23.0	17.0	1.9	665	8.8	105	<10	
AUG 07...	1035	17	314	8.4	27.0	19.5	2.0	664	8.3	104	<10	
28...	1100	20	294	8.4	25.0	21.0	1.5	660	8.4	109	*48	
SEP 25...	1115	18	301	8.3	33.5	19.0	2.6	665	8.2	102	<10	
DATE		COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
OCT 17...	K27	160	160	0	35	17	5.0	0.2	0.90	209	0	
NOV 28...	K6	160	160	0	36	17	4.9	0.2	0.90	209	0	
DEC 18...	K5	46	160	0	36	17	4.9	0.2	0.90	205	0	
JAN 30...	K2	K9	160	0	35	17	5.1	0.2	0.90	199	0	
FEB 21...	K1	K28	160	0	35	17	5.2	0.2	0.80	184	7	
MAR 27...	K14	52	87	5	20	9.0	4.0	0.2	0.80	92	4	
APR 18...	K2	K24	130	0	29	14	4.4	0.2	0.90	153	6	
MAY 30...	K6	23	160	0	35	18	5.7	0.2	1.0	<212	M0	
JUN 26...	K15	35	160	0	36	17	4.9	0.2	0.90	<200	M0	
AUG 07...	--	74	150	0	34	16	4.8	0.2	1.0	<209	M0	
28...	46	--	160	0	35	17	4.9	0.2	1.0	<203	M0	
SEP 25...	170	240	160	0	36	17	5.3	0.2	1.0	210		

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

M Presence of material verified but not quantified.

09504440 OAK CREEK AT RED ROCK CROSSING, NEAR SEDONA, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT											
17...	171	1.4	5.1	<0.10	168	167	0.23	<1	--	<0.010	<0.100
NOV											
28...	171	<1.0	4.5	0.10	175	--	--	<1	--	<0.010	<0.100
DEC											
18...	168	1.6	3.9	0.20	160	166	0.22	<1	--	<0.010	<0.100
JAN											
30...	163	1.7	4.8	<0.10	165	163	0.22	3	--	<0.010	<0.050
FEB											
21...	163	1.4	4.3	<0.10	164	161	0.22	1	0.160	0.020	0.180
MAR											
27...	81	*3.3	*5.6	<0.10	105	92	0.14	5	--	0.010	<0.050
APR											
18...	136	1.3	3.5	<0.10	139	135	0.19	1	--	<0.010	<0.050
MAY											
30...	174	1.4	4.4	0.10	165	165	0.22	<1	--	0.010	<0.050
JUN											
26...	164	1.5	4.7	<0.10	172	165	0.23	6	--	<0.010	<0.050
AUG											
07...	171	1.7	4.9	0.10	167	157	0.23	4	--	<0.010	<0.050
28...	166	1.5	4.8	<0.10	165	163	0.22	2	--	<0.010	<0.050
SEP											
25...	172	1.7	4.5	<0.10	173	169	0.24	11	--	<0.010	<0.050
DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)
OCT											
17...	0.020	0.28	0.30	0.030	--	<0.010	--	6	6	210	--
NOV											
28...	0.010	--	<0.20	0.030	0.03	0.010	<1	4	5	210	<10
DEC											
18...	0.020	--	<0.20	<0.010	--	<0.010	--	4	4	220	--
JAN											
30...	<0.010	--	<0.20	0.020	--	<0.010	<1	4	4	210	<10
FEB											
21...	0.020	--	<0.20	0.010	--	<0.010	--	5	4	210	--
MAR											
27...	<0.010	--	0.20	0.040	0.03	0.010	2	2	2	*95	<10
APR											
18...	0.010	--	<0.20	0.040	0.06	0.020	--	4	4	150	--
MAY											
30...	0.010	0.39	0.40	0.020	--	<0.010	<1	5	5	220	<10
JUN											
26...	<0.010	--	0.30	0.010	--	<0.010	--	5	5	210	--
AUG											
07...	<0.010	--	0.30	0.020	--	<0.010	<1	5	6	200	<10
28...	<0.010	--	<0.20	0.010	--	<0.010	--	5	5	210	--
SEP											
25...	0.040	0.16	0.20	0.040	0.03	0.010	<1	5	6	190	<10

* Value verified.

< Actual value is known to be less than value shown.

09504440 OAK CREEK AT RED ROCK CROSSING, NEAR SEDONA, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
OCT 17...	10	<1	<1.0	1	2	5	<1	140	31	1	<1
NOV 28...	<10	1	<1.0	10	1	2	<1	130	66	10	1
DEC 18...	10	<1	<1.0	2	1	2	1	90	53	2	<1
JAN 30...	<10	<1	1.0	3	2	3	1	140	*19	1	<1
FEB 21...	10	<1	<1.0	2	1	1	1	100	18	<1	<1
MAR 27...	<10	<1	<1.0	2	<1	2	1	740	140	1	<1
APR 18...	<10	<1	<1.0	4	2	3	<1	120	16	1	<1
MAY 30...	10	<1	<1.0	2	1	2	<1	110	23	1	1
JUN 26...	14	<1	1.0	<1	<1	1	1	80	27	1	<1
AUG 07...	<10	<1	<1.0	2	<1	4	<1	100	15	3	<1
SEP 28...	10	<1	<1.0	<1	2	2	<1	170	27	1	<1
SEP 25...	10	<1	<1.0	3	<1	3	<1	220	24	2	<1

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 17...	<10	11	<0.10	--	<1	<1	<1.0	<10	4	5	0.30
NOV 28...	10	12	<0.10	3	<1	<1	<1.0	<10	<3	6	0.39
DEC 18...	20	10	<0.10	--	<1	<1	<1.0	40	3	5	0.36
JAN 30...	10	9	0.10	1	<1	<1	<1.0	<10	5	16	1.1
FEB 21...	10	7	<0.10	--	<1	<1	1.0	30	10	1	0.08
MAR 27...	20	6	<0.10	1	<1	<1	<1.0	<10	10	8	3.0
APR 18...	10	6	<0.10	--	<1	<1	<1.0	<10	5	4	0.45
MAY 30...	10	7	<0.10	1	<1	<1	<1.0	<10	9	5	0.30
JUN 26...	<10	7	<0.10	--	<1	<1	<1.0	<10	4	11	0.53
AUG 07...	20	9	<0.10	3	<1	<1	<1.0	<10	5	7	0.32
SEP 28...	<10	8	<0.10	--	<1	<1	<1.0	<10	3	5	0.27
SEP 25...	30	13	<0.10	3	<1	<1	<1.0	10	5	26	1.3

* Value verified.

< Actual value is known to be less than value shown.

09504500 OAK CREEK NEAR CORNVILLE, AZ

LOCATION.--Lat 34°45'52", long 111°53'25", in NW¼SW¼ sec.23, T.16 N., R.4 E., Yavapai County, Hydrologic Unit 15060202, on right bank 250 ft downstream from county highway bridge, 0.2 mi upstream from Page Springs, 4 mi northeast of Cornville, and 15 mi upstream from mouth.

DRAINAGE AREA.--355 mi².

PERIOD OF RECORD.--July 1940 to September 1945, April 1948 to current year.

REVISED RECORDS.--WSP 1149: 1948(M). WRD Ariz. 1974: 1973. WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder and crest stage gage. Elevation of gage is 3,470 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to March 10, 1981, at site 250 ft upstream at same datum.

REMARKS.--Records good. Numerous diversions above and below station for irrigation.

AVERAGE DISCHARGE.--48 years, 87.4 ft³/s, 63,320 acre-ft/yr; median of yearly mean discharges, 75 ft³/s, 54,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft³/s Feb. 19, 1980, gage height, 16.30 ft; maximum gage height, 16.48 ft, Sept. 5, 1970; minimum discharge, 6 ft³/s July 27, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1885, 23 ft in March 1938, from floodmarks (upstream side of bridge).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2215	*6,970	*9.92

Minimum daily discharge, 15 ft³/s June 20, July 4, 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	31	32	32	34	1750	716	27	25	16	22	23
2	27	38	34	32	35	1570	884	26	28	16	23	24
3	23	55	34	32	35	626	994	27	26	16	21	22
4	22	50	34	78	34	504	950	27	23	15	24	23
5	22	38	34	423	34	956	984	27	21	17	24	20
6	22	33	35	363	35	898	756	25	20	18	21	22
7	22	32	35	204	35	469	937	25	20	17	20	25
8	22	31	35	121	36	261	658	25	19	44	21	23
9	23	31	34	89	37	184	336	25	20	21	20	21
10	23	30	33	74	36	202	211	25	20	19	19	20
11	24	29	33	66	35	172	158	24	20	18	24	19
12	24	29	33	56	35	141	121	26	21	17	23	20
13	24	31	35	50	35	110	94	26	20	19	23	19
14	24	31	34	44	35	100	78	25	18	20	24	19
15	24	32	32	40	34	98	69	26	19	20	23	21
16	23	32	33	39	35	89	64	26	18	19	21	21
17	23	32	36	38	35	70	60	24	18	17	21	22
18	22	32	35	37	34	72	47	23	18	15	22	20
19	22	31	33	36	33	144	43	23	16	15	22	20
20	25	30	33	36	34	118	41	24	15	16	20	49
21	26	35	33	35	33	142	39	23	16	22	19	28
22	26	33	33	35	32	131	37	24	16	20	19	23
23	26	32	e34	35	34	113	33	23	16	18	20	28
24	26	32	e35	35	34	156	33	23	16	17	20	23
25	27	32	e37	34	34	322	32	24	17	18	23	21
26	30	32	e35	34	32	393	31	23	16	18	24	21
27	34	34	e32	34	31	216	30	22	18	19	23	20
28	30	35	32	35	68	205	29	20	16	23	22	23
29	30	33	34	34	---	215	30	19	16	23	21	22
30	30	31	34	34	---	331	27	21	16	21	22	23
31	30	---	32	34	---	432	---	22	---	22	21	---
TOTAL	778	1007	1048	2269	994	11190	8522	750	568	596	672	685
MEAN	25.1	33.6	33.8	73.2	35.5	361	284	24.2	18.9	19.2	21.7	22.8
MAX	34	55	37	423	68	1750	994	27	28	44	24	49
MIN	22	29	32	32	31	70	27	19	15	15	19	19
AC-FT	1540	2000	2080	4500	1970	22200	16900	1490	1130	1180	1330	1360

CAL YR	1990	TOTAL	11932	MEAN	32.7	MAX	337	MIN	14	AC-FT	23670
WTR YR	1991	TOTAL	29079	MEAN	79.7	MAX	1750	MIN	15	AC-FT	57680

e Estimated

09505220 ROCKY GULCH NEAR RIMROCK, AZ

LOCATION.--Lat 34°44'49, long 111°29'38", in SE¼NW¼ sec.27, T.16 N., R.8 E., Coconino County, Hydrologic Unit 15060202, in Coconino National Forest, on right bank, on headwaters of Rocky Gulch, and 7 mi northwest of Rimrock.

DRAINAGE AREA.--1.40 mi².

PERIOD OF RECORD.--October 1985 to current year. Prior to October 1985, station operated by the U.S. Forest Service (records unpublished).

GAGE.--Water-stage recorder and concrete flume. Elevation of gage is 6,750 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--6 years, 0.32 ft³/s, 232 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48 ft³/s Apr. 25, 1988, gage height, 2.67 ft; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since October 1959, 1,550 ft³/s Sept. 5, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30 ft³/s, Apr. 6, gage height, 2.34 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.03	.08	9.2	.02	e.00	e.00	.00	.00
2	.00	.00	.00	.00	.08	.41	10	e.00	e.00	e.00	.00	.00
3	.00	.00	.00	.00	.11	.96	12	e.00	e.00	e.00	.00	.00
4	.00	.00	.00	1.4	.04	3.3	13	e.00	e.00	e.00	.00	.00
5	.00	.00	.00	1.3	.05	9.5	13	e.00	e.00	e.00	.00	.00
6	.00	.00	.00	1.1	.00	7.6	14	e.00	e.00	e.00	.00	.00
7	.00	.00	.00	.80	.00	4.0	9.3	e.00	e.00	e.00	.00	.00
8	.00	.00	.00	.58	.00	3.3	4.8	e.00	e.00	e.00	.00	.00
9	.00	.00	.00	.43	.01	3.9	3.1	e.00	e.00	e.00	.00	.00
10	.00	.00	.00	.36	.00	3.7	2.4	e.00	e.00	e.00	.00	.00
11	.00	.00	.00	.27	.00	3.0	1.6	e.00	e.00	e.00	.00	.00
12	.00	.00	.00	.15	.00	2.0	.88	e.00	e.00	e.00	.00	.00
13	.00	.00	.00	.21	.00	1.7	.62	e.00	e.00	e.00	.00	.00
14	.00	.00	.00	.28	.00	1.3	.47	e.00	e.00	e.00	.00	.00
15	.00	.00	.00	.14	.01	.77	.44	e.00	e.00	e.00	.00	.00
16	.00	.00	.00	.10	.01	.64	.40	e.00	e.00	e.00	.00	.00
17	.00	.00	.00	.06	.01	.72	.31	e.00	e.00	.00	.00	.00
18	.00	.00	.00	.02	.01	2.2	.26	e.00	e.00	.00	.00	.00
19	.00	.00	.00	.02	.01	2.4	.17	e.00	e.00	.00	.00	.00
20	.00	.00	.00	.04	.01	1.3	.12	e.00	e.00	.01	.00	.00
21	.00	.00	.00	.04	.01	1.2	.11	e.00	e.00	.00	.00	.00
22	.00	.00	.00	.06	.00	.84	.09	e.00	e.00	.00	.00	.00
23	.00	.00	.00	.19	.00	1.0	.07	e.00	e.00	.00	.00	.00
24	.00	.00	.00	.03	.00	2.4	.07	e.00	e.00	.00	.00	.00
25	.00	.00	.00	.09	.00	3.2	.05	e.00	e.00	.00	.00	.00
26	.00	.00	.00	.07	.00	2.3	.03	e.00	e.00	.00	.00	.00
27	.00	.00	.00	.02	.00	1.4	.03	e.00	e.00	.00	.00	.00
28	.00	.00	.00	.03	.01	1.2	.03	e.00	e.00	.00	.00	.00
29	.00	.00	.00	.06	---	1.9	.03	e.00	e.00	.00	.00	.00
30	.00	.00	.00	.16	---	3.0	.02	e.00	e.00	.00	.00	.00
31	.00	---	.00	.14	---	5.2	---	e.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	8.15	0.40	76.42	96.60	0.02	0.00	0.01	0.00	0.00
MEAN	.0000	.0000	.0000	.26	.014	2.47	3.22	.001	.0000	.0000	.0000	.0000
MAX	.00	.00	.00	1.4	.11	9.5	14	.02	.00	.01	.00	.00
MIN	.00	.00	.00	.00	.00	.08	.02	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	16	.8	152	192	.04	.00	.02	.00	.00

CAL YR 1990 TOTAL 43.11 MEAN .12 MAX 6.1 MIN .00 AC-FT 86
WTR YR 1991 TOTAL 181.60 MEAN .50 MAX 14 MIN .00 AC-FT 360

e Estimated

09505260 MONTEZUMA WELL OUTLET NEAR RIMROCK, AZ

LOCATION.--Lat 34°38'53", long 111°45'02", in NE¼, sec.31, T.15 N., R.6 E., Yavapai County, Hydrologic Unit 15060202, in Montezuma Castle National Monument, on left bank 140 ft downstream from outlet of Montezuma Well, and 2.5 mi northeast of Rimrock.

PERIOD OF RECORD.--1948-59, 1961, 1976 (three or less discharge measurements each year); April 1977 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 3,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--14 years (water years 1978-91), 2.17 ft³/s, 1,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3.2 ft³/s Apr. 4, 8-20, July 17-23, 26-31, Aug. 6, 7, 13-16, 21, 1979; minimum daily, 0.90 ft³/s Oct. 4, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3.1 ft³/s Feb. 22-Mar. 1; minimum daily, 1.3 ft³/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.8	2.0	e2.0	2.0	3.1	2.2	e2.1	2.9	2.5	2.4	e1.7
2	2.3	1.9	2.0	e2.0	1.9	3.0	2.2	e2.1	2.9	2.5	2.4	e1.7
3	2.2	1.9	2.0	e2.0	1.9	2.8	2.3	e2.1	2.8	e2.5	2.4	e1.7
4	2.3	1.9	1.9	e2.0	1.9	2.8	2.2	e2.1	2.8	e2.4	2.4	e1.7
5	2.2	2.0	2.0	e2.0	1.9	2.8	2.2	e2.1	2.6	e2.4	2.4	1.7
6	2.2	2.0	2.0	e2.0	2.0	2.9	2.2	e2.1	2.5	2.3	2.3	1.7
7	2.2	2.0	e2.0	e2.0	2.0	2.9	2.1	e2.1	2.5	2.4	2.3	1.7
8	2.1	2.0	e2.0	e2.0	1.9	2.8	2.1	e2.2	2.6	2.3	2.3	1.7
9	2.1	2.0	e2.0	e2.0	1.9	2.7	2.0	e2.2	2.6	e2.3	2.3	1.7
10	2.1	1.9	e2.0	e2.0	1.9	2.8	2.0	e2.2	2.5	e2.3	2.3	1.7
11	2.0	1.9	e2.0	e2.0	1.9	2.8	1.9	e2.2	2.5	e2.4	2.1	1.7
12	2.0	1.9	e2.0	e2.0	1.9	2.5	2.0	e2.3	e2.5	e2.4	e2.1	1.7
13	2.0	1.7	e2.0	e2.0	1.9	2.5	2.3	e2.3	e2.5	e2.5	e2.2	1.7
14	2.0	1.7	e2.0	e2.0	2.0	2.1	2.3	e2.3	e2.5	e2.5	e2.3	1.7
15	2.0	1.7	e2.0	e1.9	2.0	1.9	2.1	e2.3	e2.5	2.5	e2.2	1.7
16	2.0	1.9	e2.0	e1.9	2.0	1.8	2.1	e2.3	e2.5	2.5	e2.1	1.6
17	2.0	2.0	e2.0	e1.9	2.0	2.0	2.0	e2.3	e2.5	2.6	e2.1	e1.6
18	1.9	2.0	e2.0	e1.9	2.0	2.0	2.0	e2.3	e2.5	e2.5	e2.1	e1.6
19	1.9	2.0	e2.0	e1.9	2.0	2.0	2.1	e2.3	2.5	e2.4	e2.1	e1.6
20	1.9	2.0	e2.0	e1.9	2.0	2.0	2.1	e2.3	2.5	e2.5	e2.1	e1.6
21	1.8	2.0	e2.0	e1.9	2.4	2.0	2.0	e2.3	2.5	2.6	e2.1	1.6
22	1.8	2.0	e2.0	e1.9	3.1	2.0	e2.1	e2.4	2.5	2.6	e2.1	1.6
23	1.9	2.0	e2.0	e1.9	3.1	1.9	e2.1	e2.4	2.5	2.6	e2.0	1.6
24	1.9	1.9	e2.0	e1.9	3.1	1.9	e2.1	e2.4	2.5	2.6	e2.0	1.6
25	1.7	1.8	e2.0	e1.9	3.1	2.0	e2.1	e2.5	2.5	2.6	e2.0	1.6
26	1.7	1.7	e2.0	e1.9	3.1	2.0	e2.1	e2.5	2.5	2.5	e1.9	1.6
27	1.8	1.9	e2.0	e1.9	3.1	2.0	e2.1	e2.6	2.5	2.5	e1.9	1.6
28	1.8	2.0	e2.0	e1.9	3.1	2.0	e2.1	e2.6	2.5	2.5	e1.7	1.5
29	1.8	2.0	e2.0	e1.9	---	2.1	e2.1	e2.7	2.5	2.5	e1.7	1.4
30	1.5	2.0	e2.0	e1.9	---	2.2	e2.1	e2.8	2.5	2.5	e1.7	1.3
31	1.8	---	e2.0	e1.9	---	2.1	---	2.8	---	2.5	e1.7	---
TOTAL	61.1	57.5	61.9	60.3	63.1	72.4	63.3	72.2	76.7	76.7	65.7	48.9
MEAN	1.97	1.92	2.00	1.95	2.25	2.34	2.11	2.33	2.56	2.47	2.12	1.63
MAX	2.3	2.0	2.0	2.0	3.1	3.1	2.3	2.8	2.9	2.6	2.4	1.7
MIN	1.5	1.7	1.9	1.9	1.9	1.8	1.9	2.1	2.5	2.3	1.7	1.3
AC-FT	121	114	123	120	125	144	126	143	152	152	130	97
CAL YR 1990	TOTAL	748.5	MEAN	2.05	MAX	2.5	MIN	1.5	AC-FT	1480		
WTR YR 1991	TOTAL	779.8	MEAN	2.14	MAX	3.1	MIN	1.3	AC-FT	1550		

e Estimated

09505350 DRY BEAVER CREEK NEAR RIMROCK, AZ

LOCATION.--Lat 34°43'43", long 111°46'30", in NE¼NW¼ sec.1, T.15 N., R.5 E., Yavapai County, Hydrologic Unit 15060202, in Coconino National Forest, on left upstream abutment of abandoned highway bridge, 1,000 ft upstream from present State Highway 179, and 5.5 mi north of Rimrock.

DRAINAGE AREA.--142 mi².

PERIOD OF RECORD.--October 1960 to current year.

REVISED RECORDS.--WRD Ariz. 1969: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,694.38 ft above National Geodetic Vertical Datum of 1929 (Arizona Highway Department bench mark).

REMARKS.--Records good. No known diversions above station.

AVERAGE DISCHARGE.--31 years, 45.2 ft³/s, 32,750 acre-ft/yr; median of yearly mean discharges, 36 ft³/s, 26,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft³/s Sept. 5, 1970, gage height, 14.35 ft, from rating curve extended above 6,000 ft³/s on basis of computation of peak flow over weir at gage height 9.07 ft and 9.69 ft and slope-area measurement at gage height 14.35 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 4	1845	1,360	5.18
Mar. 1	1915	*6,180	*8.23

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	e.00	1800	629	.21	.00	.00	.00	.00
2	.00	.00	.00	.00	e.00	1120	637	.07	.00	.00	.00	.00
3	.00	.00	.00	.00	e.00	523	653	.04	.00	.00	.00	.00
4	.00	.00	.00	356	e.00	558	646	.03	.00	.00	.00	.00
5	.00	.00	.00	486	e.00	895	612	.03	.00	.00	.00	.00
6	.00	.00	.00	364	e.00	595	640	.02	.00	.00	.00	.00
7	.00	.00	.00	189	.00	318	664	.02	.00	.00	.00	.00
8	.00	.00	.00	118	.00	183	451	.02	.00	.00	.00	.00
9	.00	.00	.00	73	.00	174	271	.02	.00	.00	.00	.00
10	.00	.00	.00	50	.00	197	214	.01	.00	.00	.00	.00
11	.00	.00	.00	32	.00	149	187	.01	.00	.00	.00	.00
12	.00	.00	.00	21	.00	78	95	.01	.00	.00	.00	.00
13	.00	.00	.00	14	.00	72	58	.01	.00	.00	.00	.00
14	.00	.00	.00	13	.00	65	42	.01	.00	.00	.00	.00
15	.00	.00	.00	13	.00	33	42	.01	.00	.00	.00	.00
16	.00	.00	.00	6.9	19	29	56	.01	.00	.00	.00	.00
17	.00	.00	.00	5.0	25	17	55	.00	.00	.00	.00	.00
18	.00	.00	.00	3.2	25	115	46	.00	.00	.00	.00	.00
19	.00	.00	.00	1.5	17	220	35	.00	.00	.00	.00	.00
20	.00	.00	.00	.77	10	98	27	.00	.00	.00	.00	.00
21	.00	.00	.00	.25	6.1	105	22	.00	.00	.00	.00	.00
22	.00	.00	.00	.11	4.0	97	18	.00	.00	.00	.00	.00
23	.00	.00	.00	.06	3.0	204	14	.00	.00	.00	.00	.00
24	.00	.00	.00	.04	2.8	263	10	.00	.00	.00	.00	.00
25	.00	.00	.00	.03	3.4	298	6.0	.00	.00	.00	.00	.00
26	.00	.00	.00	e.00	3.8	239	4.1	.00	.00	.00	.00	.00
27	.00	.00	.00	e.00	3.5	123	3.0	.00	.00	.00	.00	.00
28	.00	.00	.00	e.00	12	186	2.2	.00	.00	.00	.00	.00
29	.00	.00	.00	e.00	---	332	1.4	.00	.00	.00	.00	.00
30	.00	.00	.00	e.00	---	317	.60	.00	.00	.00	.00	.00
31	.00	---	.00	e.00	---	410	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	1746.86	134.60	9813	6141.30	0.53	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	56.4	4.81	317	205	.017	.000	.000	.000	.000
MAX	.00	.00	.00	486	25	1800	664	.21	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	17	.60	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	3460	267	19460	12180	1.1	.00	.00	.00	.00
CAL YR 1990	TOTAL	2953.58	MEAN	8.09	MAX	373	MIN	.00	AC-FT	5860		
WTR YR 1991	TOTAL	17836.29	MEAN	48.9	MAX	1800	MIN	.00	AC-FT	35380		

e Estimated

09505800 WEST CLEAR CREEK NEAR CAMP VERDE, AZ

LOCATION.--Lat 34°32'19", long 111°41'36", in NW¼NW¼ sec.11, T.13 N., R.6 E., Yavapai County, Hydrologic Unit 15060203, in Coconino National Forest, on left bank at Bull Pen Ranch, 9 mi east of Camp Verde, and 11 mi upstream from mouth.

DRAINAGE AREA.--241 mi².

PERIOD OF RECORD.--December 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,630 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--26 years, 65.3 ft³/s, 47,310 acre-ft/yr; median of yearly mean discharges, 51 ft³/s, 36,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s Dec. 18, 1978, gage height, 11.6 ft, from floodmarks and rating curve extended above 2,700 ft³/s on basis of slope-area measurements at gage heights 8.3 ft and 10.15 ft; minimum daily, 11 ft³/s Aug. 1, 22, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1945	*6,070	*8.31
Apr. 2	0315	1,640	6.41

Minimum daily discharge, 14 ft³/s Aug. 7, 20-23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	17	18	18	2100	802	25	18	16	17	17
2	18	18	17	17	19	1250	918	25	18	16	16	16
3	17	18	17	18	18	544	855	24	18	15	15	16
4	17	18	17	85	18	532	779	24	17	15	15	16
5	17	17	17	148	18	1110	666	23	17	16	15	17
6	16	16	17	183	18	1510	563	22	17	17	15	18
7	17	16	17	72	18	699	551	22	17	17	14	17
8	16	16	17	41	19	329	388	21	16	17	15	16
9	16	16	17	31	19	213	239	21	16	23	15	16
10	16	16	17	26	19	238	171	21	17	19	15	16
11	16	15	17	24	18	216	143	21	17	17	18	15
12	15	15	17	22	18	155	117	20	17	16	18	15
13	15	16	18	21	18	103	87	20	17	16	16	15
14	15	16	18	20	18	91	66	20	17	16	16	15
15	15	16	18	20	18	79	57	20	17	16	15	15
16	15	16	19	19	18	60	51	20	16	15	15	15
17	15	16	19	19	19	45	49	19	16	15	15	15
18	15	16	19	19	19	55	47	19	16	15	15	15
19	15	16	18	19	18	227	45	19	16	15	15	15
20	16	17	18	19	18	172	42	18	16	20	14	16
21	16	17	18	19	18	169	39	18	16	18	14	16
22	15	18	18	19	18	129	38	18	16	17	14	16
23	15	17	18	19	18	263	37	18	16	17	14	16
24	15	17	19	18	18	528	35	18	16	16	15	16
25	15	16	19	18	18	506	33	17	16	16	17	15
26	15	19	18	18	18	457	32	17	16	16	16	15
27	15	19	18	18	18	189	30	17	16	16	18	15
28	15	18	18	18	38	220	29	17	16	16	17	16
29	16	17	19	18	---	529	28	17	16	16	16	16
30	15	17	19	18	---	500	26	17	16	17	15	16
31	16	---	18	18	---	535	---	17	---	16	15	---
TOTAL	487	501	553	1042	530	13753	6963	615	496	513	480	473
MEAN	15.7	16.7	17.8	33.6	18.9	444	232	19.8	16.5	16.5	15.5	15.8
MAX	18	19	19	183	38	2100	918	25	18	23	18	18
MIN	15	15	17	17	18	45	26	17	16	15	14	15
AC-FT	966	994	1100	2070	1050	27280	13810	1220	984	1020	952	938
CAL YR	1990	TOTAL	6496	MEAN	17.8	MAX	58	MIN	14	AC-FT	12880	
WTR YR	1991	TOTAL	26406	MEAN	72.3	MAX	2100	MIN	14	AC-FT	52380	

09506000 VERDE RIVER NEAR CAMP VERDE, AZ

LOCATION.--Lat 34°26'54", long 111°47'21", in NW¼ sec. 11, T.12 N., R.5 E. (unsurveyed), Yavapai County, Hydrologic Unit 15060303, in Prescott National Forest, on right bank 600 ft upstream from Chasm Creek, 9.0 mi southeast of Camp Verde, and 9.7 mi downstream from West Clear Creek.

DRAINAGE AREA.--5,009 mi², of which 365 mi² is noncontributing, including 357 mi² in Aubrey Valley Playa, a closed basin.

PERIOD OF RECORD.--April 1934 to September 1945, October 1988 to current year.

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,874.11 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several diversions above station for irrigation.

AVERAGE DISCHARGE.--14 years (water years 1935-1945, 1989-91) 419 ft³/s, 303,600 acre-ft/yr; median of yearly mean discharges, 360 ft³/s, 261,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97,000 ft³/s Mar. 3, 1938, gage-height, 26.1 ft; minimum daily, 40 ft³/s June 30, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*) from rating curve extended above 7,200 ft³/s on basis of slope-conveyance study:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	0145	*14,300	*14.66

Minimum daily discharge, 45 ft³/s July 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	173	198	197	e207	4020	3800	141	102	61	59	133
2	352	189	197	193	e208	9010	4690	131	129	56	92	147
3	221	195	197	193	e208	5220	4410	113	141	49	91	161
4	179	202	197	200	e207	3060	4210	110	136	45	84	157
5	159	210	196	1080	e205	4140	3840	105	120	51	82	141
6	152	213	197	1330	196	6150	3320	102	111	56	76	135
7	156	213	196	981	200	3420	3390	95	108	54	75	185
8	146	216	196	714	199	1670	2780	84	105	59	64	165
9	144	215	197	555	199	1080	1740	93	100	135	104	174
10	141	216	197	460	197	1030	1180	92	92	134	63	150
11	136	221	197	391	195	971	946	86	94	99	80	134
12	133	222	197	350	198	793	727	97	101	88	109	127
13	135	221	201	317	192	593	537	98	94	82	132	105
14	138	228	202	e273	189	512	436	90	84	80	126	91
15	136	232	202	e259	183	466	364	75	81	73	105	93
16	140	233	202	e250	184	419	309	74	76	73	85	96
17	134	238	202	e246	173	378	288	75	83	76	81	91
18	121	239	202	e239	166	342	261	69	84	69	87	86
19	124	238	202	e233	161	711	234	72	77	65	99	79
20	149	242	202	e230	154	754	219	74	67	68	88	92
21	141	236	205	e226	148	792	217	80	66	88	74	99
22	152	232	202	e224	137	698	198	79	56	115	71	107
23	163	226	202	e223	136	709	187	82	66	119	71	98
24	165	217	201	e219	144	1240	177	83	72	105	67	123
25	161	212	198	e218	162	1990	162	89	77	94	67	106
26	154	216	197	e215	151	2050	167	90	74	79	130	96
27	152	209	197	e214	148	1490	162	82	62	67	256	90
28	161	205	198	e213	180	987	160	77	60	62	208	90
29	167	200	198	e212	---	1680	161	78	62	61	175	95
30	165	198	197	e208	---	2620	148	81	57	65	151	96
31	159	---	197	e208	---	2800	---	84	---	70	136	---
TOTAL	4888	6507	6169	11071	5027	61795	39420	2781	2637	2398	3188	3542
MEAN	158	217	199	357	180	1993	1314	89.7	87.9	77.4	103	118
MAX	352	242	205	1330	208	9010	4690	141	141	135	256	185
MIN	121	173	196	193	136	342	148	69	56	45	59	79
AC-FT	9700	12910	12240	21960	9970	122600	78190	5520	5230	4760	6320	7030

CAL YR	1990	TOTAL	69553	MEAN	191	MAX	903	MIN	40	AC-FT	138000
WTR YR	1991	TOTAL	149423	MEAN	409	MAX	9010	MIN	45	AC-FT	296400

e Estimated

09507500 FOSSIL CREEK DIVERSIONS TO CHILDS POWERPLANT, NEAR CAMP VERDE, AZ

LOCATION.--Lat 34°22'06", long 111°39'56", in NE¼SW¼ sec.20, T.11 N., R.7 E. (unsurveyed), Yavapai County, Hydrologic Unit 15060203, at head of Stehr Lake, 2.3 mi northeast of Childs powerplant, 4.4 mi by flume downstream from Irving powerplant, and 17 mi southeast of Camp Verde.

PERIOD OF RECORD.--January 1952 to current year.

GAGE.--Water-stage recorder and weir in concrete flume. Datum of gage is 3,716.2 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharge. Records good. Record is obtained at the head of Stehr Lake, a regulatory basin, and shows the water used by Childs powerplant. Most of the flow originates at Fossil Springs, which are fairly constant. Diversion is made from Fossil Creek 8 mi upstream from this station and is first used by Irving powerplant. A second diversion from Fossil Creek enters the flume below Irving powerplant. Based on estimates and records for previous years, the flow through the Irving powerplant is estimated to be about 99 percent of the record published herewith.

AVERAGE DISCHARGE.--39 years, 43.1 ft³/s, 31,230 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 58 ft³/s Aug. 1, 2, 1982; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	31	43	41	44	26	45	43	47	45	33	42
2	42	42	43	41	44	44	45	42	47	45	30	42
3	42	41	42	41	44	37	45	16	47	45	19	35
4	42	41	43	38	44	34	45	1.5	47	46	15	42
5	42	41	43	40	44	39	45	3.6	47	46	14	42
6	42	41	43	44	44	31	44	6.9	47	46	5.7	42
7	43	41	43	44	45	33	43	5.4	47	45	12	42
8	42	37	43	43	45	37	43	25	46	45	42	42
9	42	43	43	43	45	45	43	47	46	45	42	38
10	43	43	43	43	45	45	43	45	47	46	42	42
11	42	43	43	42	45	45	43	44	47	37	45	38
12	42	43	43	43	45	45	43	44	47	46	43	42
13	43	43	42	43	45	45	43	44	47	46	42	42
14	42	43	43	43	45	44	42	36	47	46	42	42
15	42	44	42	43	45	42	41	48	47	45	44	42
16	43	44	43	42	45	45	42	48	47	46	45	42
17	43	44	43	43	45	44	42	48	46	46	45	42
18	43	44	42	43	45	45	41	48	46	45	46	42
19	43	43	42	43	45	45	41	48	41	45	45	42
20	43	44	43	43	46	43	42	48	42	44	38	31
21	43	43	42	43	46	44	42	47	45	43	46	42
22	42	43	43	43	46	45	41	47	47	41	46	42
23	42	43	42	43	45	45	42	47	41	42	45	42
24	42	43	42	43	45	44	42	47	45	42	44	42
25	42	43	42	43	45	45	41	48	37	42	43	42
26	42	43	42	43	45	44	41	47	14	40	43	42
27	42	43	42	43	45	44	41	47	20	41	43	42
28	42	43	43	43	40	45	40	46	37	42	43	42
29	42	43	42	43	---	45	40	47	46	42	42	42
30	42	43	41	43	---	44	42	47	46	39	42	42
31	41	---	40	44	---	44	---	47	---	38	42	---
TOTAL	1310	1266	1316	1320	1252	1303	1273	1208.4	1303	1343	1168.7	1234
MEAN	42.3	42.2	42.5	42.6	44.7	42.0	42.4	39.0	43.4	43.3	37.7	41.1
MAX	43	44	43	44	46	45	45	48	47	46	46	42
MIN	41	31	40	38	40	26	40	1.5	14	36	5.7	31
AC-FT	2600	2510	2610	2620	2480	2580	2520	2400	2580	2660	2320	2450
CAL YR 1990	TOTAL	15273.16	MEAN	41.8	MAX	46	MIN	.00	AC-FT	30290		
WTR YR 1991	TOTAL	15297.1	MEAN	41.9	MAX	48	MIN	1.5	AC-FT	30340		

09507580 EAST VERDE RIVER DIVERSION FROM CLEAR CREEK, NEAR PINE, AZ

LOCATION.--Lat 34°25'04", long 111°15'47", in NW¼NE¼ sec.23, T.12 N., R.10 E. (unsurveyed), Gila County, Hydrologic Unit 15060203, on East Verde River at mouth of Mail Creek, 0.4 mi southeast of Washington Park, and 11 mi east of Pine.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and weir in concrete flume. Datum of gage is 5,774 ft above National Geodetic Vertical Datum of 1929, (Phelps Dodge Corporation reference mark).

REMARKS.--No estimated daily discharges. Records excellent. Diversion is 9.5 mi northeast from Blue Ridge Reservoir, on East Clear Creek, in the Little Colorado River basin, to the East Verde River in the Gila River basin.

AVERAGE DISCHARGE.--25 years (water years 1967-91) 12.7 ft³/s, 9,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 34 ft³/s Apr. 19, 29, May 5-7, 10, 12, 15, 18, June 2, 1969; no flow for long periods each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	15	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	15	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	7.5	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.41	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.59	.32	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	5.1	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	12	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	12	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	12	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	3.6	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	5.8	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	12	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	12	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	12	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	14	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	7.4	2.3	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	6.9	.10	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	15	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	14	.00	.00	.00	1.2
21	.00	.00	.00	.00	.00	.00	.00	15	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	15	.00	.00	.00	.00
23	.73	.00	.00	.00	.00	.00	.00	5.4	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	8.4	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	10	.00	.00	.00	1.0
26	.00	.00	.00	.00	.00	.00	.00	6.3	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	10	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	5.7	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	6.5	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	14	---	.00	.00	---
TOTAL	0.73	0.00	0.00	0.00	0.00	0.00	0.00	241.10	40.22	0.00	0.00	2.20
MEAN	.024	.000	.000	.000	.000	.000	.000	7.78	1.34	.000	.000	.073
MAX	.73	.00	.00	.00	.00	.00	.00	15	15	.00	.00	1.2
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1.4	.00	.00	.00	.00	.00	.00	478	80	.00	.00	4.4
CAL YR	1990	TOTAL	1493.23	MEAN	4.09	MAX	18	MIN	.00	AC-FT	2960	
WTR YR	1991	TOTAL	284.25	MEAN	.78	MAX	15	MIN	.00	AC-FT	564	

09507980 EAST VERDE RIVER NEAR CHILDS, AZ

LOCATION.--Lat 34°17'00", long 111°38'50", in sec.21, T.11 N., R.7 E. (unsurveyed), Gila County Hydrologic Unit 15060203, in Tonto National Forest, on left bank 1.3 mi upstream from mouth and 6 mi southeast of Childs.

DRAINAGE AREA.--331 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1961 to December 1965, May 1967 to current year.

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,500 ft above National Geodetic Vertical Datum (NGVD) of 1929, from topographic map. Sept. 1, 1961, to Dec. 15, 1965, at site 1 mi upstream at elevation of 2,600 ft above NGVD of 1929, datum raised 0.38 ft Oct. 4, 1963. May 25, 1967, to July 20, 1972, at present site at datum 1.29 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Since September 30, 1965, records include transbasin diversions from East Clear Creek to headwaters of East Verde River. (See sta 09507580 and 09398300.)

AVERAGE DISCHARGE.--24 years (water years 1968-91), 68.4 ft³/s, 49,560 acre-ft/yr; median of yearly mean discharges, 51 ft³/s, 36,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,500 ft³/s Sept. 5, 1970, gage height, 20.5 ft, present datum, from profile past gage, from rating curve extended above 960 ft³/s on basis of slope-area measurements at gage heights 10.11 and 20.5 ft, present datum; minimum daily, 0.08 ft³/s Aug. 9, 1991.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 5	0445	930	3.89	Mar. 26	2100	1,080	4.05
Mar. 1	2000	*8,790	*11.52	Mar. 28	2230	1,360	4.46
Mar. 24	0530	667	3.24				

Minimum daily discharge, 0.08 ft³/s Aug. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.2	5.1	13	7.8	5930	415	19	10	1.2	.40	2.5
2	4.1	4.4	5.1	11	7.5	2430	347	18	12	1.1	.30	3.3
3	4.1	4.8	4.9	9.1	7.5	585	287	17	17	.99	.22	2.5
4	3.8	4.5	4.8	62	7.5	313	281	17	14	.96	.20	2.3
5	3.5	5.3	5.0	520	7.2	277	269	17	12	.93	.16	3.0
6	3.2	5.8	5.0	334	7.1	284	281	16	e14	.98	.15	3.2
7	3.2	5.4	5.0	166	6.9	207	300	16	e13	.88	.14	12
8	3.2	5.3	4.2	93	7.0	138	264	15	e13	.88	.11	13
9	3.2	5.0	4.2	58	7.0	101	203	14	e12	.84	.08	9.2
10	3.2	4.7	4.0	41	6.9	83	169	18	e11	.78	.14	8.7
11	3.2	4.5	4.0	31	6.8	73	150	21	e10	.76	1.1	e4.3
12	3.2	4.4	4.2	26	6.8	62	125	21	e9.6	.73	.71	e4.3
13	3.2	4.4	5.8	22	6.6	53	101	18	e8.6	.68	2.3	e4.2
14	3.2	4.4	5.5	18	6.2	47	86	15	e8.0	.64	3.0	e3.8
15	3.2	4.5	6.5	16	6.0	42	73	19	e7.3	.64	1.3	e3.6
16	3.0	4.5	8.7	15	6.0	49	67	20	e6.8	.61	.77	e3.6
17	3.0	4.5	9.1	14	6.1	42	63	19	e5.8	.57	.37	e3.3
18	3.0	4.7	9.1	13	7.6	42	59	19	e5.3	.56	.22	e2.6
19	3.0	4.7	8.0	12	7.2	63	54	19	e4.6	.53	.21	e2.4
20	3.2	5.2	6.5	12	7.3	161	e49	14	e4.2	.73	.19	e2.2
21	3.2	6.3	17	11	6.9	417	e45	18	e3.8	.78	.19	e1.8
22	3.2	5.7	14	11	6.3	412	e40	19	e3.5	.78	.20	e1.6
23	5.1	6.6	11	11	6.1	497	e36	19	e2.8	.66	.20	e1.4
24	4.6	6.5	7.6	10	5.9	474	e32	19	e2.5	.49	.21	e1.1
25	4.0	6.2	7.0	9.7	5.7	401	e28	17	e2.2	.31	.21	.95
26	3.5	8.2	6.9	9.2	5.6	493	e25	12	e1.9	.23	.30	.85
27	3.2	11	6.4	8.9	5.4	604	24	15	e1.5	.32	1.0	.82
28	3.2	7.2	8.5	8.7	188	755	22	12	e1.3	.46	19	.94
29	3.2	6.0	10	8.3	---	672	21	12	1.3	.51	11	.99
30	3.3	5.5	13	8.2	---	613	20	14	1.2	.44	6.7	.95
31	3.2	---	16	7.9	---	513	---	11	---	.40	2.6	---
TOTAL	106.2	163.4	232.1	1590.0	368.9	16833	3936	520	220.2	21.37	53.68	105.40
MEAN	3.43	5.45	7.49	51.3	13.2	543	131	16.8	7.34	.69	1.73	3.51
MAX	5.1	11	17	520	188	5930	415	21	17	1.2	19	13
MIN	3.0	3.2	4.0	7.9	5.4	42	20	11	1.2	.23	.08	.82
AC-FT	211	324	460	3150	732	33390	7810	1030	437	42	106	209

CAL YR 1990 TOTAL 5095.7 MEAN 14.0 MAX 286 MIN 2.5 AC-FT 10110
WTR YR 1991 TOTAL 24150.25 MEAN 66.2 MAX 5930 MIN .08 AC-FT 47900

e Estimated

09507980 EAST VERDE RIVER NEAR CHILDS, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1990 to September 1991.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS. / 100 ML) (31625)	
DEC 04...	1140	5.2	495	8.4	16.0	9.0	2.0	702	11.6	109	<10	<1	
JAN 23...	1050	10	491	8.5	8.5	6.0	6.5	696	11.4	100	13	K1	
MAR 28...	1645	857	195	8.3	12.5	8.0	50	695	10.8	100	31	K600	
MAY 29...	1130	14	455	--	27.5	21.0	1.0	691	8.4	105	<10	K8	
JUL 24...	1035	0.64	674	8.1	32.0	28.0	1.0	694	7.9	112	<10	K4	
SEP 24...	1055	1.1	570	8.3	29.0	26.0	0.70	695	8.3	113	11	K9	
DATE		STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD CO3 (00452)	HY-DROXIDE WATER DIS IT FIELD OH (71834)	ALKA-LINITY WAT DIS TOT IT FIELD CACO3 (39086)
DEC 04...	K13	250	0	60	24	28	0.8	2.7	331	4	0	278	
JAN 23...	K4	240	0	61	22	20	0.6	2.3	290	5	0	246	
MAR 28...	340	87	10	23	7.1	4.0	0.2	1.3	93	0	0	76	
MAY 29...	34	200	--	49	19	18	0.6	2.0	--	--	--	--	
JUL 24...	K6	180	0	42	19	79	3	4.7	353	0	0	289	
SEP 24...	K10	180	0	39	19	58	2	4.1	388	0	0	318	
DATE		SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)
DEC 04...	7.8	16	0.20	316	306	0.43	<1	--	<0.010	<0.100	0.040	--	
JAN 23...	13	12	0.10	290	278	0.39	9	--	<0.010	<0.100	<0.010	--	
MAR 28...	5.1	3.6	<0.10	108	90	0.15	100	0.100	0.050	0.150	0.030	0.37	
MAY 29...	9.8	13	0.40	261	245	0.35	<1	--	0.020	<0.050	0.020	0.78	
JUL 24...	18	39	1.2	390	377	0.53	13	--	<0.010	<0.050	0.190	0.01	
SEP 24...	8.6	20	0.60	333	341	0.45	<1	--	<0.010	<0.050	<0.010	--	

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

09507980 EAST VERDE RIVER NEAR CHILDS, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)
DEC 04...	<0.20	--	--	0.030	0.12	0.040	3	27	25	75	<10
JAN 23...	<0.20	--	--	0.090	0.28	0.090	2	19	19	74	<10
MAR 28...	0.40	0.55	2.4	0.160	0.21	0.070	<1	<1	2	29	<10
MAY 29...	0.80	--	--	0.020	--	<0.010	2	34	35	53	<10
JUL 24...	0.20	--	--	0.010	--	<0.010	9	*150	*160	51	<10
SEP 24...	0.40	--	--	0.020	0.06	0.020	8	110	110	48	<10
DATE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
DEC 04...	200	<1	<1.0	<1	<1	3	2	90	7	1	<1
JAN 23...	110	<1	<1.0	<1	<1	7	2	230	6	4	<1
MAR 28...	20	<1	<1.0	7	<1	6	2	3900	9	4	<1
MAY 29...	130	<1	<1.0	<10	<1	4	2	30	5	2	1
JUL 24...	*690	<1	<1.0	<1	<1	4	3	--	<3	2	<1
SEP 24...	540	<1	<1.0	<1	<1	4	2	80	13	2	<1
DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
DEC 04...	30	18	<0.10	2	<1	<1	<1.0	<10	4	23	0.32
JAN 23...	30	31	0.10	3	<1	<1	1.0	<10	3	12	0.35
MAR 28...	120	8	<0.10	8	<1	<1	<1.0	10	<3	--	--
MAY 29...	10	14	<0.10	5	<1	<1	<1.0	<10	4	3	0.11
JUL 24...	50	13	<0.10	5	<1	<1	<1.0	<10	7	5	0.01
SEP 24...	30	23	<0.10	<1	<1	<1	<1.0	<10	8	26	0.08

* Value verified.

< Actual value is known to be less than value shown.

09508300 WET BOTTOM CREEK NEAR CHILDS, AZ
(Hydrologic bench mark station)

LOCATION.--Lat 34°09'39", long 111°41'32", in sec.36, T.9 N., R.6 E. (unsurveyed), Gila County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 1.4 mi upstream from mouth and 13 mi south of Childs.

DRAINAGE AREA.--36.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1967 to current year.

REVISED RECORDS.--WRD Ariz. 1970: 1968(M).

GAGE.--Water-stage recorder. Elevation of gage is 2,320 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--24 years (water years 1968-91), 14.8 ft³/s, 10,720 acre-ft/yr; median of yearly mean discharges, 11 ft³/s, 8,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,830 ft³/s Feb. 19, 1980, gage height, 16.0 ft, from high-water mark in gage well, from rating curve extended above 3,000 ft³/s on basis of slope-area measurements at gage heights 9.77, 14.18, and 15.66 ft; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 4	2000	560	6.77	Mar. 20	2400	212	5.89
Mar. 1	1030	*3,550	*9.99	Mar. 26	1500	581	6.81
Mar. 19	2300	134	5.56				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	.29	.53	e25	.87	2750	113	1.0	.29	.00	.00	.00
2	.70	.47	.51	e22	.79	510	77	.96	.37	.00	.00	.00
3	.63	.48	.48	e20	.71	161	49	.93	.32	.00	.00	.00
4	.57	.43	.49	175	.67	76	39	.88	.26	.00	.00	.00
5	.49	.39	.53	199	.66	43	29	.82	.18	.00	.00	.00
6	.46	.39	.52	129	.66	31	21	.77	.13	.00	.00	.00
7	.45	.37	.48	71	.63	21	16	.73	.10	.00	.00	.00
8	.42	.38	.51	42	.62	16	12	.67	.04	.00	.00	.00
9	.38	.37	.52	e28	.62	12	9.9	.60	.00	.00	.00	.00
10	.36	.35	.53	e19	.60	10	8.2	.56	.00	.00	.00	.00
11	.37	.33	.50	e15	.62	8.3	6.8	.55	.00	.00	.00	.00
12	.34	.35	.50	e11	.66	6.9	6.1	.54	.03	.00	.00	.00
13	.31	.36	.59	e8.5	.57	5.9	5.3	.50	.10	.00	.00	.00
14	.31	.36	.53	e7.5	.57	5.3	4.9	.48	.09	.00	.00	.00
15	.30	.37	.56	e5.3	.53	5.1	4.5	.47	.03	.00	.00	.00
16	.31	.37	.62	e4.4	.53	6.9	3.9	.46	.00	.00	.00	.00
17	.31	.38	.51	e3.7	1.3	7.7	3.6	.44	.00	.00	.00	.00
18	.31	.38	.48	e3.1	1.5	17	3.2	.42	.00	.00	.00	.00
19	.32	.39	.49	e2.6	1.0	44	2.9	.40	.00	.00	.00	.00
20	.34	.43	.51	e2.3	.90	87	2.6	.38	.00	.00	.00	.00
21	.31	.44	.48	e2.0	.86	182	2.3	.38	.00	.00	.00	.00
22	.30	.44	.48	e1.7	.79	167	2.2	.37	.00	.00	.00	.00
23	.30	.42	.44	e1.5	.77	180	2.0	.36	.00	.00	.00	.00
24	.28	.38	.46	1.4	.73	155	1.8	.33	.00	.00	.00	.00
25	.26	.41	.45	1.3	.71	114	1.7	.30	.00	.00	.00	.00
26	.27	.63	.46	1.1	.71	223	1.6	.28	.00	.00	.00	.00
27	.28	.59	.47	1.1	.71	230	1.4	.26	.00	.00	.00	.00
28	.27	.50	.62	1.0	203	230	1.3	.24	.00	.00	.00	.00
29	.27	.48	14	.92	---	259	1.2	.24	.00	.00	.00	.00
30	.28	.48	58	.88	---	211	1.1	.21	.00	.00	.00	.00
31	.29	---	e28	.83	---	148	---	.16	.00	.00	.00	---
TOTAL	11.49	12.41	114.25	807.13	223.29	5923.1	434.5	15.69	1.94	0.00	0.00	0.00
MEAN	.37	.41	3.69	26.0	7.97	191	14.5	.51	.065	.000	.000	.000
MAX	.70	.63	.58	199	203	2750	113	1.0	.37	.00	.00	.00
MIN	.26	.29	.44	.83	.53	5.1	1.1	.16	.00	.00	.00	.00
AC-FT	23	25	227	1600	443	11750	862	31	3.8	.00	.00	.00

CAL YR 1990 TOTAL 1235.03 MEAN 3.38 MAX 81 MIN .00 AC-FT 2450
WTR YR 1991 TOTAL 7543.80 MEAN 20.7 MAX 2750 MIN .00 AC-FT 14960

e Estimated

09508300 WET BOTTOM CREEK NEAR CHILDS, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
DEC 27...	1230	0.48	365	8.1	10.0	7.0	1.0	701	11.0	99	K3	K4
FEB 27...	1130	0.74	249	8.1	19.0	12.0	2.2	698	9.6	97	K6	42
MAR 28...	1230	179	51	7.4	6.0	5.0	18	699	11.9	102	K10	K32
AUG 27...	1030	e0.01	450	7.8	30.5	26.0	0.20	699	6.2	84	20	280
DATE		HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	HY- DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
DEC 27...	130	0	36	10	30	1	1.0	214	0	0	175	
FEB 27...	100	0	29	7.8	23	1	1.1	159	0	0	130	
MAR 28...	18	3	4.8	1.5	2.5	0.3	0.60	19	0	0	16	
AUG 27...	180	0	47	14	30	1	1.4	252	0	0	207	
DATE		SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
DEC 27...	11	11	2.4	39	223	246	0.30	--	<0.010	<0.010	<0.100	
FEB 27...	6.3	9.7	2.1	34	198	191	0.27	--	<0.010	<0.010	<0.100	
MAR 28...	3.8	1.6	0.20	14	*67	40	0.09	0.024	0.030	<0.010	0.054	
AUG 27...	5.2	18	1.5	38	260	279	0.35	--	<0.010	<0.010	<0.050	
DATE		NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)
DEC 27...	<0.100	0.030	0.030	0.27	0.30	--	--	0.020	0.06	<0.010	0.020	
FEB 27...	<0.100	0.030	<0.010	--	<0.20	--	--	<0.010	--	0.010	<0.010	
MAR 28...	0.061	0.020	0.030	0.28	0.30	0.35	1.6	0.030	--	0.020	<0.010	
AUG 27...	<0.050	<0.010	0.020	--	<0.20	--	--	<0.010	--	<0.010	<0.010	

e Estimated

* Value verified.

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

09508300 WET BOTTOM CREEK NEAR CHILDS, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
DEC 27...	<0.010	--	20	11	22	<0.5	<1.0	<1	<3	1	50
FEB 27...	0.010	0.03	<10	12	20	0.8	<1.0	<1	<3	2	36
MAR 28...	<0.010	--	1400	<1	18	<0.5	<1.0	2	<3	2	240
AUG 27...	<0.010	--	<10	9	45	0.7	<1.0	<1	<3	2	15
DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
DEC 27...	<1	28	16	<0.1	<10	<1	<1	<1.0	190	<6	3
FEB 27...	2	30	13	<0.1	<10	1	<1	<1.0	150	<6	4
MAR 28...	1	<4	6	<0.1	<10	<1	<1	<1.0	28	<6	7
AUG 27...	<1	44	*51	<0.1	<10	1	<1	<1.0	*270	<6	6
DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
DEC 27...	--	--	--	--	--	--	--	--	19	2	0.00
FEB 27...	3.6	<0.4	2.0	<0.4	1.5	<0.4	0.04	0.96	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	100	4	1.9
AUG 27...	2.8	<0.4	3.9	<0.4	2.9	<0.4	0.04	0.87	82	2	--

* Value verified.

< Actual value is known to be less than value shown.

09508500 VERDE RIVER BELOW TANGLE CREEK, ABOVE HORSESHOE DAM, AZ
(National stream-quality accounting network station)

LOCATION.--Lat 34°04'23", long 111°42'56", in sec.35, T.9 N., R.6 E. (unsurveyed), Yavapai County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 1.3 mi downstream from Tangle Creek and 9 mi upstream from Horseshoe Dam.

DRAINAGE AREA.--5,858 mi², of which 365 mi² is noncontributing, including 357 mi² in Aubrey Valley Playa, a closed basin.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1945 to current year.

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,029.0 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. About 12,500 acres above station are irrigated by surface water and ground water. Low flow slightly regulated by powerplant 32 mi above station, using water from Fossil Creek. This station is above all major reservoirs on Verde River.

AVERAGE DISCHARGE.--46 years, 554 ft³/s, 401,400 acre-ft/yr; median of yearly mean discharges, 450 ft³/s, 326,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,800 ft³/s Feb. 15, 1980, gage height, 21.41 ft; minimum, 48 ft³/s June 17, 1956, July 18, 19, 1958, caused by power regulation on Fossil Creek; minimum daily, 61 ft³/s July 18, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1924, 100,000 ft³/s Mar. 3, 1938, gage height, 19.0 ft, from floodmarks, based on comparison with peak discharge at other stations on Verde River.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	0030	*34,300	*16.61	Apr. 2	1330	6,330	10.76
Mar. 6	1215	7,950	11.47				

Minimum daily discharge, 101 ft³/s July 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	175	230	282	276	19400	4570	214	138	116	124	213
2	223	186	229	276	277	19600	5670	204	148	116	119	195
3	250	200	226	274	277	8180	5380	200	164	115	118	200
4	250	199	226	327	276	4140	5150	183	177	109	145	214
5	230	202	229	1190	273	4070	4830	182	171	105	137	209
6	213	211	232	1680	267	7080	4340	177	161	101	131	196
7	205	212	235	1440	264	4910	4110	173	148	107	123	188
8	207	212	236	955	267	2730	3830	179	143	107	132	229
9	206	215	237	688	265	1760	2690	171	140	107	129	212
10	206	214	241	543	264	1430	1780	e161	135	135	150	210
11	206	212	242	466	262	1440	1330	e163	128	171	161	195
12	205	215	250	420	261	1240	1100	e166	127	149	151	181
13	204	212	257	388	263	980	837	e171	129	141	160	173
14	204	211	262	364	259	788	636	e174	126	133	176	162
15	203	214	269	345	256	687	532	e166	120	131	174	149
16	199	216	277	334	251	655	464	159	114	125	163	145
17	196	214	281	328	275	569	418	154	109	123	146	147
18	189	216	282	319	256	522	393	149	111	125	144	147
19	184	217	280	311	241	643	361	146	117	122	142	146
20	180	217	279	306	234	1290	331	143	116	127	151	142
21	183	216	277	302	227	2140	310	143	113	137	145	147
22	175	215	282	299	220	2050	299	143	110	138	137	157
23	178	215	274	297	209	1920	281	144	108	150	131	168
24	183	213	266	292	204	2830	261	147	107	158	129	163
25	185	213	260	290	210	3290	246	144	116	152	131	173
26	184	212	255	287	221	3480	230	143	120	144	129	171
27	178	211	252	286	213	3830	233	141	140	136	172	160
28	176	211	261	284	496	2920	227	140	130	125	265	159
29	181	209	273	282	---	3760	226	134	120	120	253	154
30	184	223	305	278	---	4420	224	131	117	121	227	156
31	182	---	290	277	---	4290	---	133	---	121	205	---
TOTAL	6160	6308	7995	14410	7264	117044	51289	4978	3903	3967	4800	5261
MEAN	199	210	258	465	259	3776	1710	161	130	128	155	175
MAX	250	223	305	1680	496	19600	5670	214	177	171	265	229
MIN	175	175	226	274	204	522	224	131	107	101	118	142
AC-FT	12220	12510	15860	28580	14410	232200	101700	9870	7740	7870	9520	10440

CAL YR	1990	TOTAL	92785	MEAN	254	MAX	1180	MIN	79	AC-FT	184000
WTR YR	1991	TOTAL	233379	MEAN	639	MAX	19600	MIN	101	AC-FT	462900

e Estimated

09508500 VERDE RIVER BELOW TANGLE CREEK, ABOVE HORSESHOE DAM, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.--October 1980 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	
OCT 24...	1205	179	680	8.4	29.0	17.0	15	710	9.2	103	13	K9	
DEC 04...	1430	235	630	8.5	20.0	10.0	3.7	713	11.2	106	<10	K10	
27...	1430	249	620	8.5	13.0	5.0	2.9	708	12.0	101	<10	K3	
JAN 23...	1430	295	582	8.6	15.0	10.0	7.4	708	10.8	103	<10	<1	
FEB 27...	1410	216	585	8.5	24.0	14.5	20	703	10.2	109	13	K3	
MAR 28...	1430	2500	227	8.2	14.5	9.5	41	709	10.2	96	27	180	
APR 26...	1545	232	572	8.6	24.0	20.0	4.1	704	7.9	95	<10	K2	
MAY 29...	1400	130	722	--	31.0	24.0	5.6	704	7.9	102	14	K5	
JUN 27...	1200	146	710	8.5	28.0	23.0	4.9	702	7.7	98	11	K16	
JUL 24...	1355	153	732	8.5	36.0	29.0	4.3	705	7.5	106	<10	52	
AUG 27...	1430	128	690	8.5	29.5	27.0	3.0	705	7.5	102	12	22	
SEP 24...	1330	158	680	8.5	34.0	26.5	1.0	705	8.3	112	11	K7	
DATE		STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD CO3 (00452)	HY-DROXIDE WATER DIS IT FIELD OH (71834)	ALKA-LINITY WAT DIS TOT IT FIELD CACO3 (39086)
OCT 24...	43	260	6	47	35	41	1	2.8	296	8	0	256	
DEC 04...	K18	260	0	49	34	37	1	2.5	310	5	0	263	
27...	K6	270	0	53	33	33	0.9	2.3	326	4	0	274	
JAN 23...	K6	270	7	54	32	33	0.9	2.4	303	7	0	260	
FEB 27...	24	270	11	50	34	38	1	2.5	296	7	0	254	
MAR 28...	180	97	0	23	9.5	7.8	0.3	1.4	118	0	0	97	
APR 26...	K6	250	4	53	28	28	0.8	2.5	274	12	0	244	
MAY 29...	K11	280	--	51	36	45	1	3.2	--	--	--	--	
JUN 27...	K7	270	23	48	37	50	1	3.5	279	12	0	248	
JUL 24...	37	270	39	47	38	51	1	3.7	262	12	0	235	
AUG 27...	K14	260	19	44	35	47	1	3.6	270	9	0	236	
SEP 24...	K13	260	11	44	37	47	1	3.5	254	26	0	252	

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

09508500 VERDE RIVER BELOW TANGLE CREEK, ABOVE HORSESHOE DAM, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO ₂) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N) (00630)
OCT												
24...	75	32	0.30	24	398	412	0.54	33	--	<0.010	<0.010	<0.100
DEC												
04...	56	23	0.20	--	366	359	0.50	3	--	<0.010	--	<0.100
27...	54	24	0.20	22	337	386	0.46	<1	--	<0.010	<0.010	<0.100
JAN												
23...	46	20	0.10	--	333	344	0.45	21	--	<0.010	--	<0.100
FEB												
27...	58	24	0.30	22	332	383	0.45	18	--	0.010	<0.010	<0.100
MAR												
28...	11	5.1	0.20	--	132	116	0.18	72	0.070	0.060	--	0.130
APR												
26...	55	23	0.40	21	322	359	0.44	6	--	<0.010	0.010	0.140
MAY												
29...	87	27	0.10	23	373	414	0.51	7	--	0.010	<0.010	<0.050
JUN												
27...	110	36	0.40	--	417	434	0.57	9	--	<0.010	--	<0.050
JUL												
24...	110	35	0.30	--	433	426	0.59	23	--	<0.010	--	<0.050
AUG												
27...	97	33	0.20	24	410	427	0.56	4	--	<0.010	<0.010	<0.050
SEP												
24...	92	30	0.30	--	407	405	0.55	2	--	<0.010	--	<0.050
DATE	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO ₃) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO ₄) (00650)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT												
24...	<0.100	0.020	0.020	0.38	0.40	--	--	0.030	--	0.020	<0.010	0.010
DEC												
04...	--	0.040	--	0.36	0.40	--	--	<0.010	--	--	<0.010	--
27...	<0.100	0.010	0.030	--	<0.20	--	--	<0.010	--	<0.010	<0.010	<0.010
JAN												
23...	--	<0.010	--	--	<0.20	--	--	<0.010	--	--	<0.010	--
FEB												
27...	<0.100	0.030	0.020	--	<0.20	--	--	0.040	--	0.020	<0.010	0.010
MAR												
28...	--	0.050	--	0.25	0.30	0.43	1.9	0.150	0.31	--	0.100	--
APR												
26...	<0.050	0.010	0.010	--	<0.20	--	--	0.040	--	0.020	<0.010	0.020
MAY												
29...	<0.050	0.010	<0.010	--	<0.20	--	--	0.030	--	0.010	<0.010	<0.010
JUN												
27...	--	0.030	--	1.5	1.5	--	--	0.030	0.06	--	0.020	--
JUL												
24...	--	0.180	--	0.32	0.50	--	--	0.030	--	--	<0.010	--
AUG												
27...	0.053	<0.010	0.020	--	<0.20	--	--	0.020	--	<0.010	<0.010	<0.010
SEP												
24...	--	<0.010	--	--	0.30	--	--	0.040	--	--	<0.010	--

< Actual value is known to be less than value shown.

09508500 VERDE RIVER BELOW TANGLE CREEK, ABOVE HORSESHOE DAM, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
OCT 24...	0.03	10	20	24	89	<0.5	200	<1	<1.0	<1	<1	<3
DEC 04...	--	--	18	18	95	--	180	<1	<1.0	<1	<1	--
27...	--	--	17	17	*110	--	160	<1	<1.0	<1	<1	--
JAN 23...	--	--	16	14	110	--	170	<1	<1.0	<1	<1	--
FEB 27...	0.03	<10	19	19	100	<0.5	170	<1	<1.0	1	<1	<3
MAR 28...	--	--	*5	5	34	--	40	<1	<1.0	7	<1	--
APR 26...	0.06	<10	19	18	83	<0.5	140	<1	<1.0	4	<1	<3
MAY 29...	--	--	23	24	76	--	210	<1	<1.0	1	<1	--
JUN 27...	--	--	20	20	74	--	240	<1	<1.0	1	<1	--
JUL 24...	--	--	28	23	76	--	230	<1	<1.0	<1	1	--
AUG 27...	--	<10	26	20	63	<0.5	230	<1	<1.0	1	<1	<3
SEP 24...	--	--	23	25	74	--	220	<1	<1.0	<1	<1	--

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)
OCT 24...	5	2	570	<3	<1	<1	37	*1500	13	<0.10	<0.1	<10
DEC 04...	3	1	180	3	1	1	--	20	4	<0.10	--	--
27...	3	1	190	<3	1	<1	--	<10	3	<0.10	--	--
JAN 23...	3	1	360	6	1	<1	--	<10	5	0.10	--	--
FEB 27...	3	1	480	4	<1	<1	35	20	5	<0.10	0.1	10
MAR 28...	8	2	3100	10	3	<1	--	80	6	<0.10	--	--
APR 26...	13	2	490	<3	2	<1	28	20	8	<0.10	<0.1	10
MAY 29...	4	2	310	<3	2	1	--	30	6	<0.10	--	--
JUN 27...	3	2	260	4	2	<1	--	20	8	<0.10	--	--
JUL 24...	5	1	--	<3	3	<1	--	30	5	<0.10	--	--
AUG 27...	2	<1	270	5	1	<1	42	30	5	<0.10	<0.1	<10
SEP 24...	3	<1	70	5	2	<1	--	20	6	<0.10	--	--

* Value verified.

< Actual value is known to be less than value shown.

09508500 VERDE RIVER BELOW TANGLE CREEK, ABOVE HORSESHOE DAM, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT											
24...	1	1	1	<1.0	900	7	10	<3	95	62	30
DEC											
04...	--	*<1	<1	<1.0	--	--	<10	3	92	11	7.0
27...	--	<1	<1	<1.0	--	--	<10	3	94	10	6.7
JAN											
23...	--	<1	<1	<1.0	--	--	<10	10	99	20	16
FEB											
27...	1	<1	<1	<1.0	770	8	20	3	99	39	23
MAR											
28...	--	<1	<1	<1.0	--	--	20	<3	79	101	682
APR											
26...	<1	<1	<1	<1.0	660	7	20	7	93	8	5.0
MAY											
29...	--	<1	<1	<1.0	--	--	<10	<3	93	34	12
JUN											
27...	--	<1	<1	<1.0	--	--	<10	<3	96	18	7.1
JUL											
24...	--	<1	1	<1.0	--	--	<10	7	96	38	16
AUG											
27...	<1	<1	<1	<1.0	820	7	<10	10	74	26	9.0
SEP											
24...	--	<1	<1	<1.0	--	--	<10	3	53	6	2.6

* Value verified.

< Actual value is known to be less than value shown.

09509500 RESERVOIR SYSTEM ON VERDE RIVER AT AND BELOW HORSESHOE DAM, AZ

LOCATION.--This system comprises two storage reservoirs created by Horseshoe and Bartlett Dams on Verde River, Hydrologic Unit 15060203. Gages on Horseshoe Reservoir, formed by Horseshoe Dam, lat 33°59'05", long 111°42'35", in sec.2, T.7 N., R.6 E. (unsurveyed); and Bartlett Reservoir, formed by Bartlett Dam, lat 33°49'05", long 111°37'52", in sec.34, T.6 N., R.7 E. (unsurveyed).

DRAINAGE AREA.--6,157 mi² (at Bartlett Dam), of which 365 mi² is noncontributing, including 357 mi² in Aubrey Valley Playa, a closed basin.

PERIOD OF RECORD.--July 1939 to current year. Prior to 1946 published as Bartlett Reservoir at Bartlett Dam.

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorders on dam structures. Datum of gage on Horseshoe Reservoir is 1,900.00 ft and on Bartlett Reservoir 1,599.46 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1964, Bartlett Reservoir gage datum was 10.00 ft higher.

REMARKS.--Horseshoe Reservoir is formed by earthfill and rockfill dam; dam completed and storage began Nov. 15, 1945. Bartlett Reservoir is formed by concrete multiple-arch dam; dam completed May 1939 and storage began Feb. 5, 1939. Total capacity of the two reservoirs (capacity tables dated 1978, based on survey in 1977-78) is 309,600 acre-ft divided as follows: Horseshoe Reservoir, 131,400 acre-ft between elevations 1,915.0 ft - sill of outlet gage - and 2,026.0 ft - top of spillway gates; Bartlett Reservoir, 178,200 acre-ft between elevations 1,619.46 ft - 10 ft above sill of outlet gates - and 1,797.46 ft - top of spillway gates. No dead storage. There was no spillage over Bartlett Dam during 1991 water year. Records given herein represent usable contents. Water is used for irrigation of Salt River Valley and for municipal supply.

COOPERATION.--Capacity tables furnished by Salt River Valley Water Users' Association.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents of system, 318,000 acre-ft May 9, 1973; no storage at times when natural flow of river was passed through reservoir system.

EXTREMES FOR CURRENT YEAR.--Maximum contents of system, 308,000 acre-ft Apr. 10; minimum, 50,000 acre-ft Dec. 31.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72700	73200	63200	50100	64500	115000	e274000	e303000	291000	280000	261000	234000
2	73000	73100	62900	50300	64300	159000	280000	e301000	291000	280000	259000	234000
3	73700	72700	62400	50600	64100	175000	284000	e300000	291000	279000	257000	233000
4	74000	72100	61600	51100	64100	180000	285000	e300000	290000	278000	255000	233000
5	74300	72000	60700	53500	63600	189000	298000	e299000	290000	278000	252000	233000
6	74500	71300	59900	57200	63000	201000	304000	e299000	290000	277000	251000	233000
7	74800	70500	59200	60100	62300	209000	306000	e299000	290000	276000	249000	233000
8	75100	70000	58600	61500	61800	213000	306000	e299000	290000	275000	248000	232000
9	75200	69500	58000	62000	61500	215000	306000	e298000	290000	275000	248000	232000
10	75500	68900	57500	62200	61300	217000	e308000	e298000	289000	274000	247000	232000
11	75800	68400	57100	62600	61100	219000	e307000	e297000	289000	274000	247000	232000
12	76000	67900	56700	63200	60900	221000	e306000	e297000	289000	273000	247000	232000
13	76200	67400	56200	63700	60700	223000	e307000	e296000	289000	273000	247000	232000
14	76400	66800	55800	64300	60400	223000	e307000	e296000	289000	272000	247000	232000
15	76600	66100	55500	64800	59900	224000	e307000	e296000	288000	272000	247000	231000
16	76400	65400	55400	65100	59300	225000	e307000	e296000	288000	271000	246000	231000
17	76100	64800	55400	65200	59300	225000	e306000	e295000	288000	271000	246000	231000
18	75600	64300	55300	65400	59600	226000	e306000	e295000	288000	270000	245000	231000
19	75100	63900	55400	65500	60100	227000	e305000	e294000	287000	270000	244000	230000
20	74700	63700	55500	65400	60300	228000	e305000	e294000	287000	269000	243000	230000
21	74800	63600	55500	65400	60600	e235000	e305000	e294000	286000	269000	242000	230000
22	74800	63700	55000	65400	60900	e239000	e305000	e293000	286000	268000	241000	230000
23	74900	64000	54200	65500	61100	e242000	e305000	e293000	285000	267000	240000	230000
24	75000	64100	53800	65500	61400	e246000	e305000	e293000	284000	267000	239000	230000
25	75000	64100	53600	65400	61700	e251000	e305000	e293000	284000	266000	238000	229000
26	74800	63900	52900	65300	61800	e256000	e305000	e293000	283000	266000	237000	229000
27	74400	63700	52000	65200	62100	e260000	e305000	e292000	282000	266000	236000	229000
28	74000	63500	51200	65100	63800	e262000	e304000	e292000	282000	265000	235000	229000
29	73800	63500	50500	65100	---	e264000	e304000	e292000	281000	264000	235000	229000
30	73700	63400	50100	65000	---	e265000	e304000	e292000	280000	264000	235000	229000
31	73400	---	50000	64800	---	e268000	---	291000	---	263000	235000	---
MAX	76600	73200	63200	65500	64500	268000	308000	303000	291000	280000	261000	234000
MIN	72700	63400	50000	50100	59300	115000	274000	291000	280000	263000	235000	229000
(*)	+1100	-10000	-13400	+14800	-1000	+204200	+36000	-13000	-11000	-17000	-28000	-6000
CAL YR	1990	MAX	76600	MIN	13400	(*)	+18600					
WTR YR	1991	MAX	308000	MIN	50000	(*)	+156700					

e Estimated

(*) Change in contents, in acre-feet.

09510000 VERDE RIVER BELOW BARTLETT DAM, AZ

LOCATION.--Lat 33°48'30", long 111°39'46", in NW¼ sec.5, T.5 N., R.7 E. (unsurveyed), Maricopa County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 2.1 mi downstream from Bartlett Dam, 4.0 mi upstream from Camp Creek, and 16 mi east of town of Cave Creek.

DRAINAGE AREA.--6,161 mi², of which 365 mi² is noncontributing, including 357 mi² in Aubrey Valley Playa, a closed basin.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1888 to current year. (Monthly discharge only August 1888 to December 1903, and January 1910 to September 1913. For some periods prior to December 1903 gage heights, discharge measurements, and daily discharge hydrograph are published in reports of the Geological Survey.) Prior to October 1941, published under different names as follows: "near Fort McDowell," "at mouth," "above Salt River," "at McDowell," "at McDowell near Lehi," "near McDowell," and "above Camp Creek, near McDowell."

REVISED RECORDS.--WSP 1049: 1893, 1913-14, 1917-18, 1926-27, 1929. WSP 1213: 1915-16. WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,572.34 ft above National Geodetic Vertical Datum of 1929. Gage at present site and datum Jan. 1, 1942, to Sept. 30, 1961, Dec. 30, 1965, to Mar. 10, 1971, and Oct. 1, 1978, to the present; Mar. 2 to Sept. 30, 1978, used as supplementary gage, and Feb. 18, 1975, to Feb. 28, 1978, supplementary water-stage recorder at site 30 ft upstream at same datum. Oct. 1, 1961, to Dec. 29, 1965, and Mar. 11, 1971, to Sept. 30, 1973, water-stage recorder at site 1.9 mi upstream at datum 1,600 ft, from topographic map; at same site at datum 2.00 ft higher, Oct. 1, 1973, to Mar. 3, 1975, and 3.00 ft higher, Oct. 1, 1961, to Dec. 29, 1965, and Mar. 11, 1971, to Sept. 30, 1973. Feb. 17, 1925, to Dec. 31, 1941, water-stage recorder at two sites within 0.5 mi upstream from Camp Creek, at various datums. Prior to Feb. 17, 1925, nonrecording gages at several sites about 20 mi downstream from present location at various datums.

REMARKS.--No estimated daily discharges. Records good. About 12,500 acres above station are irrigated by surface water and ground water. Flow completely regulated by Bartlett Reservoir since Feb. 5, 1939, and Horseshoe Reservoir since Nov. 15, 1945 (see preceding page), except during periods of spill. Water diverted downstream for municipal supply of city of Phoenix, and for irrigation in Fort McDowell Indian Reservation. Remainder (except during infrequent periods of extreme flooding) is diverted at Granite Reef Dam on Salt River 27 mi downstream for irrigation in Salt River Valley, and for municipal use by the city of Phoenix.

AVERAGE DISCHARGE (adjusted for storage in Bartlett and Horseshoe Reservoirs).--103 years, 668 ft³/s, 484,000 acre-ft/yr; median of yearly mean discharge, 520 ft³/s, 377,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--1888-1939: Maximum discharge not determined, probably over 150,000 ft³/s Feb. 24, 1891; minimum daily, 29 ft³/s July 11, 13, 1901. Floods of Nov. 27, 1905, and Mar. 4, 1938, reached maximum discharges of 96,000 ft³/s and 95,000 ft³/s, respectively.

1939-91: Maximum discharge, 101,000 ft³/s Mar. 2, 1978; no flow at Bartlett Dam at times when gates in dam were closed.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,280 ft³/s Mar. 30; minimum daily, 21 ft³/s Mar. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	234	381	238	426	62	1480	581	214	214	887	363
2	31	307	394	207	405	24	2260	1210	202	236	1180	368
3	61	372	473	186	357	21	3780	684	205	318	1220	381
4	54	418	629	186	371	23	1710	265	208	373	1210	336
5	53	443	694	186	394	189	989	266	206	377	1110	223
6	55	444	667	193	413	756	1130	267	203	384	858	222
7	55	467	579	253	445	773	2610	268	201	391	823	222
8	55	474	544	256	379	773	4230	269	198	397	642	222
9	54	462	537	255	399	571	3160	268	195	403	427	222
10	52	459	507	248	390	462	1030	269	193	383	230	222
11	52	458	477	226	389	463	1430	271	190	320	191	222
12	48	422	476	224	378	463	1660	272	191	319	189	222
13	48	429	486	225	376	464	594	275	189	319	189	222
14	52	500	469	223	434	465	554	277	186	319	189	222
15	89	534	448	196	527	465	553	277	183	319	222	222
16	249	571	321	238	491	464	553	277	181	318	424	222
17	328	530	277	271	329	463	578	277	178	318	468	222
18	382	495	277	255	64	410	688	280	176	320	468	222
19	358	442	253	257	61	257	737	283	196	321	468	222
20	314	384	213	332	61	142	621	289	269	321	469	222
21	197	282	287	333	63	140	303	293	314	321	519	222
22	152	181	509	274	62	185	301	237	358	317	707	222
23	151	96	661	255	64	380	301	203	354	316	686	222
24	152	196	458	275	64	621	301	209	351	314	599	221
25	177	275	390	347	65	639	301	215	345	314	505	218
26	278	355	603	372	66	1260	301	216	340	314	481	219
27	346	401	740	358	66	2640	299	218	334	314	597	218
28	340	310	756	316	68	2660	298	220	329	314	459	218
29	283	266	666	305	---	3170	298	223	326	313	386	218
30	258	270	551	334	---	4280	297	225	253	296	383	206
31	285	---	363	374	---	3080	---	225	---	380	374	---
TOTAL	5040	11477	15086	8198	7607	26765	33347	9609	7268	10183	17560	7185
MEAN	163	383	487	264	272	863	1112	310	242	328	566	239
MAX	382	571	756	374	527	4280	4230	1210	358	403	1220	381
MIN	31	96	213	186	61	21	297	203	176	214	189	206
AC-FT	10000	22760	29920	16260	15090	53090	66140	19060	14420	20200	34830	14250
CAL YR	1990	TOTAL	79428	MEAN	218	MAX	1250	MIN	29	AC-FT	157500	
WTR YR	1991	TOTAL	159325	MEAN	437	MAX	4280	MIN	21	AC-FT	316000	

09510000 VERDE RIVER BELOW BARTLETT DAM, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1950 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to December 1981, March 1982 to September 1982, April 1983 to September 1990.
WATER TEMPERATURES: December 1950 to December 1981, March 1982 to September 1982, April 1983 to September 1990.

REMARKS.--Unpublished daily specific conductance measurements for period December 1950 to September 1964 available from district office in Tucson, AZ.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (000061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (000095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
OCT 25...	0900	150	600	8.4	21.5	19.0	9.2	722	7.7	88	15
DEC 13...	0940	514	658	8.6	15.0	13.0	25	722	10.4	104	20
FEB 14...	0940	402	558	8.6	19.0	10.5	8.5	723	11.2	106	16
APR 18...	0845	666	--	8.4	18.0	11.0	18	717	11.0	106	22
JUN 20...	0855	265	280	8.3	23.5	14.0	34	716	10.2	105	26
SEP 05...	1055	222	272	8.3	31.0	17.5	8.0	717	9.8	109	21
DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS. / 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
OCT 25...	47	20	240	9	44	31	40	1	4.2	266	6
DEC 13...	K8	55	250	5	46	33	41	1	3.6	279	10
FEB 14...	<1	K3	230	3	44	29	34	1	3.2	260	8
APR 18...	K2	K16	140	7	30	16	17	0.6	2.1	161	1
JUN 20...	K15	71	130	7	30	13	12	0.5	1.9	148	0
SEP 05...	K11	K10	120	0	29	11	11	0.4	1.8	139	4
DATE	HY- DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)
OCT 25...	0	228	72	30	0.30	367	359	0.50	15	--	<0.010
DEC 13...	0	245	65	27	0.40	375	363	0.51	80	--	0.020
FEB 14...	0	226	60	20	0.20	332	326	0.45	16	--	0.010
APR 18...	0	134	24	10	0.20	181	180	0.25	8	0.200	0.020
JUN 20...	0	121	18	8.6	0.20	171	157	0.23	31	0.170	0.040
SEP 05...	0	120	12	7.4	0.20	153	145	0.21	2	0.038	0.020

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

GILA RIVER BASIN

09510000 VERDE RIVER BELOW BARTLETT DAM, AZ--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
OCT 25...	<0.100	0.030	0.37	0.40	--	--	0.050	0.12	0.040	*20	*20
DEC 13...	<0.100	0.030	0.47	0.50	--	--	0.190	0.03	0.010	18	18
FEB 14...	<0.100	0.030	0.27	0.30	--	--	0.030	0.06	0.020	13	16
APR 18...	0.220	0.010	0.29	0.30	0.52	2.3	0.080	0.18	0.060	10	9
JUN 20...	0.210	0.050	0.95	1.0	1.2	5.4	0.120	0.28	0.090	9	8
SEP 05...	0.058	0.080	0.32	0.40	0.46	2.0	0.110	0.18	0.060	9	8

DATE	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
OCT 25...	52	200	<1	<1.0	2	<1	4	4	680	7	<1
DEC 13...	53	190	<1	<1.0	2	<1	7	2	*2600	<3	4
FEB 14...	51	160	<1	<1.0	<1	<1	3	2	390	5	1
APR 18...	35	80	<1	<1.0	1	<1	7	3	740	23	3
JUN 20...	35	60	<1	<1.0	2	<1	7	2	2000	10	3
SEP 05...	34	50	<1	<1.0	<1	<1	3	1	830	11	<1

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 25...	2	100	18	<0.10	<1	1	<1.0	20	11	28	11
DEC 13...	<1	200	5	<0.10	<1	<1	<1.0	<10	4	9	13
FEB 14...	1	20	7	<0.10	<1	<1	<1.0	<10	5	4	3.9
APR 18...	<1	20	2	<0.10	<1	<1	<1.0	<10	4	15	27
JUN 20...	<1	100	21	<0.10	*2	<1	<1.0	10	<3	48	34
SEP 05...	<1	80	35	<0.10	<1	<1	<1.0	<10	4	11	6.4

* Value verified.

< Actual value is known to be less than value shown.

09510200 SYCAMORE CREEK NEAR FORT MCDOWELL, AZ

LOCATION.--Lat 33°41'39", long 111°32'28", in sec.16, T.4 N., R.8 E. (unsurveyed), Maricopa County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 0.7 mi southwest of Sugarloaf Mountain, 9 mi northeast of Fort McDowell, 10 mi upstream from mouth, and 25 mi northeast of Scottsdale.

DRAINAGE AREA.--164 mi².

PERIOD OF RECORD.--December 1960 to current year. Prior to Oct. 1, 1963, published as "near McDowell."

REVISED RECORDS.--WRD Ariz. 1970: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 1,759.33 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1970, at datum 0.16 ft lower.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--30 years (water years 1962-91), 27.7 ft³/s, 20,070 acre-ft/yr; median of yearly mean discharges, 11 ft³/s, 8,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,200 ft³/s Sept. 5, 1970, gage height, 19.7 ft, from profile past gage, from rating curve extended above 3,600 ft³/s on basis of slope-area measurements at gage heights 15.0, 16.0, and 19.7 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2230	*9,030	*10.65	Mar. 26	1500	4,020	6.65
Mar. 21	0245	946	3.15				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.01	.01	.36	1.3	3850	214	6.3	1.4	.39	.02	.00
2	.02	.02	.01	.18	1.3	e1820	168	2.4	1.3	.38	.01	.01
3	.03	.02	.01	.17	1.3	e308	129	2.4	e1.8	.32	.01	.03
4	.03	.01	.01	16	1.3	e185	105	2.0	2.7	.27	.01	.03
5	.03	.01	.01	149	1.3	e121	86	2.0	2.4	.27	.01	.34
6	.03	.01	.01	152	1.3	e73	74	2.4	2.3	.36	.01	.84
7	.03	.01	.01	62	1.3	e52	61	2.4	2.1	.28	.01	.01
8	.03	.01	.01	30	1.3	e38	e54	1.8	1.9	.23	.01	.01
9	.03	.01	.01	18	1.4	e34	e44	1.5	1.8	.21	.01	.01
10	.03	.01	.01	11	1.6	e28	e39	e1.1	1.9	.18	.01	.02
11	.03	.01	.01	5.6	1.6	e26	e32	e1.0	1.7	.17	.05	.01
12	.03	.01	.01	4.1	1.6	e23	21	e1.1	1.6	.15	.02	.01
13	.03	.01	.01	2.6	1.6	e22	20	e1.1	1.6	.15	.01	.01
14	.06	.01	.01	1.9	1.6	e20	20	e1.1	1.3	.16	.01	.01
15	.07	.01	.01	1.3	1.6	e17	19	e1.0	1.1	.19	.01	.01
16	.07	.01	.02	1.2	1.6	e15	20	e1.0	.95	.19	.01	.01
17	.07	.01	.01	.99	1.5	e11	18	e1.1	.98	.19	.01	.01
18	.06	.01	.01	.98	1.8	e7.1	17	e.90	.91	.19	.00	.00
19	.04	.01	.01	1.1	1.6	e37	17	e.73	.81	.14	.00	.00
20	.05	.02	.01	.99	1.6	142	15	e.67	.78	.15	.00	.01
21	.05	.03	.01	.99	1.6	550	14	.67	.81	.15	.00	.01
22	.05	.02	.01	1.1	1.6	363	13	.61	.77	.12	.00	.00
23	.05	.02	.01	1.2	1.6	320	13	.61	.75	.11	.00	.00
24	.06	.02	.01	1.1	1.6	315	13	.61	.65	.08	.01	.00
25	.08	.02	.01	1.4	1.6	235	12	.61	.65	.06	.01	.01
26	.08	.02	.01	1.3	1.6	869	12	e.51	.62	.05	.00	.01
27	.06	.02	.01	1.3	1.6	684	11	e.46	.61	.05	.00	.00
28	.01	.02	.01	1.3	11	690	9.2	e.61	.51	.05	.00	.01
29	.01	.01	.01	1.4	---	507	11	e.81	.50	.05	.00	.00
30	.01	.01	.54	1.2	---	380	10	e1.1	.42	.04	.00	.00
31	.01	---	.71	1.1	---	268	---	e1.5	---	.04	.00	---
TOTAL	1.26	0.42	1.55	472.86	51.7	12010.1	1291.2	42.10	37.62	5.37	0.25	1.42
MEAN	.041	.014	.050	15.3	1.85	387	43.0	1.36	1.25	.17	.008	.047
MAX	.08	.03	.71	152	11	3850	214	6.3	2.7	.39	.05	.84
MIN	.01	.01	.01	.17	1.3	7.1	9.2	.46	.42	.04	.00	.00
AC-FT	2.5	.8	3.1	938	103	2382	2560	84	75	11	.5	2.8

CAL YR	1990	TOTAL	470.30	MEAN	1.29	MAX	157	MIN	.00	AC-FT	933
WTR YR	1991	TOTAL	13915.85	MEAN	38.1	MAX	3850	MIN	.00	AC-FT	27600

e Estimated

09511300 VERDE RIVER NEAR SCOTTSDALE, AZ

LOCATION.--Lat 33°33'31", long 111°40'07", in NW¼NE¼SE¼ sec.31, T.3 N., R.7 E., Maricopa County, Hydrologic Unit 15060203, in Salt River Indian Reservation, on right bank, 0.75 mi north of city of Phoenix water treatment plant, 1.0 mi upstream from mouth, 1.7 mi downstream from State Highway 87, and 16 mi northeast of Scottsdale.

DRAINAGE AREA.--6,615 mi², of which 365 mi² is noncontributing, including 357 mi² in Aubrey Valley Playa, a closed basin.

PERIOD OF RECORD.--February 1961 to current year.

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,320.31 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1980, and Jan. 4 to Oct. 3, 1988, at site 1.7 mi upstream on State Highway 87 bridge at datum 31.04 ft higher. Oct. 1, 1980, to Jan. 3, 1988, at Verde Plant intake structure 0.1 mi upstream at same datum.

REMARKS.--Records good. Flow regulated by Bartlett and Horseshoe Reservoirs (see sta 09509500) except during periods of spill or floodflow below Bartlett Dam. About 12,500 acres above reservoirs are irrigated by surface water and ground water. Below reservoirs water is diverted for municipal supply of city of Phoenix, and for irrigation of an undetermined acreage in Fort McDowell Indian Reservation. Remainder (except during infrequent period of extreme flooding) is diverted at Granite Reef Dam on Salt River, 6 mi downstream, for irrigation in Salt River Valley and for municipal use by the city of Phoenix.

AVERAGE DISCHARGE.--30 years, 622 ft³/s, 450,600 acre-ft/yr; median of yearly mean discharges, 450 ft³/s, 326,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,000 ft³/s Feb. 16, 1980, on basis of flood routing, gage height, not determined; no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,620 ft³/s Mar. 30; minimum daily, 9.5 ft³/s Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	220	260	292	326	1230	1710	281	164	248	475	297
2	9.5	203	332	248	351	1230	1530	750	165	245	716	297
3	9.7	248	345	203	341	124	3090	695	159	245	865	304
4	13	291	442	196	305	85	1960	324	168	298	986	315
5	21	345	525	205	301	67	1090	289	159	321	1080	330
6	24	360	546	206	314	452	1000	288	142	324	908	260
7	26	369	522	204	358	638	1450	285	152	323	844	233
8	19	392	502	225	361	634	2720	280	160	322	721	226
9	18	403	494	226	313	590	2580	273	163	315	582	226
10	17	405	482	226	328	447	1210	274	159	317	366	222
11	13	407	452	226	328	439	831	274	154	294	273	221
12	23	405	443	226	326	435	1380	274	148	277	223	219
13	24	389	445	226	324	441	653	273	162	274	189	212
14	24	410	445	226	330	459	569	274	161	274	151	206
15	22	452	444	226	381	481	533	274	153	273	137	206
16	43	481	402	187	436	498	532	265	152	263	240	196
17	146	496	305	223	410	482	527	267	143	251	336	191
18	252	476	282	234	210	496	562	280	128	251	347	187
19	274	433	271	229	104	347	608	278	125	262	347	182
20	277	403	247	236	77	213	617	273	167	272	347	182
21	223	317	223	289	63	192	364	261	210	281	355	192
22	151	248	310	289	58	164	313	225	280	281	450	195
23	129	158	496	237	56	239	300	206	291	280	486	199
24	123	117	521	223	59	490	289	193	291	272	471	174
25	122	173	358	241	55	672	281	174	281	268	421	177
26	148	236	422	302	46	1030	278	160	288	268	353	181
27	234	e327	538	305	48	2550	274	168	293	265	398	192
28	270	e296	585	296	60	2860	271	164	298	263	382	193
29	264	254	579	264	---	2900	271	176	295	258	311	189
30	220	228	555	252	---	3620	270	170	291	254	289	184
31	217	---	428	261	---	3240	---	159	---	243	287	---
TOTAL	3373.2	9942	13201	7429	6669	27745	28063	8527	5902	8582	14336	6588
MEAN	109	331	426	240	238	895	935	275	197	277	462	220
MAX	277	496	585	305	436	3620	3090	750	298	324	1080	330
MIN	9.5	117	223	187	46	67	270	159	125	243	137	174
AC-FT	6690	19720	26180	14740	13230	55030	55660	16910	11710	17020	28440	13070

CAL YR 1990	TOTAL	64923.51	MEAN	178	MAX	801	MIN	.00	AC-FT	128800
WTR YR 1991	TOTAL	140357.2	MEAN	385	MAX	3620	MIN	9.5	AC-FT	278400

e Estimated

GILA RIVER BASIN

275

09512190 SALT RIVER AT 24TH STREET, AT PHOENIX, AZ

LOCATION.--Lat 33°24'56", long 112°01'45", in NE¼ sec.22, T.1 N., R.3 E., Maricopa County, Hydrologic Unit 15060106 in center of bridge, and 3.6 mi southwest of downtown post office in Phoenix.

DRAINAGE AREA.--13,391 mi².

PERIOD OF RECORD.--Discharge measurements, water years 1983, 1985-86; October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,074.80 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Flow affected by regulation and large diversions for irrigation, municipal, and industrial use.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,800 ft³/s Mar. 28, 1991, gage height, 3.04 ft; no flow for most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 38,400 ft³/s Oct. 3, 1983, gage height, 6.80 ft, datum then in use, from discharge measurement made that day.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,800 ft³/s Mar. 28, gage height 3.04 ft; no flow most of the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	16	1910	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	9.5	311	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	313	773	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	97	1700	.00	.00	.00	.00	.00
5	.00	.00	.00	8.5	.00	49	203	.00	.00	.00	.00	7.7
6	.00	.00	.00	6.2	.00	46	28	.00	.00	.00	.00	.02
7	.00	.00	.00	.00	.00	23	2.7	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	86	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	1630	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	743	.00	.00	.00	.00	.00
11	e.00	.00	.00	.00	.00	.00	36	.00	.00	.00	.00	.00
12	e.00	.00	.00	.00	.00	.00	11	.00	.00	.00	.00	.00
13	e.00	.00	.00	.00	.00	.00	.25	.00	.00	.00	.00	.00
14	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	e.00	.00	.00	.00	.00	2.1	.00	.00	.00	.00	.00	.00
16	e.00	.00	.00	.00	.00	12	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	5.1	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	9.2	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	5.6	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	3.6	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	7.5	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	12	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	7.0	2990	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	2820	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	2700	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	3350	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	14.70	7.00	12470.60	7433.95	0.00	0.00	0.00	0.00	7.72
MEAN	.000	.000	.000	.47	.25	402	248	.000	.000	.000	.000	.26
MAX	.00	.00	.00	8.5	7.0	3350	1910	.00	.00	.00	.00	7.7
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	29	14	24740	14750	.00	.00	.00	.00	15

CAL YR 1990 TOTAL 638.50 MEAN 1.75 MAX 442 MIN .00 AC-FT 1270
WTR YR 1991 TOTAL 19933.97 MEAN 54.6 MAX 3350 MIN .00 AC-FT 39540

e Estimated

09512200 SALT RIVER TRIBUTARY IN SOUTH MOUNTAIN PARK, AT PHOENIX, AZ

LOCATION.--Lat 33°20'49", long 112°05'03", in NE¼NE¼ sec.18, T.1 S., R.3 E., Maricopa County, Hydrologic Unit 15060106, in South Mountain Park, on left bank 6.5 mi south of Phoenix main post office.

DRAINAGE AREA.--1.75 mi².

PERIOD OF RECORD.--January 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,405.20 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. No storage or diversion above station.

AVERAGE DISCHARGE.--30 years, 0.011 ft³/s, 8.0 acre-ft/yr; median of yearly mean discharges, 0.002 ft³/s, 1.4 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,210 ft³/s Aug. 15, 1990, gage height, 10.31 ft, from rating curve extended above 31 ft³/s on basis of measurements of peak flow through culvert at gage heights 5.80, 9.09, and 9.52 ft; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 171 ft³/s, Sept. 5, gage height 5.98 ft; no flow most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	e2.3
6	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	e.00
7	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	e.00
8	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	e.00
9	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	e.00
10	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	e.00
11	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	e.00
12	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	e.00
13	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	e.00
14	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	e.00
15	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	e.00
16	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	e.00
17	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00
18	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00
19	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00
20	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00
21	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00
22	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00
23	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00
24	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00
25	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	e.00	e.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	e.00	e.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	e.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.30
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.077
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.3
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.6
CAL YR 1990	TOTAL	37.00	MEAN	.10	MAX	33	MIN	.00	AC-FT	73		
WTR YR 1991	TOTAL	2.30	MEAN	.006	MAX	2.3	MIN	.00	AC-FT	4.6		

e Estimated

09512280 CAVE CREEK BELOW COTTONWOOD CREEK, NEAR CAVE CREEK, AZ

LOCATION.--Lat 33°53'14", long 111°57'12", in SE¼SE¼SW¼ sec.4, T.6 N., R.4 E., Maricopa County, Hydrologic Unit 15060106, on left bank 1,500 ft downstream from Cottonwood Creek and 3.7 mi north of town of Cave Creek.

DRAINAGE AREA.--82.7 mi².

PERIOD OF RECORD.--October 1980 to current year. Prior to October 1989, published as "below Cottonwood Wash."

GAGE.--Water-stage recorder. Elevation of gage is 2,280 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--11 years, 5.27 ft³/s, 3,820 acre-ft/yr; median of yearly mean discharges, 2.8 ft³/s, 2,000 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft³/s Mar. 1, 1991, gage height, 7.24 ft; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 19, 1980, reached a stage of 10.4 ft, from flood marks, discharge, 7,020 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2115	*3,900	*7.24
Mar. 26	1445	847	3.47

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.04	1.4	e1710	11	1.4	.02	.00	.00	.00
2	.00	.00	.00	.13	1.4	e1100	7.8	1.3	.00	.00	.00	.00
3	.00	.00	.00	.18	1.4	e33	6.8	1.3	.00	.00	.00	.00
4	.00	.00	.00	.97	1.4	e6.3	5.3	1.3	.00	.00	.00	.00
5	.00	.00	.00	1.7	1.4	e5.8	4.8	1.2	.00	.00	.00	.00
6	.00	.00	.00	2.0	1.4	e3.0	4.4	1.3	.00	.00	.00	.00
7	.00	.00	.00	1.6	1.4	e2.4	4.1	1.2	.00	.00	.00	.00
8	.00	.00	.00	1.6	1.4	e2.1	3.7	1.1	.00	.00	.00	.00
9	.00	.00	.00	1.3	1.4	.93	3.5	.99	.00	.00	.00	.00
10	.00	.00	.00	1.1	1.4	.81	3.6	.90	.00	.00	.00	.00
11	.00	.00	.00	1.1	1.4	.79	3.4	.79	.00	.00	1.5	.00
12	.00	.00	.00	1.1	1.4	.79	3.3	.77	.00	.00	.00	.00
13	.00	.00	.00	1.1	1.4	.79	3.3	.78	.00	.00	.00	.00
14	.00	.00	.00	.92	1.4	1.2	3.1	.70	.00	.00	.00	.00
15	.00	.00	.00	1.1	1.4	1.6	3.1	.64	.00	.00	.00	.00
16	.00	.00	.00	1.2	1.4	3.1	3.0	.57	.00	.00	.00	.00
17	.00	.00	.00	1.1	1.5	2.1	2.7	.50	.00	.00	.00	.00
18	.00	.00	.00	1.1	1.5	1.6	2.3	.50	.00	.00	.00	.00
19	.00	.00	.00	1.1	1.6	1.8	2.2	.50	.00	.00	.00	.00
20	.00	.00	.00	1.4	1.6	12	2.2	.50	.00	.00	.00	.00
21	.00	.00	.00	1.3	1.6	98	2.0	.37	.00	.00	.00	.00
22	.00	.00	.00	1.1	1.6	54	2.0	.36	.00	.00	.00	.00
23	.00	.00	.00	1.1	1.4	27	2.0	.36	.00	.00	.00	.00
24	.00	.00	.00	1.1	1.4	12	2.0	.31	.00	.00	.00	.00
25	.00	.00	.00	1.1	1.4	7.8	1.8	.29	.00	.00	.00	.00
26	.00	.46	.00	1.1	1.4	261	1.8	.26	.00	.00	.00	.00
27	.00	.00	.00	1.1	1.4	184	1.8	.22	.00	.00	.00	.00
28	.00	.00	.00	1.2	142	146	1.6	.20	.00	.00	.00	.00
29	.00	.00	.00	1.4	---	78	1.6	.20	.00	.00	.00	.00
30	.00	.00	.00	1.4	---	26	1.5	.14	.00	.00	.00	.00
31	.00	---	.00	1.4	---	15	---	.09	---	.00	.00	---
TOTAL	0.00	0.46	0.00	35.14	180.8	3798.91	101.7	21.04	0.02	0.00	1.50	0.00
MEAN	.000	.015	.000	1.13	6.46	123	3.39	.68	.001	.000	.048	.000
MAX	.00	.46	.00	2.0	142	1710	11	1.4	.02	.00	1.5	.00
MIN	.00	.00	.00	.04	1.4	.79	1.5	.09	.00	.00	.00	.00
AC-FT	.00	.9	.00	70	359	7540	202	.42	.04	.00	3.0	.00
CAL YR 1990	TOTAL	282.00	MEAN	.77	MAX	53	MIN	.00	AC-FT	559		
WTR YR 1991	TOTAL	4139.57	MEAN	11.3	MAX	1710	MIN	.00	AC-FT	8210		

e Estimated

09512500 AGUA FRIA RIVER NEAR MAYER, AZ

LOCATION.--Lat 34°18'55", long 112°03'48", in NW¼SE¼ sec.20, T.11 N., R.3 E., Yavapai County, Hydrologic Unit 15070102, on left bank at Sycamore damsite, 700 ft downstream from Big Bug Creek and 12 mi southeast of Mayer.

DRAINAGE AREA.--585 mi².

PERIOD OF RECORD.--January 1940 to current year.

REVISED RECORDS.--WDR AZ-88-1: 1987. WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,434 ft above National Geodetic Vertical Datum of 1929 (levels by Maricopa County Municipal Water Conservation District No. 1).

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions above station for mining and irrigation of about 600 acres.

AVERAGE DISCHARGE.--51 years, 22.3 ft³/s, 16,160 acre-ft/yr; median of yearly mean discharges, 13 ft³/s, 9,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,100 ft³/s Feb. 19, 1980, from rating curve extended above 3,400 ft³/s on basis of slope-area measurement of peak flow, gage height, 15.76 ft, from mean of surge, inside high-water mark 16.03 ft, floodmark 18.97 ft; negligible flow at times during the summer months in most previous years when entire flow was diverted to Perry Canal above station and flow past gage was seepage only.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft³/s, from rating curve extended as explained above, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2100	*19,200	*12.65
Mar. 26	1530	3,270	6.62

Minimum daily discharge, 0.17 ft³/s Aug. 22-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.2	3.2	3.2	3.3	7180	65	4.2	1.8	.81	.52	.84
2	4.6	1.3	3.0	3.2	3.3	1280	e51	4.1	1.8	.78	.45	.84
3	2.6	1.3	3.2	3.3	3.3	e196	e40	4.1	1.7	.76	.41	.84
4	1.9	1.3	3.2	4.7	3.3	e119	e32	4.0	1.7	.74	.39	.84
5	1.7	1.3	3.2	4.6	3.3	e85	e27	4.1	1.6	.73	.35	.84
6	2.0	1.3	3.2	4.3	3.3	e66	e23	3.9	1.6	.71	.35	42
7	3.3	1.3	3.2	3.9	3.4	e55	e19	3.9	1.6	.72	.33	e1.6
8	3.3	1.4	3.2	3.9	3.5	e46	e17	3.8	1.5	.69	.31	e1.0
9	3.4	1.4	3.2	3.9	3.5	e38	14	3.8	1.5	.68	.31	e1.0
10	3.3	1.4	3.2	3.9	3.5	e31	12	3.7	1.4	.66	.31	e1.0
11	3.3	1.5	3.3	3.9	3.5	e26	10	3.5	1.4	.64	.51	e.80
12	3.3	1.5	3.3	3.8	3.5	26	9.5	3.4	1.4	.65	.42	e.60
13	3.3	1.5	3.3	3.6	3.5	25	8.5	3.3	1.4	.63	.33	e.50
14	2.5	1.6	3.3	3.6	3.5	25	8.1	3.3	1.4	.63	.27	e.50
15	1.2	1.6	3.3	3.6	3.5	26	7.6	3.2	1.3	.62	.25	e.50
16	1.2	1.7	3.5	3.6	3.5	28	7.3	3.2	1.2	.63	.24	e.50
17	1.2	1.7	3.6	3.6	3.7	26	6.8	3.1	1.2	.63	.24	e.50
18	1.2	1.8	3.5	3.6	3.9	24	6.5	3.2	1.1	.61	.24	e.50
19	1.2	1.9	3.4	3.6	3.6	52	6.3	3.1	1.1	.57	.19	e.50
20	1.2	2.2	3.2	3.7	3.5	47	6.0	3.1	1.1	.89	.19	e.50
21	1.1	2.3	3.2	3.8	3.5	203	5.6	2.8	1.1	.75	.18	e.50
22	1.1	2.3	3.2	3.8	3.5	181	5.4	2.7	1.0	.68	.17	e.50
23	1.1	2.4	3.2	3.7	3.4	222	5.3	2.8	1.0	.61	.17	e.50
24	1.2	2.5	3.1	3.8	3.3	224	5.2	2.7	.99	.53	.17	e.50
25	1.2	2.6	3.2	3.9	3.3	124	4.9	2.7	.98	.51	.17	e.50
26	1.3	4.2	3.2	4.0	3.3	579	4.9	2.6	.94	.51	72	e.50
27	1.3	5.6	3.2	3.8	3.4	253	4.6	2.6	.88	.48	1.8	e.50
28	1.3	3.9	3.2	3.6	80	340	4.5	2.6	.89	.48	.88	e.50
29	1.3	3.4	3.2	3.5	---	256	4.3	2.2	.83	.49	.84	e.50
30	1.3	3.3	3.2	3.5	---	176	4.3	1.8	.84	.59	.84	e.50
31	1.3	---	3.2	3.3	---	107	---	1.7	---	.57	.84	---
TOTAL	60.7	62.7	100.6	116.2	173.1	12066	425.6	99.2	38.25	19.98	84.67	61.20
MEAN	1.96	2.09	3.25	3.75	6.18	389	14.2	3.20	1.27	.64	2.73	2.04
MAX	4.6	5.6	3.6	4.7	80	7180	65	4.2	1.8	.89	.72	.42
MIN	1.1	1.2	3.0	3.2	3.3	24	4.3	1.7	.83	.48	.17	.50
AC-FT	120	124	200	230	343	23930	844	197	76	40	168	121
CAL YR 1990	TOTAL	2319.88	MEAN	6.36	MAX	238	MIN	.09	AC-FT	4600		
WTR YR 1991	TOTAL	13308.20	MEAN	36.5	MAX	7180	MIN	.17	AC-FT	26400		

e Estimated

GILA RIVER BASIN

279

09512600 TURKEY CREEK NEAR CLEATOR, AZ

LOCATION.--Lat 34°16'56", long 112°12'25", in SW¹/₄SW¹/₄SE¹/₄ sec.36, T.11 N., R.1 E. (unsurveyed), Yavapai County, Hydrologic Unit 15070102, in Prescott National Forest, on right bank 0.7 mi upstream from Forest Route 259, 1.5 mi east of Cleator, and 9.3 mi south of Mayer.

DRAINAGE AREA.--89.4 mi².

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,140 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--12 years, 11.3 ft³/s, 8,190 acre-ft/yr; median of yearly mean discharges, 5.7 ft³/s, 4,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,230 ft³/s Feb. 19, 1980, gage height, 11.51 ft, from rating curve extended above 1,500 ft³/s on basis of slope-area measurement of peak flow; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 5, 1970, reached a stage of about 16 ft, from floodmarks, discharge, about 9,000 ft³/s, from rating curve extended above 1,500 ft³/s on basis of slope-area measurement at gage height 11.51 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2000	*2,810	*7.32
Mar. 26	1930	209	2.41

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	.00	.00	.00	.00	435	72	2.8	.72	.00	.00	.00
2	.51	.00	.00	.00	.00	254	69	2.5	.68	.00	.00	.00
3	.04	.00	.00	.00	.00	69	64	2.4	.27	.00	.00	.00
4	.02	.00	.00	.01	.00	45	56	2.4	.01	.00	.00	.00
5	.01	.00	.00	.00	.00	67	44	2.3	.00	.00	.00	.00
6	.01	.00	.00	.00	.00	52	35	2.3	.00	.00	.00	.00
7	.01	.00	.00	.00	.00	27	30	2.3	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	19	22	2.1	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	17	16	1.9	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	15	12	1.8	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	14	10	1.7	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	12	8.8	1.7	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	11	7.6	1.7	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	10	6.5	1.8	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	9.5	6.2	1.8	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	9.8	5.3	1.6	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	8.4	5.0	1.6	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	7.4	4.8	1.6	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	8.5	4.8	1.6	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	11	4.6	1.5	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	14	4.0	1.4	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	17	3.7	1.3	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	29	3.6	1.2	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	37	3.4	1.2	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	40	3.4	.83	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	81	3.4	.72	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	75	3.2	.57	.00	.00	.00	.00
28	.00	.00	.00	.00	.31	79	3.0	.57	.00	.00	.00	.00
29	.00	.00	.00	.00	---	102	2.9	.44	.00	.00	.00	.00
30	.00	.00	.00	.00	---	84	2.8	.35	.00	.00	.00	.00
31	.00	---	.00	.00	---	62	---	.28	---	.00	.00	---
TOTAL	2.70	0.00	0.00	0.01	0.31	1721.6	517.0	48.26	1.68	0.00	0.00	0.00
MEAN	.087	.000	.000	.000	.011	55.5	17.2	1.56	.056	.000	.000	.000
MAX	2.1	.00	.00	.01	.31	435	72	2.8	.72	.00	.00	.00
MIN	.00	.00	.00	.00	.00	7.4	2.8	.28	.00	.00	.00	.00
AC-FT	5.4	.00	.00	.02	.6	3410	1030	96	3.3	.00	.00	.00

CAL YR	1990	TOTAL	1450.09	MEAN	3.97	MAX	622	MIN	.00	AC-FT	2880
WTR YR	1991	TOTAL	2291.56	MEAN	6.28	MAX	435	MIN	.00	AC-FT	4550

09512800 AGUA FRIA RIVER NEAR ROCK SPRINGS, AZ

LOCATION.--Lat 34°00'56", long 112°10'02", in NW¼NW¼ sec.28, T.8 N., R.2 E., Yavapai County, Hydrologic Unit 15070102, on right bank 2.5 mi southwest of Rock Springs and 10 mi upstream from Lake Pleasant.

DRAINAGE AREA.--1,111 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1970 to current year (monthly discharge only, October 1973 to September 1974).

Low-flow records not equivalent prior to Oct. 1, 1974, due to spring flow in streambed between sites in use.

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,800 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1974, at site 600 ft upstream at datum 10.00 ft higher (now used as supplementary gage).

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--21 years, 80.8 ft³/s, 58,540 acre-ft/yr; median of yearly mean discharges, 32 ft³/s, 23,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,500 ft³/s Feb. 19, 1980, gage height, 21.08 ft recorded, 28.15 ft from floodmark, from rating curve extended above 21,000 ft³/s on basis of slope-area measurement at gage height 27.2 ft; no flow at times each year prior to October 1974; since October 1974, no flow May 27 to July 12, 1977, and for many days in 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft³/s and maximum (*), from rating curve extended logarithmically above 6,400 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2000	*53,500	*21.73
Mar. 26	2130	3,440	9.98

Minimum daily discharge, 0.47 ft³/s Oct. 19, 25-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.64	.51	.71	.75	.83	23600	480	8.5	3.2	1.8	1.7	2.6
2	.62	.54	.71	.75	.83	8270	446	7.7	3.8	1.7	1.7	4.3
3	.62	.54	.71	.75	.85	804	390	7.1	3.8	1.7	1.9	27
4	.58	.55	.71	.81	.85	324	333	6.5	3.6	1.6	1.7	4.6
5	.58	.56	.71	.80	.81	218	268	5.9	3.3	1.5	1.7	2.1
6	.58	.58	.72	.82	.81	171	212	5.2	3.3	1.4	1.7	2.0
7	.58	.58	.72	.79	.81	105	170	5.0	3.2	1.4	1.5	1.9
8	.58	.58	.74	.75	.83	68	128	4.7	3.1	1.4	1.5	1.6
9	.57	.58	.75	.75	.85	48	98	4.2	2.8	1.4	1.4	1.5
10	.57	.58	.75	.75	.85	38	77	3.9	2.6	1.4	1.4	1.4
11	.55	.58	.75	.75	.85	32	60	3.7	2.7	1.4	1.4	1.3
12	.53	.58	.77	.78	.88	26	49	3.8	2.6	1.5	1.5	1.2
13	.52	.58	.80	.80	1.6	22	43	3.8	2.8	1.5	1.5	1.2
14	.50	.58	.80	.80	2.9	20	37	3.5	2.8	1.4	1.6	1.2
15	.51	.59	.80	.80	2.8	20	33	3.6	2.6	1.3	1.7	1.3
16	.56	.58	.80	.80	2.5	29	30	3.6	2.5	1.2	1.8	1.1
17	.53	.60	.80	.80	2.4	28	26	3.5	2.2	1.3	1.8	1.0
18	.50	.62	.80	.80	2.1	23	24	3.4	2.1	1.3	1.7	1.1
19	.47	.62	.80	.80	1.8	32	23	3.3	2.1	1.4	1.7	1.1
20	.48	.62	.81	.80	1.6	59	21	3.4	2.0	1.4	1.5	1.1
21	.48	.62	.80	.80	1.4	525	19	3.4	2.0	1.4	1.6	1.1
22	.49	.62	.80	.80	1.2	577	18	3.4	1.9	1.5	1.4	1.1
23	.48	.62	.80	.80	1.1	451	17	3.3	1.9	1.5	1.5	1.1
24	.48	.62	.77	.80	.99	416	16	3.2	1.9	1.6	1.5	1.1
25	.47	.62	.78	.80	.86	321	14	3.2	1.8	1.6	1.5	1.1
26	.47	.65	.75	.80	.76	1120	13	3.0	1.7	1.5	1.5	1.1
27	.47	.62	.75	.80	.71	1450	12	2.8	1.8	1.5	36	1.0
28	.47	.73	.75	.82	968	1030	11	2.8	1.8	1.6	7.5	1.1
29	.47	.75	.77	.82	---	1260	10	3.0	1.7	1.6	3.7	1.1
30	.47	.75	.76	.81	---	761	9.5	3.0	1.8	1.5	2.6	1.1
31	.48	---	.75	.85	---	564	---	2.8	---	1.6	2.1	---
TOTAL	16.30	18.15	23.64	24.55	1002.77	42412	3087.5	128.2	75.4	45.9	93.3	71.5
MEAN	.53	.60	.76	.79	35.8	1368	103	4.14	2.51	1.48	3.01	2.38
MAX	.64	.75	.81	.85	968	23600	480	8.5	3.8	1.8	36	27
MIN	.47	.51	.71	.75	.71	20	9.5	2.8	1.7	1.2	1.4	1.0
AC-FT	32	36	47	49	1990	84120	6120	254	150	91	185	142
CAL YR 1990	TOTAL	1631.62	MEAN	4.47	MAX	317	MIN	.00	AC-FT	3240		
WTR YR 1991	TOTAL	46999.21	MEAN	129	MAX	23600	MIN	.47	AC-FT	93220		

09512800 AGUA FRIA RIVER NEAR ROCK SPRINGS, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1982 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 17...	0955	0.53	715	8.0	27.0	22.0	4.5	716	7.2	88	K5	73
NOV 14...	0730	0.50	660	8.3	6.5	10.0	8.5	714	9.4	89	K19	K12
DEC 12...	0950	0.75	700	8.2	14.5	13.0	2.3	713	8.8	90	K11	K16
JAN 15...	0845	0.75	720	8.4	7.0	10.0	4.0	718	9.7	91	K5	29
FEB 12...	0840	0.90	700	8.3	13.0	14.0	0.90	717	7.7	80	23	34
MAR 19...	0920	22	620	8.1	10.0	13.0	1.2	709	8.6	88	K22	K17
APR 30...	1000	9.8	584	8.3	24.0	18.0	1.0	714	8.6	97	K5	K2
MAY 15...	0800	3.5	620	8.2	20.5	19.0	2.5	712	5.6	65	K2	200
JUN 25...	0720	1.8	648	8.1	23.0	22.0	2.5	709	5.4	66	K7	21
JUL 17...	0745	1.2	668	8.0	34.0	26.0	34	714	4.4	58	29	92
AUG 29...	0750	3.7	730	8.1	26.0	24.5	21	715	5.0	64	1600	980
SEP 18...	0750	1.0	805	7.8	25.5	25.0	0.50	712	3.6	47	87	K32
DATE		HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD HCO3 MG/L AS (00453)	CAR- BONATE WATER DIS IT FIELD CO3 MG/L AS (00452)	HY- DROXIDE WATER DIS IT FIELD OH MG/L AS (71834)	ALKA- LINITY WAT DIS TOT IT FIELD CACO3 MG/L AS (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT 17...	260	0	57	29	51	1	2.9	338	0	0	277	60
NOV 14...	240	4	43	31	52	1	2.4	266	8	0	231	73
DEC 12...	260	16	55	30	50	1	2.2	299	0	0	245	65
JAN 15...	280	21	59	32	50	1	2.2	304	5	0	258	72
FEB 12...	250	0	50	30	50	1	2.3	305	0	0	250	81
MAR 19...	240	45	57	23	36	1	2.4	234	0	0	192	80
APR 30...	220	31	52	23	38	1	2.3	234	1	0	194	77
MAY 15...	230	34	56	23	43	1	2.3	245	0	0	201	87
JUN 25...	240	24	56	24	47	1	2.7	262	0	0	215	86
JUL 17...	240	17	58	22	49	1	2.6	266	0	0	218	90
AUG 29...	250	30	56	26	49	1	2.9	264	0	0	216	71
SEP 18...	260	32	61	26	47	1	3.1	277	0	0	227	85

K Based on non-ideal colony count.

09512800 AGUA FRIA RIVER NEAR ROCK SPRINGS, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 17...	34	0.30	26	404	427	0.55	--	--	--	<0.010	<0.010	<0.100
NOV 14...	37	0.30	22	384	400	0.52	--	--	--	<0.010	<0.010	<0.100
DEC 12...	34	0.40	23	404	407	0.55	--	--	--	<0.010	<0.010	<0.100
JAN 15...	43	0.30	23	426	436	0.58	--	--	--	0.020	<0.010	<0.100
FEB 12...	46	0.20	17	414	427	0.56	--	--	--	0.010	<0.010	<0.100
MAR 19...	33	0.30	21	393	372	0.53	--	0.820	3.6	<0.010	0.010	*0.800
APR 30...	35	0.40	21	356	366	0.48	0.310	--	--	0.010	<0.010	0.320
MAY 15...	35	0.30	23	391	391	0.53	0.069	0.079	0.35	0.010	0.010	0.079
JUN 25...	41	0.40	26	382	412	0.52	--	--	--	<0.010	<0.010	<0.050
JUL 17...	43	0.40	26	389	422	0.53	--	--	--	<0.010	<0.010	<0.050
AUG 29...	36	0.10	29	412	401	0.56	0.170	--	--	0.020	<0.010	0.190
SEP 18...	47	0.40	28	418	434	0.57	--	--	--	<0.010	<0.010	<0.050

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)
OCT 17...	<0.100	0.030	0.020	0.27	0.30	--	--	0.040	0.12	0.050	0.040
NOV 14...	<0.100	0.060	0.030	--	<0.20	--	--	<0.010	0.03	<0.010	0.010
DEC 12...	<0.100	0.020	0.020	--	<0.20	--	--	0.020	0.06	0.030	0.020
JAN 15...	<0.100	0.010	0.010	--	<0.20	--	--	0.020	0.06	0.020	0.020
FEB 12...	<0.100	<0.010	<0.010	--	0.30	--	--	0.020	0.09	0.010	0.030
MAR 19...	*0.830	0.010	<0.010	0.29	0.30	1.1	4.9	0.040	0.09	0.030	0.030
APR 30...	0.250	0.020	0.010	0.18	0.20	0.52	2.3	0.050	0.12	0.040	0.040
MAY 15...	0.089	0.020	0.030	0.18	0.20	0.28	1.2	0.090	0.12	0.050	0.040
JUN 25...	<0.050	0.030	0.010	0.47	0.50	--	--	0.080	0.18	0.060	0.060
JUL 17...	<0.050	<0.010	<0.010	--	0.20	--	--	0.070	0.15	0.050	0.050
AUG 29...	0.190	0.020	0.030	0.48	0.50	0.69	3.1	0.150	0.21	0.070	0.070
SEP 18...	<0.050	0.010	0.020	--	<0.20	--	--	0.080	0.25	0.070	0.080

* Value verified.

< Actual value is known to be less than value shown.

09512800 AGUA FRIA RIVER NEAR ROCK SPRINGS, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 17...	0.040	0.12	14	<100	210	190	<1	<1	4	400	<3
NOV 14...	<0.010	--	12	<100	200	180	<1	1	5	500	12
DEC 12...	0.020	0.06	10	<100	160	170	<1	<1	7	180	5
JAN 15...	0.020	0.06	10	<100	140	150	<1	<1	4	300	3
FEB 12...	0.010	0.03	8	<100	150	160	<1	<1	2	210	9
MAR 19...	0.030	0.09	11	<100	*80	100	<1	2	4	210	<3
APR 30...	0.030	0.09	13	<100	180	120	<1	2	4	80	4
MAY 15...	0.040	0.12	14	<100	140	140	<1	<1	5	460	6
JUN 25...	0.050	0.15	16	<100	170	160	<1	1	5	190	<3
JUL 17...	0.050	0.15	15	<100	--	170	<1	<1	3	60	4
AUG 29...	0.060	0.18	18	<100	200	180	<1	2	6	1900	6
SEP 18...	0.060	0.18	14	<100	160	180	<1	<1	3	200	5

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	CYANIDE TOTAL (MG/L AS CN) (00720)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 17...	1	50	<0.10	<1	<1	<10	1.6	0.3	<0.010	19	0.03
NOV 14...	2	10	<0.20	<1	<1	<10	2.8	0.9	<0.010	19	0.03
DEC 12...	1	60	<0.10	<1	<1	<10	1.1	0.4	<0.010	3	0.01
JAN 15...	1	<10	<0.10	<1	<1	<10	1.4	0.3	<0.010	16	0.03
FEB 12...	1	40	<0.10	<1	<1	<10	2.1	0.4	<0.010	12	0.03
MAR 19...	1	40	<0.10	1	<1	<10	4.4	0.4	<0.010	<0.5	0.02
APR 30...	3	30	<0.10	<1	<1	<10	2.8	0.5	<0.010	1	0.03
MAY 15...	2	80	<0.10	<1	<1	<10	2.4	0.5	<0.010	12	0.11
JUN 25...	3	80	<0.10	<1	<1	<10	2.1	0.1	<0.010	16	0.08
JUL 17...	5	30	<0.10	<1	<1	<10	1.8	0.2	<0.010	1	0.00
AUG 29...	2	170	<0.10	<1	<1	<10	1.9	0.8	<0.010	131	1.3
SEP 18...	1	110	<0.10	<1	<1	<10	1.3	0.3	<0.010	21	0.06

* Value verified.

< Actual value is known to be less than value shown.

09512830 BOULDER CREEK NEAR ROCK SPRINGS, AZ

LOCATION.--Lat 33°59'55", long 112°12'57", in SE¼NW¼ sec.36, T.8 N., R.1 E., Yavapai County, Hydrologic Unit 15070102, on left bank 2.2 mi upstream from Agua Fria River, 1.5 mi southwest of Rock Springs, and 7.1 mi northwest of New River.

DRAINAGE AREA.--37.8 mi².

PERIOD OF RECORD.--May 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,890 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--8 years, 2.40 ft³/s, 1,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,230 ft³/s Mar. 1, 1991, gage height, 8.26 ft, from rating curve extended above 6.5 ft³/s on basis of slope-area measurement at gage height 7.33 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft³/s and maximum (*), from rating curve extended above 6.5 ft³/s on basis of slope-area measurement at gage height 7.33 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1430	*3,230	*8.26
Mar. 26	1400	314	3.60

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.00	.00	.03	.32	e1310	44	.54	.07	.00	.00	.00
2	.01	.00	.00	.03	.29	163	37	.45	.08	.00	.00	.00
3	.01	.00	.00	.03	.29	57	30	.34	.08	.00	.00	.00
4	.01	.00	.00	.12	.32	31	24	.27	.08	.00	.00	.00
5	.00	.00	.00	.14	.32	18	19	.25	.08	.00	.00	.00
6	.00	.00	.00	.17	.32	12	16	.20	.07	.00	.00	.00
7	.00	.00	.00	.15	.33	7.6	13	.18	.03	.00	.00	.00
8	.00	.00	.00	.15	.39	5.4	10	.14	.03	.00	.00	.00
9	.00	.00	.00	.15	.41	4.0	8.3	.12	.01	.00	.00	.00
10	.00	.00	.00	.15	.44	3.1	7.0	.11	.02	.00	.00	.00
11	.00	.00	.00	.19	.44	2.4	6.1	.12	.03	.00	.00	.00
12	.00	.00	.00	.22	.43	1.9	5.0	.11	.06	.00	.00	.00
13	.00	.00	.00	.19	.38	1.5	4.6	.12	.06	.00	.00	.00
14	.00	.00	.00	.19	.34	1.2	4.1	.12	.03	.00	.00	.00
15	.00	.00	.00	.19	.33	1.6	3.8	.12	.03	.00	.00	.00
16	.00	.00	.00	.20	.32	2.6	3.5	.12	.03	.00	.00	.00
17	.00	.00	.00	.25	.31	2.5	3.0	.12	.01	.00	.00	.00
18	.00	.00	.00	.25	.26	2.5	2.6	.10	.01	.00	.00	.00
19	.00	.00	.00	.25	.24	2.9	2.2	.10	.00	.00	.00	.00
20	.00	.00	.00	.26	.25	14	2.0	.11	.00	.00	.00	.00
21	.00	.00	.00	.25	.23	28	1.8	.10	.00	.00	.00	.00
22	.00	.00	.00	.28	.22	32	1.7	.09	.00	.00	.00	.00
23	.00	.00	.00	.30	.19	36	1.5	.09	.00	.00	.00	.00
24	.00	.00	.00	.25	.13	38	1.4	.08	.00	.00	.00	.00
25	.00	.00	.00	.25	.11	36	1.4	.08	.00	.00	.00	.00
26	.00	.00	.00	.25	.12	127	1.2	.08	.00	.00	.00	.00
27	.00	.00	.00	.25	.13	110	1.0	.07	.00	.00	.00	.00
28	.00	.00	.00	.25	5.2	93	.91	.07	.00	.00	.00	.00
29	.00	.00	.00	.28	---	85	.80	.07	.00	.00	.00	.00
30	.00	.00	.01	.32	---	66	.65	.07	.00	.00	.00	.00
31	.00	---	.02	.32	---	51	---	.05	---	.00	.00	---
TOTAL	0.07	0.00	0.03	6.31	13.06	2346.2	257.56	4.59	0.81	0.00	0.00	0.00
MEAN	.002	.000	.001	.20	.47	75.7	8.59	.15	.027	.000	.000	.000
MAX	.04	.00	.02	.32	5.2	1310	44	.54	.08	.00	.00	.00
MIN	.00	.00	.00	.03	.11	1.2	.65	.05	.00	.00	.00	.00
AC-FT	.1	.00	.06	13	26	4650	511	9.1	1.6	.00	.00	.00

CAL YR	1990	TOTAL	14.27	MEAN	.039	MAX	5.6	MIN	.00	AC-FT	28
WTR YR	1991	TOTAL	2628.63	MEAN	7.20	MAX	1310	MIN	.00	AC-FT	5210

e Estimated

09512860 HUMBUG CREEK NEAR CASTLE HOT SPRINGS, AZ

LOCATION.--Lat 33°58'02", long 112°17'34", in NW¼SE¼NE¼ sec.7, T.7 N., R.1 E., Yavapai County, Hydrologic Unit 15070102, on right bank, 3.0 mi upstream from Lake Pleasant, and 4.0 mi southeast of Castle Hot Springs.

DRAINAGE AREA.--59.9 mi².

PERIOD OF RECORD.--May 1983 to current year.

REVISED RECORDS.--WDR AZ-89-1: 1986(M), 1988(M).

GAGE.--Water-stage recorder. Elevation of gage is 1,790 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair.

AVERAGE DISCHARGE.--8 years, 2.42 ft³/s, 1,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,220 ft³/s, Mar. 1, 1991, gage height 9.00 ft, from rating curve extended above 45 ft³/s on basis of slope-area measurement at gage height 8.28 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1745	*3,220	*9.00	Mar. 26	1100	248	6.46
Mar. 21	0330	163	6.19	Mar. 27	1715	172	6.23

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.00	.04	.08	.07	883	20	.50	.00	.00	.00	.89
2	.01	.00	.04	.08	.07	100	18	.33	.02	.00	.00	.04
3	.01	.00	.04	.09	.07	25	17	.27	.01	.00	.00	.01
4	.00	.00	.04	.86	.06	14	16	.23	.00	.00	.00	.00
5	.00	.00	.05	.90	.06	10	16	.16	.00	.00	.00	.00
6	.00	.00	.05	.31	.06	7.8	15	.13	.00	.00	.00	.02
7	.00	.00	.04	.14	.06	5.6	13	.09	.00	.00	.00	.01
8	.00	.01	.04	.10	.06	4.2	11	.06	.00	.00	.00	.00
9	.00	.01	.04	.09	.07	3.1	9.1	.04	.00	.00	.00	.00
10	.00	.01	.04	.08	.06	2.5	7.7	.04	.00	.00	.00	.00
11	.00	.01	.04	.08	.06	2.0	6.7	.03	.00	.00	.00	.00
12	.00	.01	.04	.08	.06	1.5	5.9	.03	.00	.00	.00	.00
13	.00	.01	.05	.08	.06	1.2	5.5	.02	.00	.00	.00	.00
14	.00	.01	.04	.07	.06	1.1	4.8	.02	.00	.00	.00	.00
15	.00	.01	.04	.07	.06	1.6	4.5	.02	.00	.00	.00	.00
16	.00	.01	.05	.07	.06	2.4	4.2	.02	.00	.00	.00	.00
17	.00	.01	.06	.06	.06	1.8	3.7	.02	.00	.00	.00	.00
18	.00	.01	.06	.07	.07	1.5	3.5	.02	.00	.00	.00	.00
19	.00	.01	.06	.07	.05	1.8	3.4	.02	.00	.00	.00	.00
20	.00	.02	.13	.08	.05	4.3	3.1	.02	.00	.00	.00	.00
21	.00	.02	.09	.08	.05	32	2.3	.02	.00	.00	.00	.00
22	.00	.02	.09	.07	.05	10	2.2	.01	.00	.00	.00	.00
23	.00	.02	.09	.08	.05	10	2.1	.01	.00	.00	.00	.00
24	.00	.02	.09	.07	.04	12	1.9	.01	.00	.00	.00	.00
25	.00	.02	.09	.07	.04	12	1.7	.01	.00	.00	.00	.00
26	.00	.08	.09	.07	.04	58	1.6	.00	.00	.00	.00	.00
27	.00	.04	.09	.07	.04	52	1.5	.00	.00	.00	.00	.00
28	.00	.03	.13	.07	98	31	1.2	.00	.00	.00	.00	.00
29	.00	.03	.20	.07	---	30	1.1	.00	.00	.00	.00	.00
30	.00	.03	.10	.06	---	26	.81	.00	.00	.00	.00	.00
31	.00	---	.09	.07	---	22	---	.00	---	.00	.00	---
TOTAL	0.17	0.45	2.14	4.24	99.54	1369.4	204.51	2.13	0.03	0.00	0.00	0.97
MEAN	.005	.015	.069	.14	3.55	44.2	6.82	.069	.001	.000	.000	.032
MAX	.15	.08	.20	.90	.98	883	20	.50	.02	.00	.00	.89
MIN	.00	.00	.04	.06	.04	1.1	.81	.00	.00	.00	.00	.00
AC-FT	.3	.9	4.2	8.4	197	2720	406	4.2	.06	.00	.00	1.9

CAL YR	1990	TOTAL	196.31	MEAN	.54	MAX	132	MIN	.00	AC-FT	389
WTR YR	1991	TOTAL	1683.58	MEAN	4.61	MAX	883	MIN	.00	AC-FT	3340

09512970 COTTONWOOD CREEK NEAR WADDELL DAM, AZ

LOCATION.--Lat 33°53'55", long 112°18'39", in SW¼SW¼SE¼ sec.36, T.7 N., R.1 W., Yavapai County, Hydrologic Unit 15070102, on left bank 4 mi northwest of Waddell Dam and 1 mi upstream from the mouth at Lake Pleasant.

DRAINAGE AREA.--9.28 mi².

PERIOD OF RECORD.--May 1983 to current year.

REVISED RECORDS.--WDR AZ-86-1: 1983(M). WDR AZ-89-1: 1985(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 1,660 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 11, 1991, at datum 0.33 ft lower.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--8 years, 0.20 ft³/s, 145 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,250 ft³/s, Aug. 14, 1990, gage height 5.88 ft, from rating curve extended above 40 ft³/s on basis of slope-area measurement at gage height 5.80 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft³/s and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 28	1115	*564	*4.50	Mar. 27	1630	275	3.45
Mar. 21	0230	220	3.20	Aug. 11	0815	22	1.87
Mar. 26	1000	467	4.18				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.80	e.01	e.01	e.01	.04	111	.24	.07	.00	.00	.00	.36
2	e.01	e.01	e.01	e.01	.04	7.5	.21	.07	.00	.00	.00	.00
3	e.01	e.01	e.01	e.01	.03	1.0	.17	.08	.00	.00	.00	.00
4	e.01	e.01	e.01	e.01	.02	.62	.16	.08	.00	.00	.00	.00
5	e.01	e.01	e.01	e.01	.02	.59	.15	.07	.00	.00	.00	.00
6	e.01	e.01	e.01	e.01	.02	.53	.14	.07	.00	.00	.00	.00
7	e.01	e.01	e.01	e.01	.01	.53	.13	.06	.00	.00	.00	.00
8	e.01	e.01	e.01	e.01	.01	.50	.13	.05	.00	.00	.00	.00
9	e.01	e.01	e.01	e.01	.01	.45	.13	.04	.00	.00	.00	.00
10	e.01	e.01	e.01	e.01	.01	.39	.12	.05	.00	.00	.00	.00
11	e.01	e.01	e.01	e.01	.01	.33	.11	.05	.00	.00	1.8	.00
12	e.01	e.01	e.01	.01	.01	.28	.11	.04	.00	.00	.00	.00
13	e.01	e.01	e.01	.01	.00	.28	.11	.04	.00	.00	.00	.00
14	e.01	e.01	e.01	.01	.00	.31	.10	.04	.00	.00	.00	.00
15	e.01	e.01	e.01	.01	.00	.50	.09	.03	.00	.00	.00	.00
16	e.01	e.01	e.01	.01	.00	.78	.08	.03	.00	.00	.00	.00
17	e.01	e.01	e.01	.00	.03	.47	.07	.02	.00	.00	.00	.00
18	e.01	e.01	e.01	.01	.02	.47	.06	.01	.00	.00	.00	.00
19	e.01	e.01	e.01	.01	.00	.50	.06	.01	.00	.00	.00	.00
20	e.01	e.01	e.01	.02	.00	2.1	.05	.01	.00	.00	.00	.00
21	e.01	e.01	e.01	.02	.00	12	.04	.01	.00	.00	.00	.00
22	e.01	e.01	e.01	.02	.00	.02	.04	.00	.00	.00	.00	.00
23	e.01	e.01	e.01	.02	.00	.00	.04	.00	.00	.00	.00	.00
24	e.01	e.01	e.01	.02	.00	.00	.04	.00	.00	.00	.00	.00
25	e.01	e.01	e.01	.03	.00	.00	.05	.00	.00	.00	.00	.00
26	e.01	e1.0	e.01	.03	.00	28	.06	.00	.00	.00	.00	.00
27	e.01	e.50	e.01	.02	.00	22	.06	.00	.00	.00	.00	.00
28	e.01	e.03	e.01	.03	79	2.7	.07	.00	.00	.00	.00	.00
29	e.01	e.02	e.01	.02	---	.64	.07	.00	.00	.00	.00	.00
30	e.01	e.01	e.01	.02	---	.39	.07	.00	.00	.00	.00	.00
31	e.01	---	e.01	.03	---	.31	---	.00	---	.00	.00	---
TOTAL	1.10	1.81	0.31	0.46	79.28	195.19	2.96	0.93	0.00	0.00	1.80	0.36
MEAN	.035	.060	.010	.015	2.83	6.30	.099	.030	.000	.000	.058	.012
MAX	.80	1.0	.01	.03	79	111	.24	.08	.00	.00	1.8	.36
MIN	.01	.01	.01	.00	.00	.00	.04	.00	.00	.00	.00	.00
AC-FT	2.2	3.6	.6	.9	157	387	5.9	1.8	.00	.00	3.6	.7

CAL YR	1990	TOTAL	57.45	MEAN	.16	MAX	48	MIN	.00	AC-FT	114
WTR YR	1991	TOTAL	284.20	MEAN	.78	MAX	111	MIN	.00	AC-FT	564

e Estimated

09513000 AGUA FRIA RIVER AT WADDELL DAM, AZ

LOCATION.--Lat 33°51'20", long 112°15'58", in SW¼ sec.16, T.6 N., R.1 E., Maricopa County, Hydrologic Unit 15070102, at left upstream end of Waddell Dam, and 22 mi northwest of Glendale.

DRAINAGE AREA.--1,433 mi².

PERIOD OF RECORD.--November 1910 to September 1914 (gage heights only), October 1914 to September 1919, October 1919 to September 1924 (gage heights only), October 1933 to current year (monthly discharge only). Published as "near Glendale" prior to 1920, and as "at Lake Pleasant Dam" 1920 to September 1962.

REVISED RECORDS.--WSP 1213: 1915-16, 1918-19. WSP 1513: 1956. WDR AZ-89-1: Drainage area.

GAGE.--Nonrecording gage on Lake Pleasant read once daily. Datum of gage is 1,431.2 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1924, nonrecording gage or water-stage recorder at several sites in the vicinity of diversion dam 1.5 mi downstream from Waddell Dam, at different datum.

REMARKS.--Records good. Figures given herein represent flow into Lake Pleasant. Inflow computed on basis of three factors as follows: 1. Change in contents of Lake Pleasant and in contents of small reservoir behind diversion dam 1.5 mi downstream from Lake Pleasant. 2. (a) Release from Lake Pleasant, computed from twice-daily readings by Clausen-Pierce weir rule in Beardsley Canal, checked by current-meter measurements by U.S. Geological Survey. (b) Spill from Lake Pleasant, measured over diversion dam based on staff-gage readings. See tables of diversions and spill below. 3. Effect of rainfall and evaporation on lake; evaporation assumed as 0.85 of that measured once daily in 3-ft-square land pan buried 1 ft in ground near left end of Waddell Dam. Effect of bank storage and bank release in Lake Pleasant is not taken into account. For months when inflow to lake is small and other factors relatively large, discordant figures of runoff may appear. Such discrepancies that may be attributed to inaccuracies in the capacity table, or to the fact that bank storage and bank release are not taken into account, result in quantities too large for periods of falling stage, but tend to be compensated for by quantities too small for periods of rising stage. Inaccuracies in figures of release and evaporation, which may be within reasonable limits within themselves, may result in disproportionately large inaccuracies in small figures of inflow computed as residuals. Diversions for irrigation above Lake Pleasant of probably not over 1,000 acres. Spill occurred in 1941, 1966, 1968, 1978, 1979, 1980, 1983, and 1991 water years.

COOPERATION.--Records collected and prepared in cooperation with Maricopa County Municipal Water Conservation District No. 1.

AVERAGE DISCHARGE.--63 years (water years 1915-19, 1934-91), 93.9 ft³/s, 68,030 acre-ft/yr; median of yearly mean discharges, 40 ft³/s, 29,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 105,000 ft³/s Jan. 28, 1916, gage height, 30 ft, same datum as in 1919, from floodmarks, Nov. 27, 1919, gage height, 33 ft, datum then in use, from floodmarks, from rating curve extended above 13,000 ft³/s on basis of velocity-area studies (on basis of comparative gage heights, the flood of Nov. 27, 1919, is believed to have been the greater); no flow during spring and summer of several years.

MONTHLY INFLOW TO LAKE PLEASANT; SPILL AND DIVERSIONS BELOW LAKE PLEASANT,
WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Month	Inflow to Lake Pleasant		Diversions in acre-feet	Spill in acre-feet
	Mean (cfs)	Runoff in acre-feet		
October.....	0	0	0	0
November	0	0	0	0
December	0	0	0	0
CAL YR 1990	9.21	6,670	0	0
January	2.68	165	0	0
February	28.6	1,590	0	0
March	1,330	81,900	3,170	20,200
April	143	8,500	6,400	4,400
May	4.57	281	4,040	0
June	3.93	234	5,510	0
July	6.38	392	8,290	0
August	2.96	182	6,900	0
September	1.54	91.5	1,330	0
WTR YR 1991	129	93,300	35,600	24,600

09513500 LAKE PLEASANT AT WADDELL DAM, AZ

LOCATION.--Lat 35°51'20", long 112°15'58", in SW¼ sec.16, T.6 N., R.1 E., Maricopa County, Hydrologic Unit 15070102, at left upstream end of Waddell Dam on Agua Fria River.

DRAINAGE AREA.--1,433 mi².

PERIOD OF RECORD.--February 1928 to current year (annual figures only prior to 1939). Prior to October 1963 published as "at Lake Pleasant Dam."

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Nonrecording gage read once daily. Datum of gage is 1,431.2 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by concrete multiple-arch dam; dam completed and storage began in 1927. Capacity, 157,200 acre-ft, of which 84,300 acre-ft is between gage heights 66 ft - 32 ft above centerline of outlet works - and 146.0 ft, crest of spillway, and 72,900 acre-ft between 146.0 ft and 170.0 ft, top of spillway gates. At times, capacity is greater due to trash build-up on top of spillway gates. This condition is known to have occurred in water years 1978, 1979, 1980, and 1983. There is no storage below gage height 66 ft because of accumulated sediment. Water released from reservoir flows down river channel 1.5 mi to diversion dam where it is diverted for irrigation near Beardsley. Figures given herein represent usable storage in Lake Pleasant (based on 1979 capacity table). Contents of small reservoir formed by diversion dam is not included.

COOPERATION.--Gage-height record furnished by Maricopa County Municipal Water Conservation District No. 1.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 178,500 acre-ft Apr. 19, 1941, of which 500 acre-ft was uncontrolled storage; maximum gage height, 170.92 ft Mar. 28, 1979; no usable contents Sept. 5, 1933, July 19 to Aug. 13, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum storage, 110,000 acre-ft Mar. 29; maximum gage height, 155.58 ft Mar. 29; minimum contents, 45,900 acre-ft Feb. 23-27; minimum gage height, 127.52 ft Feb. 27.

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

125	41,600	145	81,900
130	50,200	150	94,400
135	59,800	155	108,000
140	70,400	160	123,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 17:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48800	47600	46900	46300	46200	60300	105000	101000	95600	88500	78800	70600
2	48700	47600	46900	46300	46200	100000	105000	101000	95300	88200	78500	70500
3	48700	47600	46800	46300	46200	103000	105000	101000	95200	87900	78100	70400
4	48700	47600	46800	46400	46200	104000	105000	101000	95000	87600	77800	70400
5	48600	47500	46700	46400	46100	104000	105000	100000	94800	87400	77500	70200
6	48600	47500	46700	46500	46100	103000	105000	100000	94700	87000	77100	70200
7	48600	47400	46700	46500	46100	103000	105000	100000	94500	86800	76800	70100
8	48500	47400	46600	46500	46100	102000	105000	100000	94300	86500	76500	70000
9	48400	47400	46600	46500	46100	102000	105000	99800	94100	86200	76100	69800
10	48400	47400	46600	46500	46100	102000	105000	99600	93900	86000	75800	69700
11	48300	47300	46600	46500	46100	101000	105000	99500	93800	85700	75700	69500
12	48300	47300	46600	46500	46100	101000	105000	99300	93600	85400	75400	69400
13	48200	47300	46600	46500	46100	101000	104000	99200	93400	85000	75200	69300
14	48200	47200	46600	46400	46000	101000	104000	99100	93200	84500	75000	69200
15	48200	47200	46600	46400	46000	101000	104000	99000	93000	84200	74700	69100
16	48200	47200	46600	46400	46000	101000	104000	98800	92700	83800	74500	69000
17	48100	47200	46500	46400	46000	101000	104000	98700	92500	83600	74200	69000
18	48100	47200	46500	46400	46000	101000	103000	98500	92200	83200	74000	69000
19	48100	47200	46500	46400	46000	101000	103000	98300	91900	82800	73600	68900
20	48100	47200	46500	46400	46000	101000	103000	98100	91600	82500	73300	68900
21	48000	47100	46500	46300	46000	103000	103000	97900	91300	82200	73000	68900
22	47900	47100	46500	46300	46000	104000	103000	97700	91000	81900	72800	68800
23	47900	47100	46500	46300	45900	104000	102000	97500	90700	81500	72500	68800
24	47900	47100	46400	46300	45900	104000	102000	97300	90500	81200	72200	68800
25	47800	47000	46400	46300	45900	104000	102000	97100	90200	80900	72000	68700
26	47800	47000	46400	46300	45900	105000	102000	96900	89900	80600	71800	68700
27	47800	47000	46400	46300	45900	105000	102000	96700	89600	80200	71600	68600
28	47800	47000	46400	46300	47100	108000	102000	96500	89300	80000	71400	68600
29	47700	46900	46400	46200	---	110000	101000	96300	89000	79600	71200	68500
30	47700	46900	46400	46200	---	106000	101000	96000	88800	79300	71000	68500
31	47700	---	46400	46200	---	105000	---	95800	---	79000	70800	---
MAX	48800	47600	46900	46500	47100	110000	105000	101000	95600	88500	78800	70600
MIN	47700	46900	46400	46200	45900	60300	101000	95800	88800	79000	70800	68500
(*)	128.54	128.11	127.80	127.71	128.25	153.86	152.55	150.51	147.79	143.80	140.20	139.15
(**)	-1000	-800	-500	-200	+900	+57900	-4000	-5200	-7000	-9800	-8200	-2300

CAL YR 1990 MAX 50100 MIN 46000 (**) -3600
WTR YR 1991 MAX 110000 MIN 45900 (**) +19800

(*) Gage height, in feet, at 1700 hours on last day of month.

(**) Change in storage, in acre-feet.

GILA RIVER BASIN

289

09513600 AGUA FRIA RIVER BELOW WADDELL DAM, AZ

LOCATION.--Lat 33°49'55", long 112°16'24", in SE¼ sec.29, T.6 N., R.1 E., Maricopa County, Hydrologic Unit 15070102, 1.5 mi downstream from Lake Pleasant.

DRAINAGE AREA.--1,459 mi².

PERIOD OF RECORD.--December 1950 to September 1958, April 1975, March 1982 to May 1989, March to August 1991.

REMARKS.--No flow in channel or diversions to Beardsley Canal Oct. 1 to Mar. 4 and Sept. 18-30.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
MAR												
08...	1135	435	430	8.3	16.0	13.0	22	726	9.8	98	45	180
APR												
29...	1045	71	345	8.5	22.0	14.0	13	723	11.0	112	K5	K10
MAY												
17...	1000	52	360	8.7	22.0	19.0	8.3	721	10.0	115	K4	K4
JUN												
26...	0720	121	360	8.3	19.0	16.0	11	718	--	--	K3	K14
JUL												
18...	0735	148	380	8.2	35.0	17.0	6.5	721	8.8	96	K4	K18
AUG												
30...	0650	71	375	8.1	26.0	21.0	5.9	722	7.6	90	K15	66

DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	HY- DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
MAR												
08...	150	7	32	16	35	1	4.2	159	5	0	139	46
APR												
29...	120	7	30	12	23	0.9	3.5	135	4	0	117	35
MAY												
17...	130	4	31	13	25	1	3.4	140	7	0	126	34
JUN												
26...	130	0	31	13	24	0.9	3.4	148	7	0	133	35
JUL												
18...	140	6	32	14	25	0.9	3.3	160	0	0	131	32
AUG												
30...	140	1	34	14	25	0.9	3.3	173	0	0	142	24

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
MAR												
08...	29	0.30	12	254	260	0.35	0.440	--	--	0.020	<0.010	*0.460
APR												
29...	20	0.30	13	220	209	0.30	0.410	0.360	1.6	0.030	0.020	0.440
MAY												
17...	19	0.30	14	225	216	0.31	0.120	--	--	0.020	<0.010	0.140
JUN												
26...	20	0.30	14	221	222	0.30	0.160	0.160	0.71	0.020	0.020	0.180
JUL												
18...	17	0.30	15	223	218	0.30	--	0.038	0.17	0.010	0.020	<0.050
AUG												
30...	16	0.10	15	239	218	0.33	0.080	0.077	0.34	0.030	0.020	0.110

* Value verified.

K Based on non-ideal colony count.

< Actual value is known to be less than value shown.

GILA RIVER BASIN

09513600 AGUA FRIA RIVER BELOW WADDELL DAM, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
	MAR 08...	0.480	0.040	0.050	0.66	0.70	1.2	5.1	0.140	0.18	0.050	0.060
APR 29...	*0.380	0.040	0.010	0.66	0.70	1.1	5.0	0.130	0.25	0.060	0.080	0.040
MAY 17...	0.140	0.020	0.020	0.68	0.70	0.84	3.7	0.130	0.09	0.040	0.030	0.010
JUN 26...	0.180	0.060	0.050	0.74	0.80	0.98	4.3	0.140	0.25	0.090	0.080	0.070
JUL 18...	0.058	0.120	0.140	0.98	1.1	--	--	0.140	0.31	0.110	0.100	0.090
AUG 30...	0.097	0.240	0.250	0.76	1.0	1.1	4.9	0.170	0.28	0.110	0.090	0.080
DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	
	MAR 08...	0.12	6	6	<100	50	120	100	<1	<1.0	3	<1
APR 29...	0.12	9	8	200	38	50	80	<1	<1.0	2	<1	
MAY 17...	0.03	9	8	<100	42	50	80	<1	<1.0	<1	<1	
JUN 26...	0.21	10	11	<100	43	80	80	<1	1.0	<1	1	
JUL 18...	0.28	10	10	<100	44	--	70	<1	<1.0	<1	<1	
AUG 30...	0.25	11	9	<100	48	90	70	<1	<1.0	<1	<1	
DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	
	MAR 08...	9	5	*1600	11	2	1	60	5	<0.10	<0.1	<1
APR 29...	7	3	570	11	3	<1	60	4	<0.10	<0.1	<1	
MAY 17...	9	5	310	9	3	<1	100	7	<0.10	<0.1	<1	
JUN 26...	7	2	470	8	5	<1	230	43	<0.10	<0.1	<1	
JUL 18...	4	3	460	9	3	<1	230	14	<0.10	<0.1	<1	
AUG 30...	3	1	390	36	<1	<1	380	200	<0.10	<0.1	<1	
DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	CYANIDE TOTAL (MG/L AS CN) (00720)	CYANIDE DIS- SOLVED (MG/L AS CN) (00723)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	
	MAR 08...	<1	<1	1.0	<10	<3	6.7	1.1	<0.010	<0.01	49	58
APR 29...	<1	<1	<1.0	<10	13	6.8	1.3	<0.010	<0.01	13	2.6	
MAY 17...	<1	<1	<1.0	<10	<3	7.0	1.5	<0.010	<0.01	8	1.1	
JUN 26...	<1	<1	<1.0	<10	<3	6.4	0.9	<0.010	<0.01	13	4.4	
JUL 18...	<1	<1	<1.0	<10	<3	6.8	0.3	<0.010	<0.01	10	4.2	
AUG 30...	<1	<1	<1.0	<10	4	6.7	0.5	<0.010	<0.01	8	1.5	

* Value verified.

< Actual value is known to be less than value shown.

GILA RIVER BASIN

291

09513780 NEW RIVER NEAR ROCK SPRINGS, AZ

LOCATION.--Lat 33°58'27", long 112°05'54", in SW¼SW¼ sec.6, T.7 N., R.3 E., Maricopa County, Hydrologic Unit 15070102, on right bank 180 ft upstream from road crossing and 6 mi southeast of Rock Springs.

DRAINAGE AREA.--68.3 mi².

PERIOD OF RECORD.--Water years 1962-65 (annual maximums only), October 1965 to current year.

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,310 ft above National Geodetic Vertical Datum of 1929, from topographic map. Jan. 2, 1964, to Sept. 30, 1965, crest-stage gage, and Oct. 28, 1965, to Nov. 16, 1967, water-stage recorder, at same site at datum 1.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair.

AVERAGE DISCHARGE.--26 years, 12.8 ft³/s, 9,270 acre-ft/yr; median of yearly mean discharges, 4.8 ft³/s, 3,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,600 ft³/s Sept. 5, 1970, gage height, 13.5 ft, from profile past gage, from rating curve extended above 380 ft³/s on basis of slope-area measurements at gage heights 3.6, 4.73, 7.3, 10.7, and 13.5 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1445	*9,810	*8.13	Mar. 26	1445	1,550	5.07
Mar. 21	0115	254	3.38				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	4590	9.9	.03	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	627	6.2	.02	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	52	4.3	.02	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	14	3.0	.02	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	5.3	2.1	.02	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	2.5	1.6	.02	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	1.4	1.2	.02	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.72	.90	.02	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.33	.57	.02	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.21	.39	.01	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.14	.27	.01	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.10	.21	.01	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.08	.17	.01	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.08	.14	.01	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.08	.11	.01	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.25	.09	.01	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.14	.09	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.09	.08	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.08	.07	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.58	.06	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	132	.06	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	91	.05	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	56	.05	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	22	.05	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	10	.04	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	333	.04	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	141	.04	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	551	256	.03	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	101	.03	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	33	.03	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	17	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	551.00	6487.08	31.87	0.26	0.00	0.00	0.00	0.00
MEAN	.0000	.0000	.0000	.0000	19.7	209	1.06	.008	.0000	.0000	.0000	.0000
MAX	.00	.00	.00	.00	551	4590	9.9	.03	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.08	.03	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	1090	12870	63	.5	.00	.00	.00	.00
CAL YR	1990	TOTAL	294.02	MEAN	.81	MAX	162	MIN	.00	AC-FT	583	
WTR YR	1991	TOTAL	7070.21	MEAN	19.4	MAX	4590	MIN	.00	AC-FT	14020	

GILA RIVER BASIN

09513835 NEW RIVER AT BELL ROAD, NEAR PEORIA, AZ

LOCATION.--Lat 33°38'18", long 112°14'22", in NE¼NE¼ sec.3, T.3 N., R.1 E., Maricopa County, Hydrologic Unit 15070102, on downstream side of bridge at Bell Road, 1.6 mi upstream from Skunk Creek, 3.1 mi north of Peoria, and 9 mi upstream from mouth.

DRAINAGE AREA.--185 mi².

PERIOD OF RECORD.--Water years 1963, 1965-67 (annual maximums only), October 1967 to September 1984, June 1990 to current year.

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,190.00 ft, National Geodetic Vertical Datum of 1929 (Arizona State Highway Department bench mark). Oct. 1, 1965, to Sept. 30, 1967, crest-stage gage at present site and at site 50 ft upstream, at datum 5.00 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--18 years (water years 1968-84, 1991), 11.6 ft³/s, 8,400 acre-ft/yr; median of yearly mean discharges, 3.5 ft³/s, 2,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,600 ft³/s Dec. 19, 1967, gage height, 13.5 ft, from rating curve extended above 680 ft³/s on basis of slope-area measurement of peak flow; no flow for most of time each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	2345	*1,280	*5.06

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	322	e9.0	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	1120	e5.0	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	680	e1.3	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	233	e.50	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	100	e.25	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	e18	e.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	e12	e.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	e8.0	e.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	e4.0	e.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	e1.5	e.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	e3.0	e.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	e84	e.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	176	e.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	e139	e.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	e84	e.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	e22	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	3006.50	16.05	0.00	0.00	0.00	0.00	0.00
MEAN	.0000	.0000	.0000	.0000	.0000	97.0	.53	.0000	.0000	.0000	.0000	.0000
MAX	.00	.00	.00	.00	.00	1120	9.0	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	5960	32	.00	.00	.00	.00	.00

WTR YR 1991 TOTAL 3022.55 MEAN 8.28 MAX 1120 MIN .00 AC-FT 6000

e Estimated

09513860 SKUNK CREEK NEAR PHOENIX, AZ

LOCATION.--Lat 33°43'50", long 112°07'09", in SE¼ sec.35, T.5 N., R.2 E., Maricopa County, Hydrologic Unit 15070102, on right bank dike of Skunk Creek flood control channel, 300 ft east of frontage road of Interstate Highway 17, 3 mi north of Adobe and 20 mi north of City Hall in Phoenix.

DRAINAGE AREA.--64.9 mi².

PERIOD OF RECORD.--Water years 1960-67 (annual maximums only), October 1967 to current year.

REVISED RECORDS.--WDR-89-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,472.60 ft above National Geodetic Vertical Datum of 1929. May 1961 to Sept. 30, 1967, crest-stage gage at site 400 ft downstream at datum 6.67 ft lower, and Oct. 1, 1967 to Dec. 29, 1984, water-stage recorder at site 300 ft downstream at datum 12.66 ft lower.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--24 years, 1.70 ft³/s, 1,230 acre-ft/yr; median of yearly mean discharges, 0.76 ft³/s, 550 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s Aug. 1, 1964, gage height, 10.48 ft, present datum, from rating curve extended above 6,200 ft³/s; maximum gage height, 12.24 ft Sept. 5, 1970; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 28	2100	844	2.47	Mar. 27	1945	607	2.30
Mar. 1	1530	939	2.53	Aug. 11	unknown	*1,250	*2.71

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	203	e.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	45	e.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	e119	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
16	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00	e.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
20	.00	.00	.00	.00	.00	3.2	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	2.3	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.45	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	96	.00	.00	.00	.00	.61	.00
28	.00	.00	.00	.00	71	13	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	e.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	71.00	363.04	0.00	0.00	0.00	0.00	119.61	0.00
MEAN	.000	.000	.000	.000	2.54	11.7	.000	.000	.000	.000	3.86	.000
MAX	.00	.00	.00	.00	71	203	.00	.00	.00	.00	119	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	141	720	.00	.00	.00	.00	237	.00

CAL YR	1990	TOTAL	1947.16	MEAN	5.33	MAX	882	MIN	.00	AC-FT	3860
WTR YR	1991	TOTAL	553.65	MEAN	1.52	MAX	203	MIN	.00	AC-FT	1100

e Estimated

09513910 NEW RIVER NEAR GLENDALE, AZ

LOCATION.--Lat 33°32'12", long 112°16'52", in NE¼NW¼ sec.8, T.2 N., R.1 E., Maricopa County, Hydrologic Unit 15070102, on downstream side of bridge at Glendale Avenue, 2 mi upstream from mouth, 4 mi southwest of Peoria and 1.5 mi west of Glendale.

DRAINAGE AREA.--324 mi².

PERIOD OF RECORD.--Water years 1961-63, 1971-79 (annual maximums only); February 1964 to October 1970, April 1990 to current year.

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,046.44 ft above National Geodetic Vertical Datum of 1929. Apr. 26, 1961, to Feb. 12, 1964, crest-stage gage at same site and different datum. Feb. 13 to Nov. 12, 1964, water-stage recorder on downstream or upstream side of bridge at different datums. Nov. 13, 1964, to Sept. 8, 1969, water-stage recorder at same site at datum 3.47 ft higher. Sept. 9, 1969, to Sept. 30, 1979, water-stage recorder at same site at datum 0.24 ft lower.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--7 years (water years 1965-70, 1991), 12.1 ft³/s, 8,770 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,800 ft³/s Dec. 19, 1967, gage height, 10.4 ft, datum then in use, from rating curve extended above 2,100 ft³/s on basis of slope-area measurement of peak flow; no flow most of the time each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,400 ft³/s Mar. 2, gage height, 2.57 ft, from rating curve extended above 1,300 ft³/s on basis of slope-area measurement of peak flow; no flow most of the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	232	e15	.00	.00	.00	.00	6.2
2	.00	.00	.00	.00	.00	1340	5.0	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	1010	e.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	568	e.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	349	e.00	.00	.00	.00	.00	11
6	.00	.00	.00	.00	.00	255	e.00	.00	.00	.00	.00	15
7	.00	.00	.00	.00	.00	204	e.00	.00	.00	.00	.00	6.2
8	.00	.00	.00	.00	.00	174	e.00	.00	.00	.00	.00	4.0
9	.00	.00	.00	.00	.00	118	e.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	e20	e.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	e10	e.00	.00	.00	.00	15	.00
12	.00	.00	.00	.00	.00	e5.0	e.00	.00	.00	.00	15	.00
13	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	20	.00
14	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	8.4	.00
15	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	e15	e.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	e10	e.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	e109	e.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	e34	e.00	.00	.00	.00	.00	13
23	.00	.00	.00	.00	.00	e15	e.00	.00	.00	.00	.00	18
24	.00	.00	.00	.00	.00	e15	e.00	.00	.00	.00	.00	6.2
25	.00	.00	.00	.00	.00	e4.0	e.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	e34	e.00	.00	.00	.00	8.4	.00
27	.00	.00	.00	.00	.00	e159	e.00	.00	.00	.00	15	.00
28	.00	.00	.00	.00	.00	458	e.00	.00	.00	.00	6.2	.00
29	.00	.00	.00	.00	.00	335	e.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	221	e.00	.00	.00	.00	6.2	.00
31	.00	---	.00	.00	---	e81	---	.00	---	.00	15	---
TOTAL	0.00	0.00	0.00	0.00	0.00	5775.00	20.00	0.00	0.00	0.00	109.20	79.60
MEAN	.000	.000	.000	.000	.000	186	.67	.000	.000	.000	3.52	2.65
MAX	.00	.00	.00	.00	.00	1340	15	.00	.00	.00	20	18
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	11450	40	.00	.00	.00	217	158

WTR YR 1991 TOTAL 5983.80 MEAN 16.4 MAX 1340 MIN .00 AC-FT 11870

e Estimated

GILA RIVER BASIN

295

09514300 GILA RIVER AT U.S. HIGHWAY 85, NEAR BUCKEYE, AZ

LOCATION.--Lat 33°20'03", long 112°37'22", in SW¼SW¼SW¼ sec.13, T.1 S., R.4 W., Maricopa County, Hydrologic Unit 15070101, on U.S. Highway 85 bridge, 3.4 mi southwest of Buckeye.

DRAINAGE AREA.--46,345 mi².

PERIOD OF RECORD.--May 1979 to September 1980, December 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 806.15 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Most of base flow is effluent from municipal sewage treatment plant at 91st Avenue approximately 20 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176,000 ft³/s Feb. 16, 1980, computed by flood-routing method; maximum gage height unknown; minimum daily discharge, 2.7 ft³/s Sept. 26, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,240 ft³/s Apr. 2, gage height, 6.87 ft; minimum daily, 21 ft³/s Oct. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e160	42	295	87	87	121	2100	47	37	38	32	35
2	166	45	289	88	88	135	1870	47	32	38	29	39
3	58	70	273	94	89	563	1170	47	34	32	28	35
4	53	74	242	99	83	457	816	54	31	29	30	38
5	41	71	211	99	71	283	1210	53	31	28	28	37
6	37	69	206	101	71	186	892	43	30	27	26	54
7	36	64	188	99	73	256	705	40	32	32	26	48
8	39	73	188	99	62	231	503	41	34	30	28	46
9	39	84	205	106	77	157	350	47	37	32	34	47
10	35	85	185	95	80	142	744	37	40	30	31	46
11	39	84	124	92	75	130	1040	37	29	33	35	46
12	31	88	104	94	66	121	595	45	30	33	34	47
13	e21	87	95	92	66	116	394	41	35	28	27	37
14	e24	89	87	95	67	e110	304	38	35	31	32	44
15	31	83	81	94	69	e110	246	36	34	29	34	46
16	33	76	76	90	73	136	198	43	34	28	33	45
17	29	85	76	91	71	156	137	38	40	26	34	44
18	34	94	73	90	88	158	113	36	41	23	43	41
19	38	99	72	86	90	141	113	44	45	23	41	33
20	31	116	76	84	90	156	146	41	38	22	32	31
21	32	122	94	90	89	188	146	43	35	22	32	35
22	32	137	96	94	82	210	118	44	33	23	35	35
23	54	124	94	94	94	216	108	52	30	28	34	33
24	68	137	104	82	95	216	119	54	30	26	32	26
25	69	204	108	80	97	225	99	49	27	26	32	34
26	55	247	95	82	100	231	78	56	30	27	32	34
27	59	253	86	95	100	340	76	57	32	32	32	39
28	54	275	77	103	109	428	83	53	27	34	32	41
29	47	272	89	95	---	571	70	43	32	35	32	46
30	29	279	94	90	---	1350	46	42	36	33	35	45
31	40	---	89	88	---	1730	---	37	---	32	37	---
TOTAL	1514	3628	4172	2868	2302	9570	14589	1385	1011	910	1002	1207
MEAN	48.8	121	135	92.5	82.2	309	486	44.7	33.7	29.4	32.3	40.2
MAX	166	279	295	106	109	1730	2100	57	45	38	43	54
MIN	21	42	72	80	62	110	46	36	27	22	26	26
AC-FT	3000	7200	8280	5690	4570	18980	28940	2750	2010	1800	1990	2390
CAL YR 1990	TOTAL	45118	MEAN	124	MAX	1110	MIN	21	AC-FT	89490		
WTR YR 1991	TOTAL	44158	MEAN	121	MAX	2100	MIN	21	AC-FT	87590		

e Estimated

GILA RIVER BASIN

09516500 HASSAYAMPA RIVER NEAR MORRISTOWN, AZ

LOCATION.--Lat 33°53'06", long 112°39'41", in SW¼SE¼ sec.3, T.6 N., R.4 W., Maricopa County, Hydrologic Unit 15070103, on left bank 600 ft downstream from mouth of San Domingo Wash, 3.0 mi northwest of Morristown, and 7 mi southeast of Wickenburg.

DRAINAGE AREA.--796 mi².

PERIOD OF RECORD.--October 1938 to June 1947 (continuous-record), water years, 1954, 1956, 1964-81 (annual maximums only), October 1981 to current year (discharge above 500 ft³/s only).

REVISED RECORDS.--WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,831.16 ft above National Geodetic Vertical Datum of 1929. Crest-stage gage at same site and datum 1954, 1956, and 1964-81.

REMARKS.--Records poor. Only daily discharges above 500 ft³/s are published.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,500 ft³/s Sept. 5, 1970, gage height, 19.0 ft, from high-water profile past gage and on basis of slope-area measurement of peak flow; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,700 ft³/s Mar. 2, gage height, 13.55 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e1870	---	---	---	---	---	---
2	---	---	---	---	---	e1940	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

09517000 HASSAYAMPA RIVER NEAR ARLINGTON, AZ

LOCATION.--Lat 33°20'50", long 112°43'30", in NW¼ sec.13, T.1 S., R.5 W., Maricopa County, Hydrologic Unit 15070104, at former U.S. Highway 80, 1.8 mi upstream from mouth and 2.8 mi northeast of Arlington.

DRAINAGE AREA.--1,471 mi².

PERIOD OF RECORD.--Water years 1961-77 (annual maximums only), October 1977 to September 1990 (discharge above 500 ft³/s only), October 1990 to September 1991.

REVISED RECORDS.--WDR AZ-81-1: 1969(M). WDR AZ-89-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 822.68 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 2, 1984 at datum 9.23 ft higher.

REMARKS.--Records poor. Records include irrigation return flow past station. Small diversions above station for irrigation and livestock.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,000 ft³/s Sept. 5, 1970, gage height, 8.40 ft, result of slope-area measurement of peak flow; no natural flow for most of time each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	0830	*7,010	*10.62

No flow Nov. 30 to Dec. 9.

ADDITIONAL PEAKS ABOVE BASE.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*) for water years 1988-90 are given below:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
11-1-87	1245	*2,800	*7.79	8-14-90	1600	*2,120	*7.07
8-21-88	0845	1,040	5.41	8-15-90	0515	1,430	6.13
8-22-88	0115	1,690	6.49	9-5-90	1630	1,400	6.08
8-11-89	0045	*1,510	*6.24				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	63	.00	98	111	84	103	40	44	32	39	81
2	91	91	.00	75	113	e1720	78	75	68	35	27	68
3	114	126	.00	71	127	e55	70	48	60	37	33	94
4	113	114	.00	75	98	e55	65	69	50	20	60	93
5	118	104	.00	85	74	e50	86	83	34	36	30	83
6	134	123	.00	103	89	e50	85	61	68	30	32	102
7	111	118	.00	98	82	e50	91	42	66	29	19	97
8	119	124	.00	98	65	e50	78	66	67	34	32	93
9	76	133	.00	105	88	e50	77	79	60	41	51	88
10	61	118	39	102	108	e50	51	73	42	42	52	40
11	63	111	90	107	84	e50	48	73	54	52	93	37
12	49	116	73	119	61	e45	52	70	70	34	66	76
13	71	119	86	114	54	e45	35	61	47	27	58	75
14	73	102	103	105	46	e45	37	45	56	22	53	109
15	71	97	124	84	45	e75	45	39	33	16	46	79
16	74	91	141	77	88	74	37	51	14	45	28	80
17	86	106	129	92	99	83	42	56	11	57	35	71
18	83	114	129	88	73	83	25	64	7.3	45	51	78
19	78	105	134	85	47	75	35	61	17	62	58	84
20	88	62	130	118	63	93	37	68	32	81	20	114
21	105	60	97	116	66	78	28	54	49	74	22	78
22	115	105	94	111	63	63	30	43	63	71	48	99
23	122	101	100	105	74	64	34	55	94	55	42	59
24	111	57	102	92	68	62	30	56	79	33	40	80
25	107	22	92	75	63	61	22	75	63	32	65	101
26	108	9.8	83	95	82	282	11	82	54	26	47	105
27	131	4.3	95	123	62	346	35	46	59	15	358	104
28	131	2.2	103	112	101	25	65	51	51	45	97	92
29	123	.33	94	92	---	4.7	78	35	42	48	70	107
30	99	.00	96	90	---	78	56	37	56	46	92	80
31	76	---	83	76	---	124	---	63	---	51	84	---
TOTAL	3004	2498.63	2217.00	2986	2194	4069.7	1566	1821	1510.3	1273	1848	2547
MEAN	96.9	83.3	71.5	96.3	78.4	131	52.2	58.7	50.3	41.1	59.6	84.9
MAX	134	133	141	123	127	1720	103	83	94	81	358	114
MIN	49	.00	.00	71	45	4.7	11	35	7.3	15	19	37
AC-FT	5960	4960	4400	5920	4350	8070	3110	3610	3000	2520	3670	5050

WTR YR 1991 TOTAL 27534.63 MEAN 75.4 MAX 1720 MIN .00 AC-FT 54610

e Estimated

GILA RIVER BASIN

09517490 CENTENNIAL WASH AT SOUTHERN PACIFIC RAILROAD BRIDGE,
NEAR ARLINGTON, AZ

LOCATION.--Lat 33°18'37", long 112°52'52", in SW¼NW¼SW¼ sec.28, T.1 S., R.6 W., Maricopa County, Hydrologic Unit 15070104, on downstream side of bridge, 7.2 mi southwest of Arlington and 9.0 mi upstream from Gillespie Dam.

DRAINAGE AREA.--1,817 mi² (revised).

PERIOD OF RECORD.--May 1980 to September 1984, October 1984 to September 1985 (daily discharges greater than 300 ft³/s only), October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 841.12 ft (revised) above National Geodetic Vertical Datum of 1929 (Maricopa County flood control bench mark).

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by several small retention dams in upper end of basin. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--6 years (water years 1981-84, 1990-91), 2.95 ft³/s, 2,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,600 ft³/s Sept. 2, 1984, gage height, 11.34 ft, from rating curve extended above 200 ft³/s on basis of step-back water analysis; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,000 ft³/s Aug. 27, gage height 4.67 ft; no flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	17 e65	.00
26	.00	.00	.00	.00	.00	44	.00	.00	.00	.00	e.00	.00
27	.00	.00	.00	.00	.00	3.2	.00	.00	.00	.00	e441	.00
28	.00	.00	.00	.00	.00	1.5	.00	.00	.00	.00	5.1	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	48.70	0.00	0.00	0.00	0.00	528.10	0.00
MEAN	.000	.000	.000	.000	.000	1.57	.000	.000	.000	.000	17.0	.000
MAX	.00	.00	.00	.00	.00	44	.00	.00	.00	.00	441	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	97	.00	.00	.00	.00	1050	.00

CAL YR 1990	TOTAL	1048.54	MEAN	2.87	MAX	458	MIN	.00	AC-FT	2080
WTR YR 1991	TOTAL	576.80	MEAN	1.58	MAX	441	MIN	.00	AC-FT	1140

e Estimated

09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, AZ
(National stream-quality accounting network)

LOCATION.--Lat 33°13'45", long 112°46'00", in SE¼NE¼ sec.28, T.2 S., R.5 W., Maricopa County, Hydrologic Unit 15070101, at Gillespie Dam, 8 mi downstream from Hassayampa River. Gila Bend Canal diverts from left end, and Enterprise Canal diverts from right end, of Gillespie Dam.

DRAINAGE AREA.--49,650 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1935 to November 1939 (monthly discharge only published in WSP 1313), December 1939 to September 1971 (published with records for sta 09519500, Gila River below Gillespie Dam), 1972 and 1973 (water year estimates only, listed in REMARKS for sta 09519500), October 1973 to current year. Low-flow records prior to October 1970 are not equivalent as leakage less than 5 ft³/s is not included.

09518500. Gila Bend Canal: May 1935 to September 1971, October 1973 to current year (since October 1941, monthly discharge only).

09519000. Enterprise Canal: June 1935 to September 1939 (discharge measurements and monthly estimates only), October 1939 to September 1971, April 1974 to current year (since October 1941, monthly discharge only). Published as "Gillespie Canal" prior 1951.

GAGE.--Gila Bend Canal: Water-stage recorder 200 ft downstream from headgates.

Enterprise Canal: Water-stage recorder 600 ft downstream from intake at dam.

REMARKS.--Records poor. Record is obtained by combining, on a daily basis, the flows of Gila Bend Canal, Enterprise Canal, and Gila River below Gillespie Dam (see sta 09519500).

Many large diversions above station for irrigation, municipal, and industrial use. Flow of Gila River and tributaries above this station is regulated: by San Carlos Reservoir on Gila River - capacity, 1,073,600 acre-ft; by a series of reservoirs on Salt River - capacity, 1,755,000 acre-ft; by Bartlett and Horseshoe Reservoirs on Verde River - capacity, 317,700 acre-ft; and by Lake Pleasant on Agua Fria River - capacity, 157,600 acre-ft.

AVERAGE DISCHARGE.--56 years, 391 ft³/s, 283,300 acre-ft/yr; median of yearly mean discharges, 120 ft³/s, 86,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 124,000 ft³/s Feb. 17, 1980; no flow except for possible leakage of less than 5 ft³/s Nov. 24-27, 1966, July 14, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,900 ft³/s Apr. 2; minimum daily, 54 ft³/s Aug. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
1	e253	e140	e170	e260	e239	e252	e1770	e160	127	138	130	147			
2	e298	e129	e210	e271	e250	e1230	e1900	e165	137	98	108	149			
3	e297	e169	e220	e249	e265	e484	e1340	e161	160	87	68	147			
4	e265	e179	e240	e227	e274	e381	e1100	e155	116	77	88	147			
5	e264	e194	e230	e290	250	e334	e1120	e163	105	73	121	147			
6	e263	e171	e190	e299	238	e264	e1200	e161	82	77	66	161			
7	e249	e179	e200	e260	241	e267	e864	e133	142	88	65	187			
8	e212	e205	e190	e243	245	e247	e646	117	138	104	75	185			
9	e189	e235	e183	e231	239	e215	e519	159	122	99	94	161			
10	e169	e225	e167	e212	e230	e186	e519	150	117	93	109	153			
11	e150	e194	e217	211	e224	e182	e1030	126	96	107	126	110			
12	e150	e203	e179	224	e218	e175	e619	128	100	132	139	106			
13	e211	e183	e189	222	e214	e164	e477	157	121	98	108	160			
14	e192	e173	e197	220	e228	e154	e390	135	124	77	97	156			
15	e227	e165	e188	212	e230	e170	e350	107	142	77	81	182			
16	e184	e177	e178	212	e221	e188	e323	109	84	75	70	139			
17	e173	e167	e199	188	e228	e221	e284	112	75	111	69	154			
18	e156	e203	e199	212	e233	e231	e239	115	78	127	70	140			
19	e121	e170	e209	210	e191	e236	e206	119	60	97	106	181			
20	e132	e151	e238	199	e209	e247	e196	147	80	132	104	151			
21	e148	e116	e228	229	e243	e237	e202	136	118	173	55	127			
22	e208	e141	e218	209	e240	e228	e228	109	124	164	54	120			
23	e268	e171	e238	217	e205	e207	e210	94	136	113	77	136			
24	e267	e140	e255	235	e196	e202	e161	111	170	97	97	102			
25	e196	e140	e269	e203	e222	e320	e185	131	126	88	127	157			
26	e139	e80	e310	e188	e251	e463	e164	141	126	79	131	e161			
27	e179	e119	e294	e215	e240	e389	e163	148	120	95	189	160			
28	e229	e139	e260	248	e235	e467	e182	117	118	99	189	160			
29	e229	e160	e239	236	---	e348	e211	102	110	137	142	159			
30	e193	e170	e229	239	---	e668	e211	101	100	88	111	168			
31	e162	---	e260	230	---	e1270	---	104	---	100	151	---			
TOTAL	6373	4988	6793	7101	6499	10627	17009	4073	3454	3200	3217	4513			
MEAN	206	166	219	229	232	343	567	131	115	103	104	150			
MAX	298	235	310	299	274	1270	1900	165	170	173	189	187			
MIN	121	80	167	188	191	154	161	94	60	73	54	102			
AC-FT	12640	9890	13470	14080	12890	21080	33740	8080	6850	6350	6380	8950			
(*)	1060	602	1110	2160	6820	5560	11770	6240	6070	5610	5530	4970			
(**)	1060	1170	1180	1160	931	915	871	902	718	742	764	883			
CAL YR	1990	TOTAL	83507	MEAN	229	MAX	1410	MIN	35	AC-FT	165600	(*)	61820	(**)	12790
WTR YR	1991	TOTAL	77847	MEAN	213	MAX	1900	MIN	54	AC-FT	154400	(*)	57500	(**)	11300

e Estimated

(*) Diversions, in acre-feet, to Gila Bend Canal (sta 09518500). See Remarks above. For records prior to 1972, see sta 09519500.

(**) Diversions, in acre-feet, to Enterprise Canal (sta 09519000). See Remarks above. For records prior to 1972, see sta 09519500.

09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1926 to June 1927 and March 1946 (partial-record station), December 1950 to September 1971, December 1971 to June 1973 (partial-record station), March 1974 to current year. Prior to October 1967, published as 09519500, Gila River below Gillespie Dam.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to June 1968, August to September 1968, February to September 1969, October 1970 to September 1971, April 1974 to July 1981.

WATER TEMPERATURES: December 1950 to February 1968, May to August 1969, October 1970 to September 1971, April 1974 to July 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)		
OCT												
16...	1200	171	4050	8.1	27.0	20.5	50	740	8.2	95	51	
NOV												
16...	0810	193	3700	8.0	11.0	16.0	34	744	8.7	92	45	
DEC												
11...	1115	278	3380	8.1	16.0	11.0	59	743	10.1	95	50	
JAN												
16...	1020	223	4200	8.2	10.0	12.0	30	741	9.6	93	38	
FEB												
27...	1010	211	4270	7.9	17.0	15.0	27	740	6.2	64	47	
MAR												
20...	0810	250	4500	8.1	7.0	13.0	60	740	9.2	91	41	
APR												
17...	0750	292	3800	8.0	12.0	18.0	45	739	5.7	63	43	
MAY												
14...	0735	136	4450	8.1	18.0	22.5	41	737	6.0	72	57	
JUN												
19...	0740	61	5300	8.4	23.0	24.0	35	736	6.8	85	72	
JUL												
16...	0730	74	5130	8.6	31.5	27.5	40	742	5.9	78	68	
AUG												
28...	0750	195	3550	7.9	25.0	28.0	170	739	3.6	47	53	
SEP												
17...	0720	159	4180	7.9	22.0	24.5	46	736	4.3	54	49	
DATE		COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC- CI FECAL KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
OCT												
16...	K3400	780	700	440	160	71	570	9	12	311	0	
NOV												
16...	1300	560	670	390	150	71	510	9	12	343	0	
DEC												
11...	1400	4600	610	320	140	63	470	8	12	356	0	
JAN												
16...	K3600	1100	670	380	150	71	570	10	11	348	0	
FEB												
27...	3900	800	720	420	160	76	620	10	13	364	0	
MAR												
20...	K3400	430	660	390	150	69	540	9	12	325	0	
APR												
17...	230	K290	670	390	150	70	560	9	11	337	0	
MAY												
14...	140	88	770	510	180	79	630	10	11	323	0	
JUN												
19...	K86	K100	820	560	190	85	760	12	10	260	28	
JUL												
16...	K49	160	870	600	200	91	770	11	9.5	257	36	
AUG												
28...	1700	1200	560	340	140	51	490	9	14	272	0	
SEP												
17...	650	1300	590	340	130	65	550	10	15	307	0	

K Based on non-ideal colony count.

GILA RIVER BASIN

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09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	HY-DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT 16...	0	255	430	790	1.7	24	2380	2260	3.24	57	7.82
NOV 16...	0	281	390	710	1.4	--	2130	2010	2.90	94	7.82
DEC 11...	0	292	380	670	1.6	25	2060	1990	2.80	127	7.00
JAN 16...	0	285	390	930	1.3	--	2450	2300	3.33	101	8.60
FEB 27...	0	298	510	1100	1.6	26	2540	2740	3.45	35	8.00
MAR 20...	0	266	*460	*82	*1.6	--	2360	1480	3.21	148	5.76
APR 17...	0	276	440	870	1.3	24	2340	2330	3.18	98	6.81
MAY 14...	0	265	490	950	1.8	--	2680	2500	3.64	104	8.50
JUN 19...	0	260	740	1100	1.6	17	3280	3100	4.46	60	9.41
JUL 16...	0	270	670	1000	2.1	--	3200	2910	4.35	22	9.29
AUG 28...	0	223	430	750	2.3	22	2110	2070	2.87	208	6.76
SEP 17...	0	252	420	690	2.2	--	2180	2020	2.96	11	8.80
DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
OCT 16...	7.55	33	0.880	0.850	8.70	8.40	2.80	2.60	1.9	4.7	13
NOV 16...	--	--	0.880	--	8.70	--	6.40	--	1.9	8.3	17
DEC 11...	7.02	31	0.700	0.580	7.70	7.60	8.70	9.00	3.3	*12	20
JAN 16...	--	--	1.00	--	9.60	--	4.60	--	2.1	6.7	16
FEB 27...	7.39	33	0.800	0.810	8.80	8.20	6.20	6.10	2.9	9.1	18
MAR 20...	--	--	0.640	--	6.40	--	1.50	--	3.3	4.8	11
APR 17...	6.75	30	0.690	0.650	7.50	7.40	1.80	1.70	0.70	2.5	10
MAY 14...	--	--	1.10	--	9.60	--	1.60	--	1.8	3.4	13
JUN 19...	9.25	41	0.290	0.250	9.70	9.50	0.040	<0.010	2.5	2.5	12
JUL 16...	--	--	0.310	--	9.60	--	0.020	--	2.7	2.7	12
AUG 28...	6.66	29	0.540	0.540	7.30	7.20	0.970	0.960	1.3	2.3	9.6
SEP 17...	--	--	1.20	--	10.0	--	3.30	--	1.3	4.6	15

* Value verified.

< Actual value is known to be less than value shown.

GILA RIVER BASIN

09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
OCT 16...	59	2.30	7.36	1.90	2.40	2.40	7.4	20	8	9	<100
NOV 16...	75	*2.80	8.89	--	*2.90	--	--	--	9	8	<100
DEC 11...	87	3.60	9.51	3.10	3.10	3.20	9.8	--	8	8	<100
JAN 16...	72	3.60	7.67	--	2.50	--	--	--	9	8	<100
FEB 27...	79	2.50	7.05	2.20	2.30	2.20	6.7	<10	9	9	100
MAR 20...	50	2.60	3.07	--	1.00	--	--	--	11	9	200
APR 17...	44	1.60	4.60	1.70	1.50	1.10	3.4	<10	11	10	<100
MAY 14...	58	1.80	4.60	--	1.50	--	--	--	9	9	<100
JUN 19...	54	0.510	1.13	0.240	0.370	0.180	0.55	--	5	7	<100
JUL 16...	54	0.740	1.23	--	0.400	--	--	--	10	11	<100
AUG 28...	42	1.30	2.45	0.950	0.800	0.790	2.4	<10	9	8	100
SEP 17...	65	2.30	6.75	--	2.20	--	--	--	9	8	<100

DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
OCT 16...	<10	1500	<1	<1.0	5	2	1	14	4	3000
NOV 16...	--	1500	<1	<1.0	5	2	--	11	3	2700
DEC 11...	--	1300	<1	<1.0	5	<1	--	17	5	3800
JAN 16...	--	1600	<1	<1.0	4	<1	--	8	1	3200
FEB 27...	<10	1600	<1	<1.0	3	<1	1	6	2	1400
MAR 20...	--	1300	<1	<1.0	8	2	--	13	2	4100
APR 17...	<10	1500	<1	<1.0	5	<1	1	12	2	3000
MAY 14...	--	1700	2	<1.0	6	<1	--	19	2	4200
JUN 19...	--	2500	<1	<1.0	2	3	--	16	4	3400
JUL 16...	--	2500	<1	<1.0	6	1	--	13	5	2800
AUG 28...	<10	1300	<1	<1.0	10	<1	1	23	5	6800
SEP 17...	--	1500	<1	<1.0	7	<1	--	12	1	3500

* Value verified.

< Actual value is known to be less than value shown.

GILA RIVER BASIN

303

09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
OCT 16...	60	5	<1	200	110	40	<0.10	<0.1	9	5
NOV 16...	30	3	<1	--	140	60	<0.10	--	--	--
DEC 11...	10	5	<1	--	170	60	<0.10	--	--	--
JAN 16...	20	<1	<1	--	120	70	<0.10	--	--	--
FEB 27...	20	<1	<1	230	150	110	<0.10	<0.1	12	4
MAR 20...	<10	3	<1	--	210	90	<0.10	--	--	--
APR 17...	<10	5	<1	200	200	110	<0.10	<0.1	11	4
MAY 14...	<10	13	<1	--	250	100	<0.10	--	--	--
JUN 19...	40	3	<1	--	190	40	<0.10	--	--	--
JUL 16...	10	2	<1	--	140	30	<0.10	--	--	--
AUG 28...	<10	6	<1	170	300	40	<0.10	<0.1	10	4
SEP 17...	<10	4	<1	--	150	40	<0.10	--	--	--

DATE	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 16...	3	2	<1.0	2700	37	10	<10	97	93	43
NOV 16...	<1	3	<1.0	--	--	30	10	96	127	66
DEC 11...	2	3	<1.0	--	--	30	10	99	112	84
JAN 16...	2	2	<1.0	--	--	20	<10	95	55	33
FEB 27...	2	<1	<1.0	2800	37	10	<10	98	51	29
MAR 20...	3	3	<1.0	--	--	20	<10	99	179	121
APR 17...	3	3	<1.0	2600	39	20	<10	99	106	84
MAY 14...	4	4	<1.0	--	--	20	<10	98	134	49
JUN 19...	8	7	<1.0	--	--	20	<10	100	118	19
JUL 16...	7	7	<1.0	--	--	20	<10	100	168	34
AUG 28...	3	4	<1.0	1900	29	30	<10	100	278	146
SEP 17...	4	5	<1.0	--	--	20	<10	99	115	49

< Actual value is known to be less than value shown.

09519500 GILA RIVER BELOW GILLESPIE DAM, AZ

LOCATION.--Lat 33°13'45", long 112°46'00", in SE&NE¼ sec.28, T.2 S., R.5 W., Maricopa County, Hydrologic Unit 15070101, at left end of Gillespie Dam, 8 mi downstream from Hassayampa River.

DRAINAGE AREA.--49,650 mi².

PERIOD OF RECORD.--August 1921 to current year. Low-flow records prior to October 1970 are not equivalent as leakage of less than 5 ft³/s not included, and from October 1971 to September 1973, when no leakage was included. Annual estimate of leakage was listed in REMARKS for the 1972 water year. Prior to 1939, published as "at Gillespie Dam."

REVISED RECORDS.--WSP 1213: 1939. WSP 1243: 1924(M). WSP 1926: Drainage area.

GAGE.--Water-stage recorder since July 28, 1924. Datum of gage is 9.95 ft below average elevation of crest of dam, which is 753.46 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 11, 1924, depth of water read on crest at left end of dam. Nov. 11, 1924, to July 22, 1932, datum of gage was at average elevation of dam crest. July 23, 1932, to Apr. 27, 1955, datum of gage was 5.00 ft below average elevation of crest of dam. Apr. 2, 1974 to Jan. 31, 1986, supplementary water-stage recorder and concrete control 70 ft downstream from crest of dam at datum 5.64 ft lower than datum of base gage. Since Jan. 31, 1986, supplementary water-stage recorder at bridge 0.1 mi downstream at different datum.

REMARKS.--Records poor. Flow consists of water passing over the dam, and seepage through the dam, but does not include water diverted to Gila Bend or Enterprise Canals. See sta 09518000, Gila River above diversions, at Gillespie Dam, for records of flow reaching dam, and of diversions to Gila Bend and Enterprise Canals. For diversions and regulation above station, see REMARKS for sta 09518000.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 178,000 ft³/s Feb. 16, 1980, gage height, 18.81 ft, present datum; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1891, 250,000 ft³/s, estimated, in February 1891.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,800 ft³/s Apr. 2; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e240	e120	e150	e200	e100	e110	e1700	e35	1.9	.00	.00	.00
2	e280	e100	e190	e210	e100	e1100	e1800	e30	1.9	.00	.00	.00
3	e280	e120	e200	e190	e130	e350	e1200	e30	1.8	.00	.00	.00
4	e250	e130	e220	e180	e140	e250	e920	e35	1.8	.00	.00	.00
5	e250	e150	e210	e250	121	e230	e900	e25	1.8	.00	.00	.00
6	e250	e130	e170	e260	108	e160	e930	e25	1.8	.00	.00	34
7	e240	e140	e180	e220	100	e150	e600	e30	3.4	.00	.00	39
8	e200	e170	e170	e210	99	e120	e360	25	1.4	.00	.00	37
9	e170	e200	e160	e210	98	e85	e220	44	1.5	.00	.00	13
10	e150	e190	e130	e180	e95	e50	e220	21	1.5	.00	.00	1.3
11	e130	e160	e180	191	e90	e50	e730	2.5	1.5	.00	.00	.19
12	e120	e170	e140	204	e85	e40	e320	22	1.4	.00	.00	.00
13	e160	e150	e130	201	e80	e50	e180	53	1.5	.00	.00	.00
14	e140	e140	e140	200	e80	e55	e90	33	1.5	.00	.00	.00
15	e180	e130	e150	192	e80	e60	e50	3.1	1.3	.00	.00	54
16	e140	e140	e140	176	e70	e100	e25	2.4	1.1	.00	.00	19
17	e130	e130	e160	140	e70	e110	e15	2.1	1.2	.00	.00	18
18	e110	e170	e160	164	e80	e120	e20	2.0	1.3	.00	.00	3.2
19	e75	e150	e170	162	e65	e220	e30	3.4	1.2	.00	.00	94
20	e85	e130	e200	163	e65	e230	e25	23	1.3	.00	.00	112
21	e100	e95	e190	204	e75	e220	e30	2.0	1.4	.00	.00	65
22	e160	e120	e180	164	e80	e210	e40	1.9	1.4	.00	.00	53
23	e220	e150	e200	161	e75	e150	e45	1.8	1.1	.00	.00	75
24	e220	e120	e220	147	e85	e70	e35	1.8	.38	.00	.00	75
25	e150	e120	e240	e95	e110	e160	e30	2.0	.00	.00	.00	140
26	e90	e60	e270	e95	e100	e270	e30	2.1	.00	.00	.00	145
27	e130	e100	e240	e120	e100	e230	e30	5.4	.00	.00	40	144
28	e180	e120	e200	153	e110	e360	e25	2.1	.00	.00	2.6	144
29	e180	e140	e180	144	---	e250	e25	2.5	.00	.00	.55	143
30	e150	e150	e170	136	---	e600	e30	2.1	.00	.00	.00	152
31	e140	---	e200	107	---	e1200	---	1.9	---	.00	.00	---
TOTAL	5300	4095	5640	5429	2591	7360	10655	472.1	36.38	0.00	43.15	1560.69
MEAN	171	136	182	175	92.5	237	355	15.2	1.21	.000	1.39	52.0
MAX	280	200	270	260	140	1200	1800	53	3.4	.00	40	152
MIN	75	60	130	95	65	40	15	1.8	.00	.00	.00	.00
AC-FT	10510	8120	11190	10770	5140	14600	21130	936	72	.00	86	3100

CAL YR 1990 TOTAL 45891.3 MEAN 126 MAX 1160 MIN 1.5 AC-FT 91030
WTR YR 1991 TOTAL 43182.32 MEAN 118 MAX 1800 MIN .00 AC-FT 85650

e Estimated

09519760 SAUCEDA WASH NEAR GILA BEND, AZ

LOCATION.--Lat 33°52'14", long 112°45'30", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.6 S., R.5 W., Maricopa County, Hydrologic Unit 15070101, on right bank wing wall of culvert on State Highway 85, 5.3 mi south of Gila Bend.

DRAINAGE AREA.--126 mi², of which 20 mi² also contributes to an adjoining basin.

PERIOD OF RECORD.--Water years 1964-79 (annual maximums only), October 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 848 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1979, crest-stage gage at same site and datum.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,150 ft³/s, Sept. 26, 1976, gage height, 6.3 ft; no flow most of each year.

EXTREMES FOR CURRENT PERIOD.--Water year 1990: peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 3	0200	1,320	4.00	July 24	1215	789	3.19
July 8	1445	306	2.27	Aug. 14	2030	*1,400	*4.10
July 11	0330	960	3.19	Sept. 3	1930	885	3.35

No flow for most of the year.

Water year 1991: peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 7	1945	*1,010	*3.55

No flow for most of the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
2	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
3	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	e64	.00	81
4	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	e.03	e.11
5	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	e2.4
6	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
7	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
8	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	e11	.00	.00
9	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	e.00	.00	.00
10	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	e.00	.00	.00
11	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	e135	e4.6	.00
12	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	e.00	e9.1	.00
13	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	e4.7	e.00	.00
14	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	e2.2	e211	.00
15	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	e.00	e3.2	1.8
16	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	e.00	.00	.00
17	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	e.00	.00	.00
18	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	e.00	.00	.00
19	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	e.00	.00	.00
20	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	e.00	.00	.00
21	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	e.00	.00	.00
22	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	e.00	.00	.00
23	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	e.00	.00	.00
24	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	e45	.00	.00
25	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
26	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
27	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
28	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
29	e.00	e.00	e.00	e.00	---	.00	.00	.00	.00	.00	.00	.00
30	e.00	e.00	e.00	e.00	---	.00	.00	.00	.00	.00	.00	.00
31	e.00	---	e.00	e.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	261.90	227.93	85.31
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	8.45	7.35	2.84
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	135	211	81
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	519	452	169

WTR YR 1990 TOTAL 575.14 MEAN 1.58 MAX 211 MIN .00 AC-FT 1140

e Estimated

GILA RIVER BASIN

09519760 SAUCEDA WASH NEAR GILA BEND, AZ--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	.00	.00	.00	.00	2.7	e.00	e.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	1.1	e.00	e.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	e.00	e.00	e.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	e.00	e.00	e.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	e.00	e.00	e.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	e.00	e.00	e.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	e.00	e.00	e.00	.00	49	.00	.00
8	.00	.00	.00	.00	.00	e.00	e.00	e.00	.00	e.00	.00	.00
9	.00	.00	.00	.00	.00	e.00	e.00	e.00	.00	e.00	.00	.00
10	.00	.00	.00	.00	.00	e.00	e.00	e.00	.00	e.00	.00	.00
11	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
12	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
13	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
14	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
15	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
16	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
17	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
18	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
19	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
20	.00	.00	.00	.00	.00	10	e.00	.00	.00	e.00	.00	.00
21	.00	.00	.00	.00	.00	1.8	e.00	.00	.00	e.00	.00	.00
22	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
23	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
24	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.26	.00
25	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
26	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
27	.00	.00	.00	.00	.00	7.5	e.00	.00	.00	e.00	.00	.00
28	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	.00	.00
29	.00	.00	.00	.00	---	e.00	e.00	.00	.00	e.00	.00	.00
30	.00	.00	.00	.00	---	e.00	e.00	.00	.00	e.00	.00	.00
31	.00	---	.00	.00	---	e.00	---	.00	---	e.00	.00	---
TOTAL	1.70	0.00	0.00	0.00	0.00	23.10	0.00	0.00	0.00	49.00	0.26	0.00
MEAN	.055	.000	.000	.000	.000	.75	.000	.000	.000	1.58	.008	.000
MAX	1.7	.00	.00	.00	.00	10	.00	.00	.00	49	.26	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	3.4	.00	.00	.00	.00	46	.00	.00	.00	97	.5	.00

CAL YR	1990	TOTAL	576.84	MEAN	1.58	MAX	211	MIN	.00	AC-FT	1140
WTR YR	1991	TOTAL	74.06	MEAN	.20	MAX	49	MIN	.00	AC-FT	147

e Estimated

GILA RIVER BASIN

307

09519800 GILA RIVER BELOW PAINTED ROCK DAM, AZ

LOCATION.--Lat 33°04'30", long 113°00'50", in SE¼ sec.18, T.4 S., R.7 W., Maricopa County, Hydrologic Unit 15070201, on left bank 0.3 mi downstream from Painted Rock Dam and 19 mi northeast of Sentinel.

DRAINAGE AREA.--50,910 mi², approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 518.69 ft above National Geodetic Vertical Datum of 1929 (levels by Army Corps of Engineers). Auxiliary gage at site 0.3 mi upstream: May 5, 1969, to Mar. 30, 1973, at datum 2.87 ft higher; since Feb. 8, 1979 at same datum.

REMARKS.--No estimated daily discharges. Records fair. Many diversions above station for irrigation. Flow above station regulated by many reservoirs, the largest of which is Painted Rock Reservoir - capacity, 2,492,000 acre-ft. (See REMARKS for sta 09518000, Gila River above diversions, at Gillespie Dam.)

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,190 ft³/s, result of a discharge measurement May 3, 1983, gage height, 9.36 ft, maximum gage height, 10.57 ft Feb. 9, 1979; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 291 ft³/s, Apr. 10; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	40	27	2.2	.47	92	1.7	.30	.00	.00
2	.00	.00	.12	43	34	2.8	.56	86	1.6	.28	.00	.00
3	.00	.00	.45	45	35	2.9	.68	72	1.5	.23	.00	.00
4	.00	.00	.73	48	26	2.6	.75	20	1.5	.20	.00	.00
5	.00	.00	1.2	51	19	40	79	10	1.4	.13	.00	.00
6	.00	.00	1.8	57	15	144	158	9.1	1.3	.08	.00	.00
7	.00	.00	2.6	55	16	226	151	8.2	1.3	.05	.00	.00
8	.00	.00	3.4	53	21	249	194	7.4	1.2	.04	.00	.00
9	.00	.00	4.3	59	21	207	262	6.7	1.2	.00	.00	.00
10	.00	.00	5.1	63	15	112	291	5.8	1.1	.00	.00	.00
11	.00	.00	6.3	65	11	131	201	5.3	1.1	.00	.00	.00
12	.00	.00	7.7	66	8.2	91	147	4.6	1.0	.00	.00	.00
13	.00	.00	9.0	69	6.6	73	150	4.8	1.0	.00	.00	.00
14	.00	.00	10	73	5.4	53	150	4.5	.96	.00	.00	.00
15	.00	.00	12	74	4.8	28	151	4.1	.88	.00	.00	.00
16	.00	.00	12	75	4.4	24	150	3.8	.81	.00	.00	.00
17	.00	.00	13	74	4.1	28	146	3.6	.75	.00	.00	.00
18	.00	.00	14	77	3.8	23	146	3.3	.68	.00	.00	.00
19	.00	.00	16	77	3.4	35	145	3.2	.67	.00	.00	.00
20	.00	.00	17	73	2.9	37	143	3.1	.62	.00	.00	.00
21	.00	.00	18	60	2.7	40	142	2.8	.60	.00	.00	.00
22	.00	.00	20	56	2.6	53	139	2.7	.57	.00	.00	.00
23	.00	.00	20	57	2.6	82	138	2.6	.54	.00	.00	.00
24	.00	.00	23	57	2.4	92	135	2.6	.51	.00	.00	.00
25	.00	.00	25	58	2.3	93	130	2.4	.48	.00	.00	.00
26	.00	.00	28	57	2.3	106	119	2.2	.45	.00	.00	.00
27	.00	.00	30	55	2.2	39	117	2.1	.42	.00	.00	.00
28	.00	.00	32	48	2.2	.48	110	2.0	.39	.00	.00	.00
29	.00	.00	35	35	---	.42	102	1.9	.36	.00	.00	.00
30	.00	.00	37	25	---	.42	99	1.8	.33	.00	.00	.00
31	.00	---	38	22	---	.44	---	1.9	---	.00	.00	---
TOTAL	0.00	0.00	442.70	1767	302.9	2018.26	3897.46	382.5	26.92	1.31	0.00	0.00
MEAN	.000	.000	14.3	57.0	10.8	65.1	130	12.3	.90	.042	.000	.000
MAX	.00	.00	38	77	35	249	291	92	1.7	.30	.00	.00
MIN	.00	.00	.00	22	2.2	.42	.47	1.8	.33	.00	.00	.00
AC-FT	.00	.00	878	3500	601	4000	7730	759	53	2.6	.00	.00

CAL YR 1990 TOTAL 559.80 MEAN 1.53 MAX 38 MIN .00 AC-FT 1110
WTR YR 1991 TOTAL 8839.05 MEAN 24.2 MAX 291 MIN .00 AC-FT 17530

09520360 GILA RIVER NEAR MOHAWK, AZ

LOCATION.--Lat 32°47'18", long 113°45'48", in NE¼SE¼ sec. 26, T.7 S., R.15 W., Yuma County, Hydrologic Unit 15070201, in center of channel at culvert outlet at Avenue 51E, and 4.0 mi north of Mohawk.

DRAINAGE AREA.--55,430 mi², approximately.

PERIOD OF RECORD.--February to April 1966 (published in WSP 1850-C), April 1973 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 295 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to March 1983 at site 70 ft upstream at datum 6.45 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Painted Rock Dam; capacity of reservoir at Painted Rock Dam is 2,492,000 acre-ft, (see REMARKS for sta 09519800).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,270 ft³/s Apr. 30, 1980, gage height, 11.28 ft, site and datum then in use; maximum gage height, 14.20 ft June 7, 8, 1983, present site and datum; no flow most of time most years.

EXTREMES FOR CURRENT YEAR.--No flow for entire year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CAL YR	1990	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC-FT	.00	
WTR YR	1991	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC-FT	.00	

09520500 GILA RIVER NEAR DOME, AZ

LOCATION.--Lat 32°45'39", long 114°25'11", in SW¼ sec.4, T.8 S., R.21 W., Yuma County, Hydrologic Unit 15070201, on right bank 440 ft upstream from McPhaul bridge on old route of State Highway 95, 3 mi west of Dome, and 12 mi upstream from mouth.

DRAINAGE AREA.--57,850 mi², approximately - includes 373 mi² in Aubrey Valley Playa, a closed basin, but excludes all other closed basins.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1903 to current year. Monthly total, maximum, and minimum daily discharges only for January 1903 to December 1904 and January 1906 to July 1929 in WSP 918 or WSP 1313. Published as "at Yuma and Gila City" 1903, as "near Dome" 1904, and as "at Dome (Gila City)" 1905-6. Records for 1907-29 are published in WSP 918 as "at Yuma and at and near Dome."

REVISED RECORDS.--WSP 918: 1905. WSP 1733: July 1942. WSP 1926: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 139.18 ft above National Geodetic Vertical Datum of 1929. Prior to October 1903 and January 1907 to April 1929, no gage; discharge estimated. October 1903 to December 1906, principal nonrecording gage 4 mi upstream at datum 19.19 ft higher, supplemented by many nonrecording gages at different datums. May 1929 to May 31, 1981, at datum 9.00 ft higher.

REMARKS.--No estimated daily discharges. Records poor. Many diversions above station for irrigation. Flow above station regulated by reservoirs at and above Painted Rock Dam; capacity of reservoir at Painted Rock Dam is 2,492,000 acre-ft. Painted Rock Reservoir, which is for flood control only, was completed in October 1959 (see also REMARKS for sta 09518000).

EXTREMES FOR PERIOD OF RECORD.--1903-29: Maximum daily discharge, 200,000 ft³/s, roughly estimated, Jan. 22, 1916. 1929-59: Maximum discharge, 20,700 ft³/s Feb. 15, 1932, gage height, 25.75 ft, present datum; no flow for part or all of most years. 1959-91: Maximum discharge, 4,820 ft³/s Sept. 18, 1963, gage height, 16.20 ft; no flow for part or all of most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 671 ft³/s Sept. 5, gage height, 16.26 ft; minimum daily, 0.62 ft³/s Aug. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	3.8	3.0	3.5	3.1	4.1	3.9	3.7	2.7	17	1.3	.79
2	6.6	5.1	2.8	3.6	2.4	3.3	2.7	4.6	3.2	4.3	1.3	.81
3	6.6	3.4	3.9	4.5	2.7	3.5	2.9	5.1	2.8	5.4	1.3	.83
4	8.6	4.5	2.9	4.4	3.5	3.9	3.1	3.7	3.0	4.4	1.3	3.9
5	8.1	4.4	2.6	7.2	3.3	4.1	3.5	3.2	3.3	3.6	1.4	91
6	7.5	5.1	3.4	6.6	3.6	4.0	3.5	3.3	2.6	3.6	1.7	2.5
7	5.0	5.4	2.4	4.9	3.0	4.5	3.0	4.0	2.7	3.4	1.4	2.1
8	4.7	4.9	2.8	5.0	2.5	4.0	3.3	3.5	2.9	3.9	1.4	2.7
9	5.3	4.3	3.3	4.1	2.8	3.5	3.5	3.6	2.5	3.4	1.4	1.6
10	7.1	4.0	4.0	4.6	2.6	3.8	10	3.4	2.5	3.6	3.1	1.0
11	5.4	4.6	4.1	3.5	3.0	3.4	3.4	3.1	3.2	3.4	1.5	1.5
12	4.1	3.0	3.9	3.7	2.7	3.2	4.1	3.0	2.2	3.0	1.4	1.3
13	3.9	2.4	5.1	3.1	2.3	3.2	3.2	3.0	2.5	2.9	1.3	1.4
14	4.8	2.5	4.7	3.1	2.6	4.2	2.7	3.0	2.4	2.5	1.2	1.0
15	3.7	3.8	3.9	3.9	3.1	3.5	3.7	3.4	2.2	2.3	1.1	1.4
16	3.8	3.2	4.1	3.5	2.1	3.0	3.1	3.5	2.0	2.4	1.1	1.9
17	4.6	4.2	4.4	4.2	2.5	2.9	1.8	3.8	2.4	2.5	.99	2.3
18	4.6	2.9	4.6	3.5	2.6	3.0	2.5	3.3	2.1	2.0	.91	1.4
19	3.8	2.3	4.9	3.1	2.4	3.2	2.0	3.2	2.5	1.8	.84	1.7
20	3.0	2.1	4.6	4.5	2.0	3.4	1.8	2.8	3.4	1.6	.72	1.8
21	3.0	4.6	4.2	4.2	1.8	3.0	1.8	3.3	2.5	1.3	.72	1.7
22	3.5	4.0	3.9	4.8	1.8	5.1	5.1	4.7	1.8	1.3	.75	1.3
23	3.5	4.7	3.7	3.6	1.8	3.8	5.2	3.0	2.4	1.3	.63	1.7
24	4.4	3.4	3.5	3.0	2.1	3.7	4.7	2.6	2.7	1.5	.64	1.8
25	3.9	2.3	3.8	4.0	2.8	3.6	5.8	2.7	3.4	1.2	.62	1.7
26	3.0	84	3.5	3.9	2.0	3.2	5.8	2.8	2.7	1.1	.63	1.6
27	3.2	74	3.4	4.0	2.0	4.5	3.9	3.2	3.4	1.1	.67	2.0
28	2.6	18	3.6	3.8	3.2	4.0	3.9	2.9	3.4	1.0	.71	1.6
29	2.4	13	3.7	4.5	---	3.2	4.1	2.5	3.1	1.0	.73	1.6
30	2.9	14	3.9	2.5	---	2.8	3.6	2.4	3.2	1.3	.76	2.2
31	3.1	---	4.0	2.2	---	2.8	---	3.6	---	1.2	.79	---
TOTAL	143.3	297.9	116.6	125.0	72.3	111.4	111.6	103.9	81.7	90.3	34.31	140.13
MEAN	4.62	9.93	3.76	4.03	2.58	3.59	3.72	3.35	2.72	2.91	1.11	4.67
MAX	8.6	84	5.1	7.2	3.6	5.1	10	5.1	3.4	17	3.1	91
MIN	2.4	2.1	2.4	2.2	1.8	2.8	1.8	2.4	1.8	1.0	.62	.79
AC-FT	284	591	231	248	143	221	221	206	162	179	68	278

CAL YR	1990	TOTAL	3040.49	MEAN	8.33	MAX	823	MIN	.09	AC-FT	6030
WTR YR	1991	TOTAL	1428.44	MEAN	3.91	MAX	91	MIN	.62	AC-FT	2830

GILA RIVER BASIN

09520500 GILA RIVER NEAR DOME, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to August 1973, February 1979, October 1983 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1983 to September 1986.

WATER TEMPERATURE: October 1983 to September 1986.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	
OCT												
22...	1230	4.4	8220	7.7	28.0	22.5	4.5	766	12.1	143	150	
NOV												
27...	0845	123	1360	8.2	16.0	12.0	2.1	770	9.9	91	14	
DEC												
17...	1000	4.9	3800	7.8	12.0	10.5	3.5	770	10.5	94	25	
JAN												
14...	0930	3.0	3400	7.8	16.5	12.0	3.2	770	10.4	97	34	
FEB												
14...	1145	2.8	1500	8.0	25.0	16.5	6.0	770	11.0	112	20	
MAR												
14...	1215	5.0	5970	7.7	17.5	18.0	4.4	762	9.8	106	48	
APR												
18...	0945	2.2	5340	7.6	23.0	21.0	4.5	764	6.4	73	50	
MAY												
21...	0930	3.2	2620	7.8	24.0	22.0	12	760	7.0	81	37	
JUN												
27...	1315	3.0	1520	7.9	28.0	27.5	6.9	760	7.1	91	17	
JUL												
23...	1000	1.3	1360	7.8	34.0	25.0	4.3	765	5.7	69	17	
AUG												
20...	0945	1.0	1200	8.4	31.0	30.0	13	766	9.5	126	17	
SEP												
05...	1200	4.4	930	7.7	31.0	29.0	300	760	3.8	50	83	
DATE		HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT												
22...	1800	1500	410	190	1100	11	12	322	0	264	710	
NOV												
27...	370	220	91	35	150	3	5.6	190	0	156	330	
DEC												
17...	880	680	210	87	470	7	7.0	246	0	202	460	
JAN												
14...	770	570	180	78	400	6	6.7	242	0	198	450	
FEB												
14...	380	230	94	36	160	4	5.4	190	0	156	350	
MAR												
14...	1400	1200	320	150	760	9	10	310	0	254	620	
APR												
18...	1300	1100	310	130	700	8	9.2	283	0	232	540	
MAY												
21...	650	480	150	67	300	5	6.4	210	0	172	400	
JUN												
27...	390	240	95	38	160	4	5.6	185	0	152	340	
JUL												
23...	370	210	88	36	150	3	4.9	188	0	154	340	
AUG												
20...	330	180	80	31	120	3	4.8	171	6	150	310	
SEP												
05...	190	100	53	14	100	3	14	107	0	88	140	

09520500 GILA RIVER NEAR DOME, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)
OCT 22...	2200	0.40	5450	4780	7.41	13	--	0.020	<0.100	0.430	0.47
NOV 27...	150	0.40	880	856	1.20	<1	--	<0.010	0.100	0.060	0.24
DEC 17...	850	0.30	2270	2210	3.09	5	--	<0.010	0.100	0.070	--
JAN 14...	750	0.20	2030	1990	2.76	5	--	<0.010	0.100	0.060	0.24
FEB 14...	200	0.30	942	940	1.28	4	--	<0.010	0.100	<0.010	--
MAR 14...	1400	0.50	3640	3410	4.95	1	--	<0.010	0.085	0.140	0.26
APR 18...	1500	0.50	3440	3330	4.68	7	0.250	0.010	0.260	<0.010	--
MAY 21...	560	0.50	1660	1590	2.26	20	0.076	0.010	0.086	<0.010	--
JUN 27...	200	0.30	1010	930	1.37	14	--	<0.010	<0.050	0.020	0.58
JUL 23...	160	0.40	856	872	1.16	11	--	<0.010	0.240	0.020	0.68
AUG 20...	110	0.40	794	747	1.08	18	--	0.020	<0.050	<0.010	--
SEP 05...	150	0.20	552	524	0.75	608	2.37	0.230	2.60	0.090	1.7
DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)
OCT 22...	0.90	--	--	0.020	--	<0.010	--	2	1	200	--
NOV 27...	0.30	0.40	1.8	0.020	--	<0.010	<1	2	2	110	<10
DEC 17...	<0.20	--	--	<0.010	--	<0.010	--	2	2	100	--
JAN 14...	0.30	0.40	1.8	0.010	--	<0.010	<1	2	1	200	<10
FEB 14...	0.60	0.70	3.1	0.020	--	<0.010	--	2	2	94	--
MAR 14...	0.40	0.48	2.1	0.040	--	<0.010	<1	2	2	100	<10
APR 18...	0.30	0.56	2.5	0.020	0.03	0.010	--	2	2	100	--
MAY 21...	0.70	0.79	3.5	0.050	--	<0.010	<1	2	2	200	<10
JUN 27...	0.60	--	--	0.030	0.03	0.010	--	3	2	100	--
JUL 23...	0.70	0.94	4.2	0.020	--	<0.010	<1	3	2	110	<10
AUG 20...	0.40	--	--	0.050	0.06	0.020	--	3	3	110	--
SEP 05...	1.8	4.4	19	0.730	0.18	0.060	2	6	5	120	<10

< Actual value is known to be less than value shown.

GILA RIVER BASIN

09520500 GILA RIVER NEAR DOME, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
OCT 22...	1100	<1	<1.0	4	<1	3	2	730	50	<1
NOV 27...	190	<1	<1.0	<1	<1	4	1	80	5	2
DEC 17...	470	<1	<1.0	<1	<1	2	1	390	<10	1
JAN 14...	430	<1	<1.0	<1	<1	3	1	180	20	<1
FEB 14...	190	<1	<1.0	<1	<1	1	1	200	4	<1
MAR 14...	740	<1	<1.0	<1	<1	3	1	400	20	<1
APR 18...	730	<1	<1.0	1	<1	2	1	300	<10	<1
MAY 21...	350	<1	<1.0	1	<1	1	1	680	20	1
JUN 27...	130	<1	<1.0	<1	<1	2	1	440	10	1
JUL 23...	180	<1	<1.0	1	<1	3	3	270	5	3
AUG 20...	170	<1	<1.0	2	<1	3	<1	640	6	2
SEP 05...	240	<1	<1.0	23	<1	31	7	15000	65	25

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 22...	<1	1700	1700	<0.10	--	<1	1	<1.0	<10	20
NOV 27...	<1	30	23	<0.10	1	<1	2	<1.0	<10	4
DEC 17...	<1	480	520	<0.10	--	<2	1	<1.0	<10	<10
JAN 14...	<1	520	510	<0.10	1	1	1	<1.0	<10	<10
FEB 14...	<1	110	95	<0.10	--	<1	1	2.0	<10	5
MAR 14...	<1	460	430	<0.10	1	1	1	<1.0	<10	<10
APR 18...	<1	650	690	<0.10	--	2	2	<1.0	40	<10
MAY 21...	1	400	280	<0.10	5	1	2	<1.0	<10	<10
JUN 27...	<1	220	220	<0.10	--	2	2	<1.0	<10	17
JUL 23...	<1	120	72	<0.10	3	<1	1	<1.0	<10	4
AUG 20...	<1	70	53	<0.10	--	2	2	<1.0	<10	5
SEP 05...	<1	700	190	0.10	26	<1	<1	<1.0	70	5

< Actual value is known to be less than value shown.

COLORADO RIVER MAIN STEM

313

09521100 COLORADO RIVER BELOW YUMA MAIN CANAL
WASTEWAY, AT YUMA, AZ

LOCATION.--Lat 32°43'54", long 114°37'55", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.26, T.16 S., R.22 E., San Bernardino meridian, in Imperial County, California, Hydrologic Unit 15030107, on right bank 1,000 ft downstream from Yuma Main Canal wasteway, 0.6 mi downstream from former gaging station on Colorado River at Yuma, 1.1 mi northwest of downtown post office in Yuma, 5.2 mi downstream from Gila River, and 6.4 mi upstream from northerly international boundary.

DRAINAGE AREA.--246,500 mi², approximately, including all closed basins entirely within the drainage boundary, also 3,959 mi² in Great Divide basin in southern Wyoming.

PERIOD OF RECORD.--October 1963 to current year. If records for Yuma Main Canal wasteway at Yuma (sta 09525000) and Reservation Main Drain No. 4 (sta 09530000) are subtracted from records at this station, records equivalent to those published 1902-64 as "Colorado River at Yuma" (sta 09521000) can be obtained.

GAGE.--Water-stage recorder. Datum of gage is 101.99 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, municipal, and industrial uses, and return flows from irrigated areas.

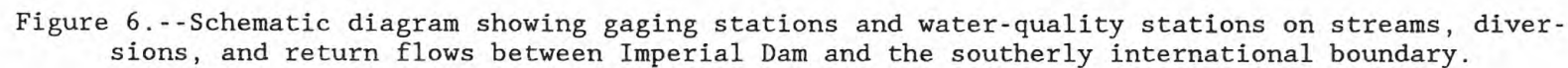
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,600 ft³/s Aug. 19, 1983, gage height, 26.67 ft; maximum gage height, 27.67 ft July 4, 1983; minimum daily discharge, 260 ft³/s Jan. 17, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum gage height since at least 1878, 34.0 ft Jan. 22, 1916, discharge, 250,000 ft³/s, at former gaging station at Yuma.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,310 ft³/s Sept. 8, gage height, 11.77 ft; minimum daily, 574 ft³/s July 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1030	926	1100	1320	879	948	1970	827	1370	1320	889	1210
2	1000	921	1080	1350	1220	1760	1600	854	1400	1210	855	1150
3	888	930	1170	1390	1680	2030	1270	879	656	1080	935	1190
4	879	929	1240	1400	1700	2090	1240	877	701	1080	992	1150
5	1010	962	1230	1430	1180	2190	1260	1310	748	1050	1120	1240
6	972	937	1240	1450	750	2670	977	1250	732	1040	1060	1250
7	952	976	1240	1390	731	1500	1050	1130	784	1150	1040	1670
8	955	996	1230	1410	722	1170	1010	1130	797	1140	1050	2780
9	988	977	1250	1410	714	1050	912	1100	861	1080	1050	1310
10	955	966	1260	1450	751	1200	856	813	1010	925	1000	1210
11	938	973	1270	1430	728	1320	848	755	1020	872	1100	1230
12	967	983	1250	1600	699	1160	823	923	1040	982	1130	1140
13	958	992	1240	1580	742	1350	1000	1580	1030	1110	1140	1110
14	966	988	1250	1850	719	1020	1190	1360	1010	1220	1060	1160
15	958	982	1260	1270	715	954	1240	1160	968	1160	965	1180
16	965	956	1250	1440	723	1140	1170	1150	1050	1130	1020	1220
17	924	973	1300	1460	729	1370	1140	1150	1110	1090	1140	1190
18	959	1010	1280	1460	722	1390	827	1150	822	1100	1160	1160
19	930	962	1270	1500	735	1330	736	1140	920	1180	875	1190
20	912	958	1290	1490	756	1290	821	1140	970	1270	874	1150
21	936	993	1260	1490	741	1400	1020	1130	1160	1340	888	1240
22	909	1010	1210	1490	728	1100	966	1180	1150	1210	892	1250
23	922	1010	1260	1500	740	1190	835	1150	1250	907	862	1220
24	944	1040	1330	1450	728	1260	787	1150	1080	801	862	1180
25	910	970	1350	1460	723	1270	781	1130	1030	792	896	1170
26	910	1030	1410	1460	772	1200	800	1100	1000	829	883	1190
27	912	1020	1370	1500	744	1200	969	1130	1040	938	844	1180
28	930	1070	1320	1670	766	1300	1070	1160	1250	582	894	1180
29	925	1070	1280	1700	---	1460	946	1110	1310	574	922	1160
30	914	1090	1340	1660	---	1410	883	1140	1390	586	1650	1160
31	935	---	1350	873	---	1600	---	1220	---	664	1340	---
TOTAL	29253	29600	39180	45333	23537	43322	30997	34278	30659	31412	31388	37820
MEAN	944	987	1264	1462	841	1397	1033	1106	1022	1013	1013	1261
MAX	1030	1090	1410	1850	1700	2670	1970	1580	1400	1340	1650	2780
MIN	879	921	1080	873	699	948	736	755	656	574	844	1110
AC-FT	58020	58710	77710	89920	46690	85930	61480	67990	60810	62310	62260	75020
CAL YR	1990	TOTAL	387115	MEAN	1061	MAX	2550	MIN	509	AC-FT	767800	
WTR YR	1991	TOTAL	406779	MEAN	1114	MAX	2780	MIN	574	AC-FT	806800	



COLORADO RIVER MAIN STEM

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09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA
(National stream-quality accounting network)

LOCATION.--Lat 32°43'07", long 114°43'05", in NE¼SE¼ sec.21, T.8 S., R.24 W., Gila and Salt River meridian, in Yuma County, Arizona, Hydrologic Unit 15030108, on left bank at northerly international boundary, 0.5 mi east of Andrade, 1.1 mi upstream from Morelos Dam, 1.1 mi downstream from Rockwood Gate, and 6.4 mi downstream from gaging station on Colorado River below Yuma Main Canal wasteway.

DRAINAGE AREA.--246,700 mi², approximately, including all closed basins entirely within the drainage boundary, also 3,959 mi² in Great Divide basin in southern Wyoming.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1950 to current year. Prior to October 1958 published as "at international boundary."

GAGE.--Water-stage recorder. Datum of gage is mean sea level, National Geodetic Vertical Datum of 1929. Supplementary water-stage recorder 1,680 ft upstream at same datum.

REMARKS.--No estimated daily discharges. This record shows water passing northerly international boundary. Minor diversions to the United States below this station by pumping from ground water for irrigation in the floodway between river and Yuma levee.

COOPERATION.--Records furnished by International Boundary and Water Commission, U.S. Section (discharge figures rounded in accordance with Geological Survey standard practice).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,600 ft³/s Aug. 20, 1983; maximum elevation, 115.65 ft Aug. 18, 19, 1983; minimum discharge, 495 ft³/s Sept. 28, 1970; minimum elevation, 101.72 ft, Nov. 2, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,160 ft³/s Apr. 19-21; minimum daily, 1,010 ft³/s Oct. 17, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1140	1110	1250	1460	1940	2090	3110	2730	1500	2520	2500	1370
2	1130	1110	1210	1480	2040	2480	2930	2720	1600	2500	2300	1300
3	1510	1110	1280	1520	1820	2170	2910	2720	1720	2540	2110	1330
4	1980	1110	1280	1530	1850	2250	2910	2640	1770	2530	2090	1300
5	1180	1170	1280	2040	1830	2320	2920	2520	1830	2510	2240	1350
6	1110	1120	1300	2860	1940	2670	2900	2420	1800	2530	2220	1390
7	1090	1140	1300	2640	1850	2400	2910	2270	1880	2550	2190	1660
8	1060	1170	1290	2900	1800	2310	3080	2240	1910	2560	2200	2630
9	1090	1150	1310	2700	1810	2330	3060	2240	1940	2500	2240	1500
10	1060	1140	1330	1650	1860	2370	3010	2250	2100	2510	2190	1310
11	1030	1140	1360	1600	1860	2550	3010	2130	2130	2510	2240	1310
12	1060	1160	1370	1810	1820	2600	3040	2000	2140	2580	2260	1300
13	1050	1190	1360	1770	1880	2580	3060	1750	2120	2590	2260	1320
14	1060	1180	1390	2660	1840	2540	3060	1550	2100	2560	2230	1310
15	1050	1150	1400	1980	1840	2620	3100	1320	2100	2490	2200	1300
16	1080	1140	1360	1630	1830	2600	3110	1310	2110	2560	2220	1310
17	1010	1160	1460	1630	1850	2590	3120	1300	2330	2530	2190	1280
18	1080	1200	1450	1640	1830	2750	3130	1300	2560	2520	2340	1300
19	1040	1140	1430	1680	1850	2760	3160	1290	2660	2520	1970	1280
20	1010	1150	1450	1670	1880	2860	3160	1290	2640	2520	2010	1280
21	1040	1180	1440	1650	1870	2840	3160	1290	2630	2520	2010	1290
22	1030	1180	1340	1660	1870	2860	2930	1330	2670	2570	2020	1280
23	1060	1180	1390	1670	1880	2880	2980	1290	2590	2550	1980	1310
24	1090	1200	1470	1630	1860	2880	2940	1300	2760	2570	1990	1310
25	1050	1160	1490	1620	1860	2890	2960	1290	2770	2560	2010	1300
26	1060	1160	1570	1610	1900	2830	2990	1250	2790	2560	2000	1320
27	1040	1190	1540	1630	1920	2880	2990	1270	2830	2520	1960	1300
28	1070	1230	1520	1860	1910	2890	2970	1320	2830	2540	2000	1290
29	1070	1210	1460	1880	---	2880	2830	1270	2820	2670	1990	1270
30	1100	1270	1500	1870	---	2870	2800	1250	2760	2620	1770	1290
31	1120	---	1510	1900	---	2900	---	1350	---	2610	1520	---
TOTAL	34550	34900	43090	57830	52290	81440	90240	54200	68390	78920	65450	41090
MEAN	1115	1163	1390	1865	1867	2627	3008	1748	2280	2546	2111	1370
MAX	1980	1270	1570	2900	2040	2900	3160	2730	2830	2670	2500	2630
MIN	1010	1110	1210	1460	1800	2090	2800	1250	1500	2490	1520	1270
AC-FT	68530	69220	85470	114700	103700	161500	179000	107500	135700	156500	129800	81500
CAL YR	1990	TOTAL	709290	MEAN	1943	MAX	4990	MIN	1010	AC-FT	1407000	
WTR YR	1991	TOTAL	702390	MEAN	1924	MAX	3160	MIN	1010	AC-FT	1393000	

COLORADO RIVER MAIN STEM

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1968 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to September 1984.

REMARKS.--Discharge reported by International Boundary and Water Commission. Unpublished chemical analyses for water years 1961-68 available from district office in Tucson, AZ.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	
OCT 23...	1130	1130	1600	8.1	29.0	22.0	8.0	768	8.6	98	18	180	
NOV 27...	1245	1220	1710	8.1	16.0	16.0	10	770	9.7	98	14	K180	
DEC 17...	1130	1500	1570	8.1	16.5	14.0	5.5	770	10.4	100	13	27	
JAN 14...	1415	3090	1610	8.2	26.0	15.0	10	770	10.2	101	11	84	
FEB 11...	0940	1860	1360	8.2	21.0	17.0	6.6	767	8.9	92	18	130	
MAR 11...	1245	2540	1350	8.2	19.0	15.5	15	765	9.5	95	12	64	
APR 18...	1300	3060	1150	8.1	25.0	20.5	16	765	8.4	93	16	120	
MAY 22...	0945	1350	1430	8.2	29.0	24.0	4.7	760	8.4	101	14	81	
JUN 25...	1030	2770	1230	8.2	29.5	23.0	4.3	765	8.1	95	15	K140	
JUL 22...	1245	2560	1260	8.2	36.0	29.0	4.8	765	7.8	101	11	100	
AUG 19...	1100	1960	1390	8.3	41.0	30.0	3.8	767	7.8	103	15	51	
SEP 03...	1300	1410	1430	8.2	38.0	32.0	2.5	767	7.2	98	13	130	
DATE		STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT 23...	K22	400	210	100	36	180	4	5.0	227	0	186	380	
NOV 27...	110	440	250	110	39	200	4	5.4	232	0	190	370	
DEC 17...	K12	390	200	98	35	170	4	4.8	225	0	184	350	
JAN 14...	200	400	210	100	37	180	4	5.1	234	0	192	370	
FEB 11...	K32	360	190	89	32	150	3	4.5	206	0	169	330	
MAR 11...	42	360	200	91	32	150	3	4.6	200	0	164	330	
APR 18...	K22	320	160	80	28	110	3	4.7	185	0	152	280	
MAY 22...	35	380	210	96	34	150	3	4.9	207	0	170	340	
JUN 25...	K70	340	190	84	32	120	3	4.7	188	0	154	310	
JUL 22...	82	350	190	86	32	140	3	4.6	193	0	158	330	
AUG 19...	20	360	200	89	34	150	3	5.0	200	0	164	350	
SEP 03...	85	370	200	92	34	160	4	5.0	207	0	170	340	

K Based on non-ideal colony count.

COLORADO RIVER MAIN STEM

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09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	RESIDUE TOTAL AT 105 DEG. C, PENDEED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
OCT 23...	200	0.40	14	1010	1030	1.37	28	0.380	0.380	1.7	0.020	0.020
NOV 27...	220	0.50	--	1090	1060	1.48	20	0.380	--	--	0.020	--
DEC 17...	180	0.70	14	988	964	1.34	15	0.390	--	--	0.010	<0.010
JAN 14...	180	0.20	--	1040	988	1.41	13	0.290	--	--	0.010	--
FEB 11...	150	0.50	11	872	871	1.19	18	--	--	--	<0.010	<0.010
MAR 11...	140	0.40	--	836	847	1.14	38	0.300	--	--	0.010	--
APR 18...	110	0.50	9.5	774	717	1.05	23	--	0.340	1.5	<0.010	0.010
MAY 22...	170	0.50	--	896	898	1.22	17	0.350	--	--	0.020	--
JUN 25...	120	0.40	9.7	806	775	1.10	11	0.240	0.250	1.1	0.010	0.010
JUL 22...	140	0.40	--	802	828	1.09	13	--	--	--	<0.010	--
AUG 19...	140	0.20	12	889	882	1.21	9	0.280	0.290	1.3	0.010	0.010
SEP 03...	170	0.40	--	938	904	1.28	4	0.360	--	--	0.020	--
DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 23...	0.400	0.400	0.160	0.170	0.44	--	0.60	--	1.0	--	4.4	0.030
NOV 27...	0.400	--	0.160	--	0.24	--	0.40	--	0.80	--	3.5	0.060
DEC 17...	0.400	<0.400	0.100	0.170	--	--	<0.20	--	--	--	--	0.010
JAN 14...	0.300	--	0.070	--	0.13	--	0.20	--	0.50	--	2.2	0.030
FEB 11...	0.300	0.300	0.090	0.110	0.41	--	0.50	--	0.80	--	3.5	0.060
MAR 11...	0.310	--	0.130	--	0.57	--	0.70	--	1.0	--	4.5	0.090
APR 18...	0.310	0.350	0.040	0.050	0.36	--	0.40	--	0.71	--	3.1	0.050
MAY 22...	0.370	--	0.100	--	0.30	--	0.40	--	0.77	--	3.4	0.040
JUN 25...	0.250	0.260	0.050	0.050	0.25	--	0.30	--	0.55	--	2.4	0.020
JUL 22...	<0.050	--	<0.010	--	--	--	0.30	--	--	--	--	0.030
AUG 19...	0.290	0.300	0.050	0.050	0.25	0.25	0.30	0.30	0.59	0.60	2.6	0.030
SEP 03...	0.380	--	0.080	--	0.42	--	0.50	--	0.88	--	3.9	0.040

< Actual value is known to be less than value shown.

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS- PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)
OCT 23...	--	<0.010	<0.010	0.010	0.03	<10	3	2	97	<0.5	250	<1
NOV 27...	0.06	--	0.020	--	--	--	4	3	100	--	260	<1
DEC 17...	0.03	0.030	0.010	<0.010	--	--	3	3	100	--	240	<1
JAN 14...	--	--	<0.010	--	--	--	2	2	110	--	240	<1
FEB 11...	0.12	0.040	0.040	0.030	0.09	20	2	2	93	<0.5	200	<1
MAR 11...	--	--	<0.010	--	--	--	2	2	97	--	190	<1
APR 18...	0.03	0.020	0.010	<0.010	--	<10	3	2	97	<0.5	170	<1
MAY 22...	--	--	<0.010	--	--	--	3	3	95	--	220	<1
JUN 25...	0.03	<0.010	0.010	0.020	0.06	--	2	2	110	--	160	<1
JUL 22...	--	--	<0.010	--	--	--	4	3	110	--	180	<1
AUG 19...	--	0.010	<0.010	<0.010	--	<10	3	3	110	<0.5	210	<1
SEP 03...	--	--	<0.010	--	--	--	3	3	110	--	200	<1
DATE	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
OCT 23...	<1.0	3	<1	<3	6	1	380	<3	2	<1	71	90
NOV 27...	<1.0	2	<1	--	7	1	490	4	1	2	--	130
DEC 17...	<1.0	2	<1	--	5	1	470	<10	2	<1	--	110
JAN 14...	<1.0	<1	<1	--	5	1	910	<3	3	<1	--	140
FEB 11...	<1.0	<1	<1	<3	3	2	350	<3	2	<1	60	60
MAR 11...	<1.0	2	<1	--	5	1	890	5	4	<1	--	140
APR 18...	<1.0	<1	<1	<3	13	1	830	<3	4	<1	47	100
MAY 22...	<1.0	<1	<1	--	4	2	440	<3	1	1	--	90
JUN 25...	<1.0	5	<1	--	4	1	370	<3	2	<1	--	30
JUL 22...	<1.0	1	<1	--	7	6	330	20	5	<1	--	50
AUG 19...	<1.0	1	<1	<3	9	3	310	4	10	<1	62	50
SEP 03...	<1.0	<1	<1	--	3	1	150	<3	3	<1	--	60

< Actual value is known to be less than value shown.

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY,
ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
OCT 23...	36	<0.10	<0.1	<10	1	1	2	<1.0	1300	<6	<10	<3
NOV 27...	33	<0.10	--	--	--	<1	2	<1.0	--	--	<10	5
DEC 17...	40	<0.10	--	--	--	<3	2	<1.0	--	--	<10	<10
JAN 14...	23	<0.10	--	--	--	1	1	<1.0	--	--	<10	<3
FEB 11...	26	<0.10	<0.1	<10	2	2	1	<1.0	1200	<6	<10	<3
MAR 11...	13	<0.10	--	--	--	2	2	<1.0	--	--	<10	13
APR 18...	10	<0.10	<0.1	<10	<1	3	3	<1.0	1100	<6	<10	<3
MAY 22...	25	<0.10	--	--	--	2	2	<1.0	--	--	10	6
JUN 25...	11	<0.10	--	--	--	2	3	<1.0	--	--	<10	4
JUL 22...	12	<0.10	--	--	--	2	2	<1.0	--	--	<10	8
AUG 19...	14	<0.10	<0.1	<10	<1	2	2	<1.0	1300	<6	<10	10
SEP 03...	15	<0.10	--	--	--	3	4	<1.0	--	--	<10	8

DATE	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)
OCT 23...	--	--	--	--	--	--	--	--	94	24	73
NOV 27...	--	--	--	--	--	--	--	--	--	38	126
DEC 17...	5.0	0.6	9.2	1.2	6.9	1.1	0.17	4.3	82	19	77
JAN 14...	--	--	--	--	--	--	--	--	--	93	779
FEB 11...	--	--	--	--	--	--	--	--	87	15	75
MAR 11...	--	--	--	--	--	--	--	--	--	50	339
APR 18...	--	--	--	--	--	--	--	--	73	46	380
MAY 22...	--	--	--	--	--	--	--	--	--	19	71
JUN 25...	2.5	<0.4	8.0	1.9	6.0	1.8	0.09	4.5	46	49	366
JUL 22...	--	--	--	--	--	--	--	--	--	28	194
AUG 19...	--	--	--	--	--	--	--	--	--	22	116
SEP 03...	--	--	--	--	--	--	--	--	--	10	37

< Actual value is known to be less than value shown.

Two major diversions for irrigation water are located at Imperial Dam, the Gila Gravity Main Canal, and the All-American Canal. The Gila Gravity Main Canal diverts water for irrigation in the Gila Project which is located entirely in Arizona. The All-American Canal diverts water for irrigation in Imperial Valley in California and the Yuma Project in Arizona and California. Between Imperial Dam and the northerly international boundary with Mexico, water is diverted from these principal canals for the individual diversions of the Gila and Yuma Projects.

Between Imperial Dam and the northerly international boundary with Mexico, flows from irrigated areas enter the Colorado River through many drains and wasteways in Arizona and California. Other return flows enter the Gila River below the gaging station near Dome (09520500).

See figure 6 on p. 314 for schematic diagram showing location of diversions and return flows.

Diversions at and below Imperial Dam, AZ-CA

09522500. GILA GRAVITY MAIN CANAL AT IMPERIAL DAM.--See p. 324.

09522600. NORTH GILA MAIN CANAL.

LOCATION.--Water-stage recorder and sharp-crested weir, in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.23, T.7 S., R.22 W., Yuma County, Hydrologic Unit 15030107, about 700 ft downstream from turnout from Gila Gravity Main Canal and 1.2 mi south of Laguna Dam.

PERIOD OF RECORD.--October 1965 to current year (monthly discharge only).

REMARKS.--Record shows water available for irrigation in North Gila Valley.

09522650. NORTH GILA MAIN CANAL NO. 2.

LOCATION.--Water-stage recorder in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.11, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, at turnout from Gila Gravity Main Canal and 3.5 mi downstream from turnout to North Gila Main Canal.

PERIOD OF RECORD.--June 1969 to current year (monthly discharge only).

REMARKS.--Record shows water available for irrigation in North Gila Valley.

09522700. WELLTON-MOHAWK CANAL.

LOCATION.--Three water-stage recorders to record forebay and tailrace elevations and gate openings since June 1, 1974, in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.17, T.8 S., R.21 W., Yuma County, Hydrologic Unit 15070201, at turnout from Gila Gravity Main Canal.

PERIOD OF RECORD.--October 1965 to current year (monthly discharge only).

REMARKS.--Record shows water available for irrigation in the Dome, Wellton, and Mohawk areas of the lower Gila Valley.

COOPERATION.--Supplementary record of gate openings furnished by Wellton-Mohawk Irrigation District.

09522800. SOUTH GILA MAIN CANAL.

LOCATION.--Sparling flowmeter, in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.36, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 110 ft downstream from turnout from Gila Gravity Main Canal.

PERIOD OF RECORD.--October 1965 to current year (monthly discharge only).

REMARKS.--Record shows water available for irrigation in South Gila Valley.

COOPERATION.--Daily discharges furnished by Yuma Irrigation District.

09522850. GILA GRAVITY MAIN CANAL AT PUMPING PLANT.

LOCATION.--Intake consisting of 5 pumps, in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.1, T.9 S., R.22 W., Yuma County, Hydrologic Unit 15070201, at end of Gila Gravity Main Canal and head of Yuma Mesa canals.

PERIOD OF RECORD.--October 1965 to current year (monthly discharge only).

REMARKS.--Record shows water available for irrigation on Yuma Mesa and in Yuma Auxiliary Division of Yuma Valley.

COOPERATION.--Records furnished by Yuma Mesa Irrigation and Drainage District.

09522900. UNIT B MAIN CANAL.

LOCATION.--Headworks in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.9 S., R.23 W., Yuma County, Hydrologic Unit 15030108, 5 mi north-east of Somerton.

PERIOD OF RECORD.--October 1965 to current year (monthly discharge only).

REMARKS.--Record shows water available for irrigation in Yuma Auxiliary Division of the Yuma Project.

COOPERATION.--Records furnished by Yuma Mesa Irrigation and Drainage District.

09523000. ALL-AMERICAN CANAL NEAR IMPERIAL DAM.--See p. 325.

Diversions at and below Imperial Dam, AZ-CA--Continued

09523200. RESERVATION MAIN CANAL.

LOCATION.--Water-stage recorder and, since Sept. 5, 1975, gate-opening recorder, in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.35, T.15 S., R.23 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, at turnout from All-American Canal and 5.8 mi downstream from Imperial Dam.

PERIOD OF RECORD.--August 1950 to current year (monthly discharge only). Prior to October 1965 included in total diversions from All-American Canal and Yuma Main Canal above siphon-drop powerplant and published as part of sta 09524000.

REMARKS.--Record computed from rated gate on turnout from All-American Canal and shows water available for irrigation in parts of Reservation Division of Yuma Project in California.

COOPERATION.--Record of gate openings furnished by Bard Water District.

09523400. TITSINK CANAL.

LOCATION.--Water-stage recorder and Parshall flume in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.15 S., R.23 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 0.6 mi downstream from turnout from All-American Canal and 7.2 mi downstream from Imperial Dam.

PERIOD OF RECORD.--August 1950 to current year (monthly discharge only). Prior to October 1965 included in total diversions from All-American Canal and Yuma Main Canal above siphon-drop powerplant and published as part of sta 09524000.

REMARKS.--Record shows water available for irrigation in parts of Reservation Division of Yuma Project in California.

09523600. YAQUI CANAL.

LOCATION.--Water-stage recorder and Parshall flume in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.31, T.15 S., R.23 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 700 ft downstream from turnout from All-American Canal and 11.1 mi downstream from Imperial Dam.

PERIOD OF RECORD.--June 1950 to current year (monthly discharge only). Prior to October 1965 included in total diversions from All-American Canal and Yuma Main Canal above siphon-drop powerplant and published as part of sta 09524000.

REMARKS.--Record shows water available for irrigation in parts of Reservation Division of Yuma Project in California.

09523800. PONTIAC CANAL.

LOCATION.--Water-stage recorder and Parshall flume in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.1, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 500 ft downstream from turnout from All-American Canal and 13.1 mi downstream from Imperial Dam.

PERIOD OF RECORD.--August 1950 to current year (monthly discharge only). Prior to October 1965 included in total diversions from All-American Canal and Yuma Main Canal above siphon-drop powerplant and published as part of sta 09524000.

REMARKS.--Record shows water available for irrigation in parts of Reservation Division of Yuma Project in California.

09523900. WALAPAI CANAL.

LOCATION.--Water-stage recorder and sharp-crested weir in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.10, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 100 ft downstream from siphon-drop powerplant forebay and 4.3 mi north of Yuma.

PERIOD OF RECORD.--October 1946 to current year (monthly discharge only). Prior to October 1965 included in total diversions from All-American Canal and Yuma Main Canal above siphon-drop powerplant and published as part of sta 09524000.

REMARKS.--Record shows water available for irrigation in parts of Reservation Division of Yuma Project in California.

09524000. YUMA MAIN CANAL AT SIPHON-DROP POWERPLANT.--See p. 326.

09524500. DIVERSIONS FROM YUMA MAIN CANAL BETWEEN SIPHON-DROP POWERPLANT AND YUMA MAIN CANAL WASTEWAY.

LOCATION.--Turnouts for several canals diverting from Yuma Main Canal between siphon-drop powerplant, 4 mi north of Yuma, and Yuma Main Canal wasteway, 1,600 ft upstream from Colorado River siphon, in Imperial County.

PERIOD OF RECORD.--October 1940 to current year (monthly discharge only). Prior to October 1947 in WSP 1313. October 1947 to September 1965 published as supplemental table with records for Yuma Main Canal at siphon-drop powerplant.

REMARKS.--Record shows water available for irrigation in parts of Reservation Division of Yuma Project in California.

COOPERATION.--Record furnished by Bard Water District.

Diversions at and below Imperial Dam, AZ-CA--Continued

09525500. YUMA MAIN CANAL BELOW COLORADO RIVER SIPHON.--See p. 328.

09526000. DIVERSION FROM YUMA MAIN CANAL FOR MUNICIPAL SUPPLY FOR YUMA.

LOCATION.--Sparling and Venturi flowmeters, in NW¼NE¼ sec.35, T.16 S., R.22 E., San Bernardino meridian, Yuma County, Hydrologic Unit 15030107, on two pipelines, respectively, about 1,000 ft downstream from intake, which is at outlet of Colorado River siphon of Yuma Main Canal, on Arizona side of Colorado River at Yuma.

PERIOD OF RECORD.--June 1945 to current year (monthly discharge only). Prior to October 1973 published as a supplemental table with records for Yuma Main Canal below Colorado River siphon.

REMARKS.--Record shows water for Yuma municipal supply. Figures shown in table herewith are also included in record for Yuma Main Canal below Colorado River siphon (sta 09525500).

COOPERATION.--Records furnished by Yuma County Water Users' Association.

09527500. ALL-AMERICAN CANAL BELOW PILOT KNOB WASTEWAY.--See p. 335.

Diversions at and below Imperial Dam, AZ-CA--Continued

MONTHLY DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Month	North Gila Main Canal 09522600	North Gila Main Canal No. 2 09522650	Wellton-Mohawk Canal 09522700	South Gila Main Canal 09522800	Gila Gravity Main Canal at pumping plant 09522850
October	5,150	1,000	30,620	3,470	17,710
November	3,200	482	26,950	2,270	13,340
December	3,120	513	20,720	2,240	18,860
CAL YR 1990	41,040	6,770	442,400	32,810	279,600
January	2,020	329	13,290	1,090	7,790
February	2,600	467	29,420	1,870	11,810
March	2,530	540	23,610	2,030	13,130
April	4,630	842	41,980	3,280	23,930
May	5,890	846	48,610	4,180	29,340
June	4,340	516	50,950	2,250	29,090
July	3,460	601	53,030	2,720	33,400
August	2,830	428	50,590	2,760	30,420
September	3,150	706	48,630	4,060	24,680
WTR YR 1991	42,920	7,330	438,400	32,220	253,500

Month	Unit B Main Canal 09522900	Reservation Main Canal 09523200	Titsink Canal 09523400	Yaqui Canal 09523600	Pontiac Canal 09523800
October	2,850	6,610	20	1,220	1,420
November	1,600	5,640	26	624	686
December	1,960	3,150	106	564	371
CAL YR 1990	33,740	58,680	574	10,140	7,430
January	1,140	1,780	20	256	343
February	1,750	3,170	21	386	300
March	1,530	3,770	23	715	453
April	2,900	5,950	56	1,110	407
May	3,080	7,670	50	1,400	565
June	3,190	6,400	49	1,300	781
July	3,830	5,640	86	1,090	612
August	3,730	4,400	10	958	732
September	2,690	4,760	28	708	927
WTR YR 1991	30,250	58,940	496	10,330	7,600

Month	Walapai Canal 09523900	Diversions from Yuma Main Canal 09524500	Diversions from Yuma Main Canal for Yuma supply 09526000
October	2,270	1,350	1,606
November	1,430	1,270	1,475
December	834	629	1,280
CAL YR 1990	14,720	9,780	19,564
January	640	493	1,200
February	1,170	668	1,219
March	1,250	308	1,203
April	1,120	558	1,480
May	1,520	1,010	1,768
June	1,190	760	1,971
July	961	663	2,110
August	772	442	2,053
September	1,700	884	1,763
WTR YR 1991	14,870	9,030	19,128

NOTE.--Yearly totals given above have been computed from total cfs-days and may differ slightly from the summation of monthly total acre-feet on occasion.

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09522500 GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, AZ-CA

LOCATION.--Lat 32°52'34", long 114°27'18", in SE¼SW¼ sec.30, T.6 S., R.21 W., Gila and Salt River meridian, Yuma County, Hydrologic Unit 15030107, on right bank 3,200 ft downstream from intake at east end of Imperial Dam.

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

GAGE.--Water-stage recorder. Datum of gage is 160.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those below 500 ft³/s, which are fair. Gila Gravity Main Canal diverts water from Colorado River at left end of Imperial Dam for irrigation of lands in the Gila Project area in Arizona. Diversions to this canal began Aug. 17, 1943. Diversions to North Gila Valley from this canal began Dec. 16, 1954.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,240 ft³/s May 25, 1965; no flow at canal intake at times in several years when intake gates were closed.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1640	1060	577	71	947	373	992	1830	1160	1560	1420	872
2	850	751	1110	591	585	163	1230	1530	837	1870	1230	1260
3	1220	676	1440	500	395	69	1230	1490	1410	1990	1130	1550
4	842	483	1250	309	929	699	1270	876	1700	1820	1030	1420
5	1050	1250	867	204	967	677	1050	729	1890	1410	1870	1380
6	902	1220	701	42	1210	728	923	1490	1740	1370	1800	1150
7	665	1310	616	432	1240	742	631	1680	1640	964	1950	758
8	1090	1110	509	231	880	709	1530	1970	1130	1950	1870	719
9	1420	896	534	132	487	657	1630	1730	900	2120	1710	1470
10	1530	596	879	106	518	489	1730	1540	1750	2020	1330	1710
11	1530	639	982	104	1090	1320	1590	1020	1710	1810	1140	1730
12	1310	1170	1110	103	1110	1430	1390	668	1930	1660	1640	1500
13	719	1170	1120	125	1310	1380	1080	1730	1760	1230	1800	1400
14	496	1470	1070	310	1040	1230	1110	1790	1770	918	1900	1210
15	1260	1290	824	392	830	1210	1470	1610	1450	1660	1620	1060
16	1440	1090	671	406	585	596	1650	1730	1210	1610	1410	1900
17	1480	961	1090	366	411	374	1440	1410	1650	1850	901	2020
18	1210	639	846	311	946	1210	1470	1150	1870	1570	958	2030
19	912	1520	914	265	1150	1020	1300	866	1940	1620	1620	1950
20	670	1580	962	598	1290	1020	1010	1760	1840	1240	1800	1690
21	505	1440	980	784	1170	925	673	1970	1530	1440	1900	1370
22	860	1240	850	924	696	618	1630	1980	1240	1820	1700	1280
23	1070	639	763	884	652	580	1520	1720	1100	1800	1570	1690
24	1170	3.0	525	703	557	610	1740	1470	1970	1550	1270	1700
25	1000	.00	88	553	1210	1130	1780	1320	1980	1730	874	1600
26	707	.00	416	520	1210	933	1320	959	1950	1380	1620	1420
27	379	.00	792	357	1320	884	968	1830	1740	1350	1590	1350
28	399	.00	935	1020	700	566	687	1970	1670	1290	1530	1110
29	1200	.00	932	955	---	492	1660	1950	1200	1630	1490	919
30	1120	61	627	964	---	386	1820	1890	1300	1700	1380	1570
31	1170	---	247	1160	---	275	---	1650	---	1760	1080	---
TOTAL	31816	24264.00	25227	14422	25435	23495	39524	47308	46967	49692	46133	42788
MEAN	1026	809	814	465	908	758	1317	1526	1566	1603	1488	1426
MAX	1640	1580	1440	1160	1320	1430	1820	1980	1980	2120	1950	2030
MIN	379	.00	88	42	395	69	631	668	837	918	874	719
AC-FT	63110	48130	50040	28610	50450	46600	78400	93840	93160	98560	91500	84870
CAL YR 1990	TOTAL	431746.00	MEAN	1183	MAX	2100	MIN	.00	AC-FT	856400		
WTR YR 1991	TOTAL	417071.00	MEAN	1143	MAX	2120	MIN	.00	AC-FT	827300		

09523000 ALL-AMERICAN CANAL NEAR IMPERIAL DAM, AZ-CA

LOCATION.--Lat 32°52'17", long 114°28'47", in SE¼NW¼ sec.17, T.15 S., R.24 E., San Bernardino meridian, in Imperial County, California, Hydrologic Unit 15030107, on left bank 6,000 ft downstream from intake at west end of Imperial Dam and 13.7 mi upstream from turnout to Yuma Main Canal.

PERIOD OF RECORD.--October 1938 to current year. Prior to October 1939 monthly discharge only, published in WSP 1313.

GAGE.--Water-stage recorder. Datum of gage is 150.00 ft above National Geodetic Vertical Datum of 1929 (subject to undetermined changes caused by earthquake of May 18, 1940). Since Aug. 21, 1952, auxiliary water-stage recorder 18.5 mi downstream from base gage.

REMARKS.--No estimated daily discharges. Records excellent. All-American Canal diverts water from Colorado River at Imperial Dam. Water is used for power development and for irrigation in Yuma, Coachella, and Imperial Valleys. Water can be released back to the river through Pilot Knob powerplant and wasteway for power, regulatory purposes, or for downstream use in Mexico. First diversion to All-American Canal began October 1938, but prior to October 1940 was used only for priming canal.

COOPERATION.--Daily discharge figures furnished by Imperial Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 14,400 ft³/s, Apr. 17, July 15, 16, 1980; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6530	5740	4560	3250	5200	3420	6240	9960	7690	8120	7770	6280
2	6910	5640	4060	3770	5370	2640	7060	9790	7400	8630	7920	6250
3	6580	5600	4440	4360	5140	1560	8130	9610	7580	9110	7060	6350
4	6880	5310	4630	3830	4930	2320	9020	9380	8110	9240	6400	6530
5	5670	4980	4690	3210	5200	2840	9400	8590	8360	9020	7180	6610
6	5340	4930	5000	3580	5510	3120	9590	8670	8490	8910	7300	5740
7	5160	5030	4660	3210	5630	4340	9700	8980	8240	9020	7660	4800
8	5420	5260	4470	3590	5300	5340	10100	9250	7820	9120	8250	5270
9	5900	5320	4330	3290	5200	6190	10300	9140	7480	9110	8160	4750
10	6110	5430	4520	2380	4990	6690	10100	9320	8110	9300	8240	5100
11	6480	4960	4680	2090	5010	7270	10100	9190	8280	9280	8250	5620
12	6140	5200	4540	2000	5360	7960	10500	8540	8240	9010	8210	6310
13	6150	5320	4250	1960	5760	7380	9860	8190	8490	8590	8200	6190
14	6150	5500	4220	2610	5470	7530	9840	8240	8360	8230	8100	6460
15	6270	5520	4370	2790	5130	7360	9550	8300	8220	8280	8330	6470
16	6190	4970	3880	2840	4790	7140	9580	8480	7940	8710	8210	6430
17	6180	4740	4200	3180	4520	6920	9870	8310	8380	8840	7870	6610
18	5750	4170	4170	3230	4600	7260	9840	7980	8940	9360	7880	6650
19	5450	4000	4360	3570	4900	7540	9520	7410	8960	9120	7700	6550
20	5330	4040	4430	3610	5460	7620	9050	7470	8850	8890	7790	5990
21	5340	4130	4330	3960	5630	7460	8650	7760	8590	8780	7880	5650
22	5280	3590	3720	4300	5790	7570	9020	7460	8540	8830	7860	5510
23	5500	3970	3650	4620	5940	7080	9420	7730	8390	9080	7900	5930
24	5740	4080	3420	4780	6170	6560	9680	7520	8890	9300	8010	5730
25	5640	3710	2540	4800	6410	7160	10100	7100	8970	8780	7880	5850
26	5510	4260	3590	4540	6770	7570	9870	6820	8790	8790	7960	6270
27	5490	4190	3990	4390	6660	6820	9680	7230	8510	8310	8000	6100
28	5470	4350	4520	4900	4590	5500	9700	7480	7700	8180	7980	6210
29	5640	4490	4760	5220	---	5710	9790	7700	7610	8560	7820	6390
30	5670	4800	4270	5210	---	5260	9840	7970	7770	8690	6960	6480
31	5670	---	3920	5540	---	4920	---	7720	---	8530	6750	---
TOTAL	181540	143230	131170	114610	151430	184050	283100	257290	247700	273720	241480	181080
MEAN	5856	4774	4231	3697	5408	5937	9437	8300	8257	8830	7790	6036
MAX	6910	5740	5000	5540	6770	7960	10500	9960	8970	9360	8330	6650
MIN	5160	3590	2540	1960	4520	1560	6240	6820	7400	8120	6400	4750
AC-FT	360100	284100	260200	227300	300400	365100	561500	510300	491300	542900	479000	359200
CAL YR 1990	TOTAL	2485230	MEAN	6809	MAX	10100	MIN	2390	AC-FT	4929000		
WTR YR 1991	TOTAL	2390400	MEAN	6549	MAX	10500	MIN	1560	AC-FT	4741000		

09524000 YUMA MAIN CANAL AT SIPHON-DROP POWERPLANT, NEAR YUMA, AZ

LOCATION.--Lat 32°46'36", long 114°38'05", in SE½SE¼ sec.10, T.16 S., R.22 E., San Bernardino meridian, in Imperial County, California, Hydrologic Unit 15030107, 500 ft from turnout from All-American Canal to Yuma Main Canal, 4.0 mi north of Yuma, and 14.9 mi downstream from intake of All-American Canal at Imperial Dam.

PERIOD OF RECORD.--July 1926 to current year. Prior to October 1938, monthly discharge only published in WSP 1313. Diversions from All-American Canal and Yuma Main Canal previously published with this record are listed separately in this report.

GAGE.--Accusonic flowmeters.

REMARKS.--Records are fair above 100 ft³/s and poor below. New powerplant began operation Sept. 14, 1987, replacing former powerplant located 500 ft downstream that ended operation Dec. 8, 1972. A weir, installed in forebay of former powerplant, is used to measure flow bypassing the new powerplant. Separate gates on the All-American Canal to powerplant and bypass weir are controlled automatically on signal from the powerplant accusonic flowmeters on the two generators. Records of daily discharge show quantity of water diverted from All-American Canal to Yuma Main Canal (powerplant and bypass), except that diverted from forebay of former powerplant to Walapai Canal (see sta. 09523900).

COOPERATION.--Daily discharge record furnished by Yuma County Water Users' Association.

EXTREMES.--1930 to current year: Maximum daily discharge, 2,040 ft³/s Nov. 11, 1943; no flow for several days in 1937-39, 1945.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1130	1110	885	1040	460	847	819	1010	1160	847	1030	1030
2	1130	1110	641	1090	881	577	1040	1020	1140	1300	1050	997
3	1040	1110	803	1140	1400	545	1030	1020	432	856	999	1080
4	1120	778	872	1110	1470	970	1010	1010	649	1030	795	1060
5	1230	733	957	949	1040	1280	1000	1010	709	1030	918	1110
6	1170	714	1240	935	594	1300	1020	946	624	977	975	782
7	1150	811	1240	911	504	949	1040	887	643	955	934	598
8	1120	1040	1110	907	532	1200	1030	908	571	1000	1040	1690
9	1130	1150	1040	912	561	1060	1020	1010	565	1040	1070	769
10	1170	1140	1120	905	425	1030	1020	1030	831	1040	1070	921
11	1170	1060	1220	911	372	1020	1010	1020	969	1040	978	1180
12	1180	1060	1260	959	426	1000	1010	1160	999	1030	763	1240
13	1190	1100	1320	972	533	1000	1020	1760	977	1030	1000	1180
14	1180	1090	1260	778	642	1000	1030	1620	906	1040	1000	1170
15	1190	1100	1300	741	672	1030	1020	1500	946	1020	1040	1070
16	1090	970	1030	1010	611	1020	1020	1460	745	1030	1000	1080
17	1100	948	1070	1070	478	1030	1020	1370	994	1020	929	1170
18	1190	637	1110	1140	501	1020	1020	1120	1000	1050	914	1220
19	1180	694	1140	1190	596	1020	1010	821	1000	1030	794	1260
20	1160	758	1230	1170	725	1020	1020	862	1000	1040	888	1250
21	1100	761	1170	1250	755	1020	1030	974	1000	1010	967	1230
22	1130	758	529	1320	695	1020	1010	1030	1000	1010	931	1230
23	1240	847	1060	1330	689	1020	1010	1290	1000	1000	866	1240
24	1320	909	1070	1260	586	1030	1010	1330	1000	1020	870	1290
25	1280	721	1030	1240	521	1030	1010	1160	1000	1030	753	1330
26	1210	944	1130	1210	642	1010	1030	926	1000	1020	780	1350
27	1120	873	1070	1050	651	1020	1030	1070	1000	758	891	1320
28	1040	778	1250	1260	760	1030	1020	1150	1000	e80	984	1370
29	1100	837	1200	1270	---	1010	1010	1180	1000	e80	955	1350
30	1130	927	662	1220	---	1030	1020	1260	1000	e80	1610	1370
31	1140	---	927	760	---	1030	---	1230	---	342	1220	---
TOTAL	35830	27468	32946	33010	18722	31168	30389	35144	26860	27835	30014	34937
MEAN	1156	916	1063	1065	669	1005	1013	1134	895	898	968	1165
MAX	1320	1150	1320	1330	1470	1300	1040	1760	1160	1300	1610	1690
MIN	1040	637	529	741	372	545	819	821	432	80	753	598
AC-FT	71070	54480	65350	65480	37140	61820	60280	69710	53280	55210	59530	69300
CAL YR 1990	TOTAL	366737	MEAN	1005	MAX	1980	MIN	48	AC-FT	727400		
WTR YR 1991	TOTAL	364323	MEAN	998	MAX	1760	MIN	80	AC-FT	722600		

e Estimated

09525000 YUMA MAIN CANAL WASTEWAY AT YUMA, AZ

LOCATION.--Lat 32°44'00", long 114°37'20", in SW¼SE¼ sec.26, T.16 S., R.22 E., San Bernardino meridian, in Imperial County, California, Hydrologic Unit 15030107, 45 ft downstream from wasteway gates from Yuma Main Canal which are 1,645 ft upstream from intake of Colorado River siphon on Yuma Main Canal, 0.5 mi north of Yuma, and 3.2 mi downstream from siphon-drop powerplant on Yuma Main Canal.

PERIOD OF RECORD.--April 1913 to current year. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder for low flows only prior to Jan. 29, 1988. Datum of gage is 122.51 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 1, 1968, gate-opening record used for low flows only.

REMARKS.--Records fair. The wasteway discharges into Colorado River 1,000 ft upstream from station on Colorado River below Yuma Main Canal wasteway at Yuma. Discharges are computed as difference between discharge of Yuma Main Canal at siphon-drop powerplant and Yuma Main Canal below Colorado River siphon, with deductions for small irrigation diversions from canal between these stations. Records do not include flow of Reservation Main Drain No. 4.

EXTREMES.--1930 to current year: Maximum daily discharge, 2,020 ft³/s Dec. 24, 25, 1948; no flow for several days in 1937-39, 1945, 1950, 1971.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	467	400	488	838	208	403	637	171	818	476	310	699
2	438	416	453	866	374	343	802	208	871	807	240	627
3	315	411	585	865	917	401	704	234	67	282	275	684
4	347	432	651	858	1080	836	352	288	114	478	318	612
5	478	448	700	796	621	1140	283	765	129	454	476	650
6	458	441	708	807	175	1100	299	686	68	433	460	271
7	448	502	695	780	147	467	359	579	161	549	452	72
8	469	377	681	781	161	651	262	502	140	570	487	1280
9	467	421	757	789	188	508	201	141	264	519	471	332
10	420	430	804	782	194	614	175	63	435	393	435	323
11	411	435	824	787	147	638	153	121	474	320	548	537
12	434	444	815	834	148	410	146	418	512	438	349	547
13	432	451	804	851	211	356	378	1010	489	541	550	536
14	446	423	802	640	198	351	541	768	438	636	436	540
15	444	434	863	595	175	373	587	551	488	595	500	545
16	439	420	803	846	190	586	533	477	439	592	509	598
17	400	459	869	880	185	810	500	468	556	534	534	631
18	421	356	837	911	197	820	232	511	333	544	637	661
19	407	457	835	943	236	733	166	528	324	585	436	663
20	411	451	825	933	262	655	300	597	409	667	441	689
21	458	466	731	948	250	483	455	654	562	737	465	677
22	413	478	163	961	240	477	412	634	532	632	409	740
23	448	486	789	982	247	581	287	580	637	316	391	740
24	468	431	901	896	218	675	423	546	457	232	387	727
25	418	294	892	894	209	678	235	552	392	242	389	695
26	367	566	842	897	249	557	296	490	360	323	363	672
27	409	463	646	884	135	588	434	523	378	333	320	638
28	421	266	796	1080	198	685	525	554	518	e15	336	650
29	433	315	721	1080	---	723	404	534	612	e15	404	629
30	420	416	327	998	---	718	325	602	655	e15	1140	599
31	403	---	647	169	---	847	---	714	---	e277	828	---
TOTAL	13210	12789	22254	26171	7760	19207	11406	15469	12632	13550	14296	18264
MEAN	426	426	718	844	277	620	380	499	421	437	461	609
MAX	478	566	901	1080	1080	1140	802	1010	871	807	1140	1280
MIN	315	266	163	169	135	343	146	63	67	15	240	72
AC-FT	26200	25370	44140	51910	15390	38100	22620	30680	25060	26880	28360	36230
CAL YR 1990	TOTAL	185225.0	MEAN	507	MAX	1610	MIN	6.0	AC-FT	367400		
WTR YR 1991	TOTAL	187008	MEAN	512	MAX	1280	MIN	15	AC-FT	370900		

e Estimated

09525500 YUMA MAIN CANAL BELOW COLORADO RIVER SIPHON, AT YUMA, AZ

LOCATION.--Two gages, one at each end of canal siphon passing under Colorado River. At intake, lat 32°43'49", long 114°37'09", in NE¼NE¼ sec.35, T.16 S., R.22 E., San Bernardino meridian, in Imperial County, California, Hydrologic Unit 15030107, on left bank 1,645 ft downstream from center of Yuma Main Canal wasteway gates and 3.5 mi downstream from siphon-drop power-plant. At outlet, in NW¼NE¼ sec.35, T.16 S., R.22 E., San Bernardino meridian, in Yuma County, Arizona, on right bank. Siphon crossing is 1,300 ft upstream from 4th Avenue bridge over Colorado River at Yuma.

PERIOD OF RECORD.--January 1924 to current year. Prior to October 1938, monthly discharge only published in WSP 1313. Diversion from Yuma Main Canal for municipal supply for Yuma (sta 09526000), published with this record prior to October 1973, is listed separately in this report.

REVISED RECORDS.--WSP 1713: 1958, 1959 (Yuma municipal supply).

GAGE.--Water-stage recorder at each end of siphon. Datum of each gage is 100.62 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1963, at datum 0.05 ft lower. Elevation of sill of inlet is 125.5 ft above NGVD. Prior to Oct. 29, 1938, nonrecording gages at approximately same sites, read simultaneously.

REMARKS.--Records good except those below 100 ft³/s, which are poor. Daily discharge computed from relation between discharge and head on siphon, which is the difference between intake and outlet gages. Records show quantity of water delivered through Colorado River siphon for irrigation in the Valley Division of the Yuma Project and for municipal supply for city of Yuma (see sta 09526000).

EXTREMES.--1930 to current year: Maximum daily discharge, 973 ft³/s May 16, 1991; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	649	674	372	202	241	444	182	819	337	371	712	320
2	692	667	165	216	507	234	230	812	269	491	800	361
3	702	673	202	274	483	144	314	779	362	561	717	393
4	743	318	203	252	375	134	648	720	516	552	477	448
5	726	259	244	153	401	141	709	245	561	561	437	450
6	712	243	515	128	395	184	696	244	546	532	493	511
7	702	288	529	130	333	469	672	279	481	406	474	525
8	639	651	421	124	348	529	768	391	431	423	553	403
9	648	724	277	123	359	532	819	833	298	513	599	428
10	741	696	296	123	226	403	844	947	370	636	635	593
11	754	606	391	124	191	365	850	891	468	699	430	621
12	741	594	439	116	255	568	844	742	453	576	406	652
13	753	617	497	116	309	641	642	724	479	476	442	621
14	726	641	448	123	434	649	489	821	468	396	549	612
15	735	649	421	141	495	656	425	921	456	407	520	515
16	638	536	227	159	408	434	469	973	306	416	471	467
17	690	476	195	190	288	220	500	895	430	460	381	523
18	738	281	260	213	300	200	769	604	631	488	277	545
19	745	237	305	235	347	286	829	293	653	439	345	573
20	724	281	402	227	450	349	710	250	572	373	441	534
21	617	264	434	292	493	537	575	293	417	273	500	542
22	694	264	364	326	440	539	588	366	468	353	521	480
23	782	331	265	332	410	437	719	694	363	639	475	490
24	811	450	169	349	358	355	587	784	535	762	481	538
25	810	411	138	334	312	343	755	601	580	788	364	600
26	791	352	272	302	389	453	714	421	612	682	417	634
27	665	381	418	163	515	432	592	504	596	416	550	673
28	581	497	447	168	562	345	495	564	467	e65	627	712
29	630	507	463	160	---	287	585	614	374	e65	546	708
30	667	471	320	212	---	310	680	636	345	e65	470	756
31	694	---	277	575	---	183	---	504	---	e65	387	---
TOTAL	21940	14039	10376	6582	10624	11803	18699	19164	13844	13949	15497	16228
MEAN	708	468	335	212	379	381	623	618	461	450	500	541
MAX	811	724	529	575	562	656	850	973	653	788	800	756
MIN	581	237	138	116	191	134	182	244	269	65	277	320
AC-FT	43520	27850	20580	13060	21070	23410	37090	38010	27460	27670	30740	32190
CAL YR 1990	TOTAL	176858	MEAN	485	MAX	952	MIN	93	AC-FT	350800		
WTR YR 1991	TOTAL	172745	MEAN	473	MAX	973	MIN	65	AC-FT	342600		

e Estimated

Return surface flows below Imperial Dam, AZ-CA

095250000. YUMA MAIN CANAL WASTEWAY.--See p. 327.

095270000. PILOT KNOB POWERPLANT AND WASTEWAY.--See p. 334.

09528600. LAGUNA CANAL WASTEWAY.

LOCATION.--Nonrecording gage and sharp-crested weir, in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.14, T.7 S., R.22 W., Yuma County, Hydrologic Unit 15030107, 1,000 ft downstream from Laguna Dam and 0.7 mi upstream from outlet to Colorado River. Water-stage recorder used prior to Oct. 3, 1986.

PERIOD OF RECORD.--October 1960 to current year (monthly discharge only).

REMARKS.--Record shows waste water from North Gila Valley Irrigation District.

09528800. LEVEE CANAL WASTEWAY.

LOCATION.--Water-stage recorder and sharp-crested weir, in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15030107, 1,000 ft upstream from outlet to Colorado River.

PERIOD OF RECORD.--October 1960 to current year (monthly discharge only).

REMARKS.--Record shows waste water from North Gila Valley Irrigation District.

09529000. NORTH GILA DRAIN NO. 1.

LOCATION.--Water-stage recorder, in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15030107, 0.25 mi upstream from outlet to Colorado River and 5.5 mi downstream from Laguna Dam.

PERIOD OF RECORD.--October 1960 to current year (monthly discharge only).

REMARKS.--Record shows waste water from North Gila Valley Irrigation District.

09529150. NORTH GILA MAIN CANAL WASTEWAY.

LOCATION.--Water-stage recorder, in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.22, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 1,000 ft upstream from outlet to Gila River.

PERIOD OF RECORD.--October 1960 to current year (monthly discharge only).

REMARKS.--Record shows waste water from North Gila Valley Irrigation District.

09529160. SOUTH GILA PUMP OUTLET CHANNEL NO. 3.

LOCATION.--In NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.22, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 0.5 mi upstream from outlet to Gila River.

PERIOD OF RECORD.--January 1965 to current year (monthly discharge only).

REMARKS.--Record shows water pumped from wells in South Gila Valley.

COOPERATION.--Records furnished by U.S. Bureau of Reclamation.

09529200. BRUCE CHURCH DRAIN.

LOCATION.--At culvert in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.21, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 0.2 mi upstream from outlet to Gila River.

PERIOD OF RECORD.--April 1962 to current year (monthly discharge only).

REMARKS.--Record shows seepage water from parts of secs. 15, 16, and 21 (Bruce Church Ranch).

09529240. SOUTH GILA PUMP OUTLET CHANNEL NO. 2.

LOCATION.--In SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.28, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 0.6 mi upstream from outlet to Gila River.

PERIOD OF RECORD.--January 1962 to current year (monthly discharge only).

REMARKS.--Record shows water pumped from wells in South Gila Valley.

COOPERATION.--Record furnished by U.S. Bureau of Reclamation.

09529250. BRUCE CHURCH WASTEWAY.

LOCATION.--Water-stage recorder and sharp-crested weir, in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.20, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 500 ft upstream from outlet to Gila River.

PERIOD OF RECORD.--October 1960 to current year (monthly discharge only).

REMARKS.--Record shows waste water from North Gila Valley Irrigation District.

Return surface flows below Imperial Dam, AZ-CA--Continued

09529300. WELLTON-MOHAWK MAIN OUTLET DRAIN (CONVEYANCE CHANNEL).

LOCATION.--Water-stage recorder and Parshall flume in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.8 S., R.21 W., Yuma County, Hydrologic Unit 15070201, 7.8 mi upstream from outlet to Gila River (M.O.D.E. 1), which is 0.6 mi upstream from mouth of Gila River.

PERIOD OF RECORD.--October 1960 to current year (monthly discharge only).

REMARKS.--Record shows water pumped from numerous wells in Wellton-Mohawk Irrigation and Drainage District to lower the water table. Flow can be discharged to the Gila River or Colorado River by any one of or combination of four outlets. These outlets are: M.O.D.E. 1 (release to Gila River about 7.8 mi below station); an overflow flume about 11.3 mi below station releases water to Colorado River; M.O.D.E. 2 (see sta 09531800) releases water to Colorado River above Morelos Dam; and M.O.D.E. 3 (see sta 09531900) releases water to Colorado River below Morelos Dam.

09529360. SOUTH GILA PUMP OUTLET CHANNEL NO. 1.

LOCATION.--In SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.30, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 0.2 mi upstream from outlet to Gila River, which is 0.6 mi upstream from mouth of Gila River.

PERIOD OF RECORD.--August 1961 to current year (monthly discharge only).

REMARKS.--Record shows water pumped from wells in South Gila Valley.

COOPERATION.--Record furnished by U.S. Bureau of Reclamation.

09529420. SOUTH GILA TERMINAL WASTEWAY.

LOCATION.--Water-stage recorder and Parshall flume, in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.36, T.8 S., R.23 W., Yuma County, Hydrologic Unit 15030107, 2.0 mi upstream from outlet to Colorado River.

PERIOD OF RECORD.--March 1965 to current year (monthly discharge only).

REMARKS.--Record shows waste water from South Gila Canal of South Gila Valley.

09529440. SOUTH GILA PUMP OUTLET CHANNEL NO. 4.

LOCATION.--In NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.26, T.8 S., R.23 W., Yuma County, Hydrologic Unit 15030107, 1.5 mi upstream from outlet to Colorado River.

PERIOD OF RECORD.--July 1965 to current year (monthly discharge only).

REMARKS.--Records show water pumped from wells in South Gila Valley.

COOPERATION.--Records furnished by U.S. Bureau of Reclamation.

09529600. RESERVATION DRAIN NO. 7.

LOCATION.--At downstream end of culvert on State Road 24, in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.15 S., R.23 E., San Bernardino Meridian, Imperial County, Hydrologic Unit 15030107, 0.5 mi upstream from outlet to Reservation Main Drain.

PERIOD OF RECORD.--March 1966 to current year (monthly discharge only).

REMARKS.--Record shows drainage water from sec.34, T.15 S., R.23 E., in Reservation Division.

09529700. RESERVATION MAIN DRAIN NO. 6.

LOCATION.--Nonrecording gage on upstream right piling of Stallnacker Road Bridge, SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.32, T.15 S., R.23 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107.

PERIOD OF RECORD.--March 1966 to current year (monthly discharge only).

REMARKS.--Record shows waste and drainage water from the Reservation Division.

09529800. RESERVATION DRAIN NO. 2.

LOCATION.--At upstream side of bridge on White Road, in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.6, T.16 S., R.23 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 0.9 mi upstream from outlet to Reservation Main Drain.

PERIOD OF RECORD.--March 1966 to current year (monthly discharge only).

REMARKS.--Record shows drainage water from sec.31, T.15 S., R.22 E., in Reservation Division.

09529900. RESERVATION DRAIN NO. 3.

LOCATION.--At Jackson Road Bridge, in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.10, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 1.0 mi upstream from outlet to Reservation Main Drain.

PERIOD OF RECORD.--March 1966 to current year (monthly discharge only).

REMARKS.--Record shows drainage water from Reservation Division upstream from Yuma Main Canal.

Return surface flows below Imperial Dam, AZ-CA--Continued

09530000. RESERVATION MAIN DRAIN NO. 4.

LOCATION.--Water-stage recorder in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.26, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 500 ft upstream from railroad culvert.

PERIOD OF RECORD.--January 1913 to April 1920, October 1921 to March 1925, January 1934 to current year (monthly discharge only) (calendar year discharge only 1934-36). Prior to October 1955, published as California drainage canal.

REMARKS.--Record shows waste and drainage water from area east of Yuma Main Canal on Reservation Division.

09530200. YUMA MESA OUTLET DRAIN.

LOCATION.--In SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.16 S., R.22 E., San Bernardino meridian, Yuma County, in Arizona, Hydrologic Unit 15030108, 0.3 mi from outlet to Colorado River.

PERIOD OF RECORD.--July 1970 to current year (monthly discharge only).

REMARKS.--Record shows water pumped from wells on the Yuma Mesa and conveyed by underground conduit to Colorado River.

COOPERATION.--Records furnished by Bureau of Reclamation.

09530400. RESERVATION DRAIN NO. 11.

LOCATION.--At outlet to Drain 8-B, in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.19, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107.

PERIOD OF RECORD.--March 1966 to current year (monthly discharge only).

REMARKS.--Record shows drainage from sec.20, T.16 S., R.22 E. in Reservation Division.

09530500. DRAIN 8-B.

LOCATION.--Enters Colorado River in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 4 mi downstream from outlet of Yuma Main Canal wasteway.

PERIOD OF RECORD.--March 1948 to current year (monthly discharge only). Prior to October 1955, published as Araz Drain.

REMARKS.--Record shows waste and drainage water west of Yuma Main Canal on the Reservation Division.

09531800. MAIN OUTLET DRAIN EXTENSION ABOVE MORELOS DAM (M.O.D.E. 2).

LOCATION.--Nonrecording gage and Parshall flume, in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.36, T.16 S., R.21 E., San Bernardino meridian, Yuma County in Arizona, Hydrologic Unit 15030107, at outlet to Colorado River, 1.7 mi upstream from Morelos Dam.

PERIOD OF RECORD.--November 1965 to current year (monthly discharge only).

REMARKS.--Record shows water conveyed to Colorado River, 1.7 mi above Morelos Dam, from Wellton-Mohawk Main Outlet Drain (see sta 09529300).

Return surface flows below Imperial Dam, AZ-CA--Continued

MONTHLY RETURN FLOWS, IN ACRE-FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Month	Laguna Canal wasteway 09528600	Levee Canal wasteway 09528800	North Gila Drain No. 1 09529000	North Gila Main Canal wasteway 09529150	South Gila Pump Outlet Channel No. 3 09529160
October	0	455	409	288	970
November	0	374	393	219	1,610
December	0	553	208	278	1,510
CAL YR 1990	0	3,250	2,400	1,760	12,880
January	0	176	211	112	1,410
February	0	167	75	115	1,220
March	0	179	93	78	1,320
April	0	193	131	112	1,500
May	0	284	171	77	1,600
June	0	238	254	94	363
July	0	188	258	93	1,560
August	0	93	237	53	1,650
September	0	189	225	156	1,240
WTR YR 1991	0	3,090	2,660	1,670	15,950

Month	Bruce Church Drain 09529200	South Gila Pump Outlet Channel No. 2 09529240	Bruce Church wasteway 09529250	Wellton-Mohawk Main Outlet Drain 09529300	South Gila Pump Outlet Channel No. 1 09529360
October	0	1,210	202	12,600	2,020
November	0	1,670	146	12,450	2,010
December	0	1,720	187	13,530	2,220
CAL YR 1990	0	15,310	1,430	138,200	21,670
January	0	1,720	193	13,700	2,150
February	0	1,560	148	11,490	1,740
March	0	1,550	123	14,300	1,770
April	0	1,590	135	13,270	1,760
May	0	1,670	33	10,990	1,800
June	0	1,100	32	9,630	1,360
July	0	1,780	121	12,880	1,650
August	0	1,400	101	12,000	1,330
September	0	1,090	109	11,730	1,400
WTR YR 1991	0	18,070	1,530	148,600	21,130

Month	South Gila Terminal wasteway 09529420	South Gila Pump Outlet Channel No. 4 09529440	Reservation Drain No. 7 09529600	Reservation Main Drain No. 6 09529700	Reservation Drain No. 2 09529800
October	313	188	238	1,330	15
November	408	175	213	1,150	19
December	630	184	232	1,180	25
CAL YR 1990	3,090	3,790	2,180	12,820	244
January	483	379	203	988	24
February	419	313	155	762	17
March	119	167	184	970	18
April	400	169	210	996	26
May	128	184	221	1,090	24
June	465	179	241	1,200	15
July	311	238	252	1,310	18
August	267	430	256	1,220	15
September	122	232	251	1,160	26
WTR YR 1991	4,060	2,840	2,660	13,350	241

NOTE.--Yearly totals given above have been computed from total cfs-days and may differ slightly from the summation of monthly total acre-feet on occasion.

Return surface flows below Imperial Dam, AZ-CA--Continued

MONTHLY RETURN FLOWS, IN ACRE-FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Month	Reservation Drain No. 3 09529900	Reservation Main Drain No. 4 09530000	Yuma Mesa Outlet Drain 09530200	Reservation Drain No. 11 09530400	Drain 8-B 09530500	M.O.D.E. 2 (above) Morelos Dam 09531800
October	320	4,740	1,280	184	606	0
November	316	4,590	1,420	433	706	0
December	296	4,610	1,900	219	510	0
CAL YR 1990	3,510	46,370	20,710	1,550	4,910	0
January	240	4,490	2,070	116	414	0
February	209	3,280	1,420	154	365	0
March	254	4,180	994	247	495	0
April	271	3,660	1,410	92	341	0
May	264	4,540	1,390	92	406	0
June	244	4,780	1,120	117	384	0
July	310	4,600	1,050	71	461	0
August	311	3,770	1,540	58	522	0
September	385	4,290	1,770	140	601	0
WTR YR 1991	3,420	51,520	17,350	1,920	5,810	0

NOTE.--Yearly totals given above have been computed from total cfs-day and may differ slightly from the summation of monthly total acre-feet on occasion.

09527000 PILOT KNOB POWERPLANT AND WASTEWAY NEAR PILOT KNOB, CA

LOCATION.--Lat 32°44'15", long 114°42'56", in NW¼SW¼ sec.25, T.16 S., R.21 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 2 mi east of summit of Pilot Knob, 6 mi west of Yuma, AZ, and 20.8 mi downstream from intake of All-American Canal at Imperial Dam.

PERIOD OF RECORD.--February 1939 to current year. Prior to October 1943 monthly discharge only, published in WSP 1313. Prior to October 1956, published as Pilot Knob wasteway near Pilot Knob.

GAGE.--Water-stage recorder in forebay on right bank of All-American Canal (also used as auxiliary gage for sta 09527500); tailrace gage with remote recorder logged hourly in control house; calibrated wicket gates for turbine flow and calibrated bypass gates for wasteway flow which are logged for each change. Datum of forebay staff gage is 150.00 ft; that of tailrace staff gage is 0.00 ft; elevation of sill of bypass gates is 147.88 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Daily discharge computed from head and gate openings on wicket gates. Records show water released through Pilot Knob powerplant and wasteway from All-American Canal and returned to Colorado River through Rockwood gates. Pilot Knob wasteway was completed in summer of 1938 and first flow occurred Feb. 5, 1939. Pilot Knob powerplant was completed in January 1957 and first flow occurred Jan. 14, 1957. See table below for monthly return flow by Pilot Knob wasteway only.

COOPERATION.--Daily discharges furnished by Imperial Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 9,930 ft³/s Dec. 6, 1985; no flow for long periods.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	991	1030	998	1850	.00	1120	1470	.00
2	.00	.00	.00	.00	796	727	1090	1810	.00	1240	1290	.00
3	533	.00	.00	.00	.00	.00	1520	1760	1010	1420	1050	.00
4	968	.00	.00	.00	.00	.00	1530	1660	1000	1410	1000	.00
5	.00	.00	.00	551	451	.00	1480	1090	1000	1420	999	.00
6	.00	.00	.00	1420	1150	.00	1820	998	1000	1470	999	.00
7	.00	.00	.00	1090	1030	728	1780	999	1000	1400	999	.00
8	.00	.00	.00	1420	1030	1060	1990	999	1000	1430	1030	62
9	.00	.00	.00	1190	1030	1300	2040	1040	1000	1400	1060	.00
10	.00	.00	.00	.00	1030	1090	2060	1380	999	1520	1070	.00
11	.00	.00	.00	.00	1030	1240	2100	1300	1020	1600	1030	.00
12	.00	.00	.00	.00	1020	1360	2140	1020	999	1550	1010	.00
13	.00	.00	.00	.00	1030	1090	2020	.00	1010	1440	999	.00
14	.00	.00	.00	637	1020	1420	1790	.00	999	1220	1020	.00
15	.00	.00	.00	575	1020	1580	1800	.00	1040	1200	1210	.00
16	.00	.00	.00	.00	1020	1400	1870	.00	999	1320	1210	.00
17	.00	.00	.00	.00	1020	1090	1920	.00	1110	1330	1020	.00
18	.00	.00	.00	.00	1020	1300	2220	.00	1700	1350	1020	.00
19	.00	.00	.00	.00	1020	1370	2370	.00	1730	1230	1000	.00
20	.00	.00	.00	.00	1020	1500	2290	.00	1640	1190	1000	.00
21	.00	.00	.00	.00	1020	1300	2070	.00	1450	1040	1000	.00
22	.00	.00	.00	.00	1020	1750	1870	.00	1480	1240	1000	.00
23	.00	.00	.00	.00	1020	1610	2040	.00	1290	1530	1000	.00
24	.00	.00	.00	.00	1020	1520	2100	.00	1670	1700	1000	.00
25	.00	.00	.00	.00	1020	1550	2180	.00	1760	1700	1000	.00
26	.00	.00	.00	.00	1020	1540	2150	.00	1800	1650	1000	.00
27	.00	.00	.00	.00	1030	1560	1980	.00	1820	1450	1000	.00
28	.00	.00	.00	.00	1030	1450	1850	.00	1560	1970	1000	.00
29	.00	.00	.00	.00	.00	1280	1820	.00	1470	2100	1000	.00
30	.00	.00	.00	.00	.00	1360	1850	.00	1310	2000	.00	.00
31	.00	---	.00	1000	---	1090	---	.00	---	1880	.00	---
TOTAL	1501.00	0.00	0.00	7883.00	25908.00	35295.00	56738	15906.00	35866.00	45520	30486.00	62.00
MEAN	48.4	.000	.000	254	925	1139	1891	513	1196	1468	983	2.07
MAX	968	.00	.00	1420	1150	1750	2370	1850	1820	2100	1470	62
MIN	.00	.00	.00	.00	.00	.00	998	.00	.00	1040	.00	.00
AC-FT	2980	.00	.00	15640	51390	70010	112500	31550	71140	90290	60470	123
(*)	0	0	0	0	0	0	0	0	0	0	0	123
CAL YR 1990	TOTAL	284985.00	MEAN	781	MAX	3460	MIN	.00	AC-FT	565300	(*)	119
WTR YR 1991	TOTAL	255165.00	MEAN	699	MAX	2370	MIN	.00	AC-FT	506100	(*)	123

(*) Return flow, in acre-feet, by Pilot Knob Wasteway (included in Daily discharge Table).

09527500 ALL-AMERICAN CANAL BELOW PILOT KNOB WASTEWAY, CA

LOCATION.--Lat 32°44'07", long 114°43'25", in NE¼SE¼ sec.26, T.16 S., R.21 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, on left bank 0.4 mi downstream from Pilot Knob wasteway, 6 mi west of Yuma, Az., 15 mi upstream from turnout to Coachella Canal, and 21.2 mi downstream from intake at Imperial Dam.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 150.00 ft above National Geodetic Vertical Datum of 1929. Auxiliary water-stage recorder on right bank 0.4 mi upstream, used to determine head on Pilot Knob check gates (also used as forebay gage for sta 09527000, Pilot Knob powerplant and wasteway). Datum of auxiliary gage is 150.00 ft above NGVD.

REMARKS.--No estimated daily discharges. Records excellent. Water is used for power development at four sites below station and for irrigation in Coachella and Imperial Valleys.

COOPERATION.--Daily discharges furnished by Imperial Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 7,610 ft³/s Apr. 27, 28, 1976; no flow Jan. 4, 1967.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5006	4245	3462	1960	3445	1280	3992	6637	6150	5746	5159	5076
2	4792	4152	3197	2436	3427	1150	4688	6592	6010	6034	5386	4962
3	4577	4164	3354	2953	3568	895	5309	6485	5773	6284	4934	5028
4	4478	4194	3470	2591	3345	1158	6055	6378	6035	6393	4510	5201
5	4175	3943	3503	1339	3523	1295	6579	6216	6245	6266	5023	5196
6	3804	3865	3644	1001	3588	1627	6516	6381	6372	6139	5102	4724
7	3674	3872	3319	993	3847	2207	6622	6608	6216	6406	5415	3852
8	3985	3920	3163	1009	3491	2739	6802	6836	5903	6447	5872	3400
9	4372	3972	3144	967	3374	3671	6853	6570	5626	6439	5784	3630
10	4611	4090	3156	1152	3299	4384	6703	6503	5882	6415	5849	3820
11	4953	3647	3245	898	3315	4744	6622	6462	5954	6392	5979	4068
12	4645	3819	3023	785	3597	5274	6904	6035	5924	6167	5941	4742
13	4617	3960	2588	704	3891	5022	6450	6181	6042	5866	5931	4686
14	4620	4145	2601	932	3594	4798	6595	6296	6008	5858	5790	4961
15	4687	4129	2771	1160	3186	4463	6462	6473	5926	5783	5754	5115
16	4725	3717	2480	1560	2796	4481	6469	6585	5812	6016	5661	4984
17	4682	3442	2808	1758	2561	4525	6640	6491	5915	6120	5615	5009
18	4235	3141	2768	1757	2715	4667	6404	6438	5949	6445	5592	5061
19	3867	2999	2778	2104	2927	4759	6025	6192	5896	6424	5565	4958
20	3779	2963	2710	2196	3417	4842	5588	6164	5846	6282	5587	4418
21	3864	2987	2852	2410	3624	4845	5362	6299	5750	6286	5570	4073
22	3785	2495	2791	2736	3837	4663	5782	6003	5723	6148	5599	3920
23	3936	2796	2243	3039	4013	4330	6061	6017	5803	6148	5686	4302
24	4072	2806	2093	3368	4348	3819	6249	5862	5915	6199	5749	4058
25	3996	2648	1244	3398	4579	4240	6529	5687	5940	5836	5728	4129
26	3931	2882	2148	3175	4814	4533	6355	5570	5799	5802	5798	4409
27	3971	2999	2634	3118	4749	3947	6353	5799	5495	5775	5777	4314
28	4051	3246	2906	3341	2557	2728	6506	6013	5031	5827	5760	4389
29	4215	3364	3266	3727	---	3106	6572	6140	4986	6065	5636	4615
30	4241	3626	3205	3762	---	2644	6586	6186	5324	6175	5241	4649
31	4234	---	2680	3576	---	2375	---	6149	---	5992	5333	---
TOTAL	132580	106228	89246	65905	99427	109211	186633	194248	175250	190175	172326	135749
MEAN	4277	3541	2879	2126	3551	3523	6221	6266	5842	6135	5559	4525
MAX	5010	4240	3640	3760	4810	5270	6900	6840	6370	6450	5980	5200
MIN	3670	2490	1240	704	2560	895	3990	5570	4990	5750	4510	3400
AC-FT	263000	210700	177000	130700	197200	216600	370200	385300	347600	377200	341800	269300
CAL YR 1990	TOTAL	1724074	MEAN	4723	MAX	7080	MIN	1240	AC-FT	3420000		
WTR YR 1991	TOTAL	1656978	MEAN	4540	MAX	6900	MIN	704	AC-FT	3287000		

RIO SONOYTA BASIN

SAN SIMON WASH BASIN

09535100 SAN SIMON WASH NEAR PISINIMO, AZ

LOCATION.--Lat 32°02'39", long 112°22'13", in SE¼ sec.9, T.16 S., R.1 W. (unsurveyed), Pima County, Hydrologic Unit 15080101, in Tohono O'Odham Indian Reservation, on right bank about 100 ft downstream from road, just upstream from Gu Vo Wash, and 3.2 mi west of Pisinimo.

DRAINAGE AREA.--569 mi².

PERIOD OF RECORD.--February 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,830 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1980, at site 120 ft upstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--19 years, 3.85 ft³/s, 2,790 acre-ft/yr; median of yearly mean discharges, 2.8 ft³/s, 2,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft³/s Sept. 24, 1976, gage height, 10.82 ft, from rating curve extended above 1,700 ft³/s on basis of slope-area measurement of peak flow; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 27	0400	*6.48	*6.57

No flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
5	.00	.00	.00	24	.00	.00	.00	.00	.00	9.3	.00	e.00
6	.00	.00	.00	3.5	.00	.00	.00	.00	.00	.16	.00	e.00
7	.00	.00	.00	.07	.00	.00	.00	.00	.00	.16	.00	e.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
15	.00	.00	.00	.00	.00	8.7	.00	.00	.00	.00	.00	e.00
16	.00	.00	39	.00	.00	5.9	.00	.00	.00	.00	.00	e.00
17	.00	.00	.05	.00	.00	.03	.00	.00	.00	.00	.00	e.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e1.5
21	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00	.00	e.35
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	64	e.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.2	e.00
26	.00	.00	.00	.00	.00	1.2	.00	.00	.00	.00	.35	e.00
27	.00	.00	.00	.00	.00	6.3	.00	.00	.00	.00	112	e.00
28	.00	.00	.00	.00	.00	4.2	.00	.00	.00	.00	e2.5	e.00
29	.00	.00	.00	.00	---	.23	.00	.00	.00	.00	e.00	e.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	e.00	e.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	e.00	---
TOTAL	1.60	0.00	39.12	27.57	0.00	26.56	0.00	0.00	0.00	41.62	181.05	1.85
MEAN	.052	.000	1.26	.89	.000	.86	.000	.000	.000	1.34	5.84	.062
MAX	1.6	.00	39	24	.00	8.7	.00	.00	.00	32	112	1.5
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	3.2	.00	78	55	.00	53	.00	.00	.00	83	359	3.7

CAL YR 1990	TOTAL	1356.82	MEAN	3.72	MAX	444	MIN	.00	AC-FT	2690
WTR YR 1991	TOTAL	319.37	MEAN	.87	MAX	112	MIN	.00	AC-FT	633

e Estimated

SAN SIMON WASH BASIN

09535300 VAMORI WASH AT KOM VO, AZ

LOCATION.--Lat 31°57'04", long 112°20'50", in NW¼ sec.14, T.17 S., R.1 W (unsurveyed), Pima County, Hydrologic Unit 15080101, in Tohono O'Odham Indian Reservation, on right bank 200 ft downstream from road crossing, 0.6 mi south of Kom Vo (Santa Cruz Village) and 5 mi upstream from mouth.

DRAINAGE AREA.--1,250 mi², approximately, of which about 250 mi² is in Mexico.

PERIOD OF RECORD.--February 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,770 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--19 years, 10.8 ft³/s, 7,820 acre-ft/yr; median of yearly mean discharges, 8.5 ft³/s, 6,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft³/s Oct. 3, 1983, gage height, 10.54 ft, from rating curve extended above 550 ft³/s on basis of slope-area measurement of peak flow; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 1	0845	*1,210	*9.40
Dec. 18	0200	450	8.63

No flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	927	e.00	.00	e.00	.00	.00	.37	e.00	e.00	e.00	.00	.98
2	723	.00	.00	e.00	.00	.00	e.00	e.00	e.00	e.00	2.4	.15
3	85	.00	.00	e.00	.00	.00	e.00	e.00	e.00	e.00	.17	.00
4	17	.00	.00	e.00	.00	.00	e.00	e.00	.00	e.00	.00	.00
5	1.7	.00	.00	13	.00	.00	e.00	e.00	.00	e.00	.00	.00
6	e.95	.00	.00	86	.00	.00	e.00	e.00	.00	e.00	.00	.00
7	e.62	.00	.00	136	.00	.00	e.00	e.00	.00	e.00	.00	.00
8	e.33	.00	.00	11	.00	.00	e.00	e.00	.00	e.00	.00	.00
9	e.00	.00	.00	1.5	.00	.00	e.00	e.00	.00	e1.3	.00	.00
10	e.00	.00	.00	1.0	.00	.00	e.00	e.00	.00	e7.9	.00	.00
11	e.00	.00	.00	.81	.00	.00	e.00	e.00	.00	.58	.00	.00
12	e.00	.00	.00	.52	.00	.00	e.00	e.00	.00	.04	.00	.00
13	e.00	.00	.00	.20	.00	.00	e.00	e.00	.00	.00	.00	.00
14	e.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	.00	.00	.00
15	e.00	.00	.00	.00	.00	1.6	e.00	e.00	e.00	.00	.00	.00
16	e.00	.00	159	.00	.00	9.0	e.00	e.00	e.00	.00	.00	.00
17	e.00	.00	242	.00	.00	.36	.00	e.00	e.00	.00	.00	1.5
18	e.00	.00	175	.00	.00	.00	.00	e.00	e.00	.00	.00	1.9
19	e.00	.00	9.5	.00	.00	.00	e.00	e.00	e.00	.00	.00	4.4
20	e.00	.00	1.5	.00	.00	.00	e.00	e.00	e.00	.00	.00	5.8
21	e.00	.00	.95	.00	.00	.00	e.00	e.00	e.00	.00	.00	7.1
22	e.00	.00	3.5	.00	.00	42	e.00	e.00	e.00	.00	.00	4.3
23	e.00	.00	37	.00	.00	21	e.00	e.00	e.00	.00	.00	2.3
24	e.00	.00	5.3	.00	.00	1.1	e.00	e.00	e.00	.00	17	.13
25	e.00	.00	1.1	.00	.00	.79	e.00	e.00	e.00	.00	e225	e.00
26	e.00	.00	.90	.00	.00	.84	e.00	e.00	e.00	.00	e116	e.00
27	e.00	.00	.75	.00	.00	.59	e.00	e.00	e.00	.00	e12	e.00
28	e.00	.00	.85	.00	.00	4.7	e.00	e.00	e.00	.00	131	e.00
29	e.00	.00	.57	.00	---	2.9	e.00	e.00	e.00	.00	52	e.00
30	e.00	.00	.41	.00	---	.94	e.00	e.00	e.00	15	3.1	e.00
31	.00	---	e.00	.00	---	.60	---	e.00	---	.28	1.9	---
TOTAL	1755.60	0.00	638.33	250.03	0.00	86.42	0.37	0.00	0.00	25.10	560.57	28.56
MEAN	56.6	.000	20.6	8.07	.000	2.79	.012	.000	.000	.81	18.1	.95
MAX	927	.00	242	136	.00	42	.37	.00	.00	15	225	7.1
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	3480	.00	1270	496	.00	171	.7	.00	.00	50	1110	57

CAL YR	1990	TOTAL	8430.60	MEAN	23.1	MAX	927	MIN	.00	AC-FT	16720
WTR YR	1991	TOTAL	3344.98	MEAN	9.16	MAX	927	MIN	.00	AC-FT	6630

e Estimated

09535900 QUITOBAQUITO SPRING NEAR LUKEVILLE, AZ

LOCATION.--Lat 31°56'37", long 113°01'10", in SE¼, sec.18, T.17 S., R.7 W. (unsurveyed), Pima County, Hydrologic Unit 15080102, in Organ Pipe Cactus National Monument, in spring outlet channel 5 ft downstream from first source, 450 ft downstream from second source, and 12.8 mi northwest of Lukeville.

PERIOD OF RECORD.--September 1917 (one discharge measurement, published in WSP 499), October 1981 to September 1989; October to November 1989, April, June 1990 (fragmentary record); July 1990 to current year. Gage-heights and discharge measurements collected at this site, January 1974 to May 1976, are in the files of the National Park Service.

GAGE.--Water-stage recorder and 2-in parshall flume. Elevation of gage is 1,080 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1981 to Nov. 17, 1989, water-stage recorder and V-notch weir at site 45 ft downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Record is for flow from the two principal spring openings. Numerous small spring openings in the area discharge downstream from the gage.

COOPERATION.--Channel upstream is maintained by National Park Service to prevent flow from bypassing gage.

AVERAGE DISCHARGE.--9 years (water years 1982-89, 1991), 0.064 ft³/s, 46 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 0.33 ft³/s Sept. 29, 1983, gage height, 1.51 ft, site and datum then in use, includes local runoff; minimum, 0.02 ft³/s Aug. 18, 1983, gage height, 1.25 ft, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 0.11 ft³/s Mar. 19, 27, gage height, 0.31 ft, includes local runoff; minimum, 0.05 ft³/s Sept. 19, gage height 0.19 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.08	.08	e.08	.08	.08	.09	.07	.07	.06	.07	.07
2	.08	.08	.08	e.08	.08	.09	.09	.07	.06	.06	.07	.07
3	.08	.08	.08	e.08	.08	.08	.09	.07	.07	.07	.07	.07
4	.08	.08	.08	e.08	.08	.08	.09	.07	.07	.07	.07	.06
5	.08	.08	.08	e.08	.08	.08	.09	.07	.07	.07	.07	.06
6	.08	.08	.08	e.08	.08	.08	.09	.07	.06	.07	.07	.06
7	.08	.08	.08	e.08	.08	.08	.08	.07	.06	.07	.07	.06
8	.07	.08	.08	e.08	.08	.08	.08	.07	.06	.07	.07	.06
9	.07	.08	.08	e.08	.08	.08	.08	.07	.06	.06	.07	.06
10	.07	.08	.08	e.08	.08	.08	.08	.07	.06	.06	.07	.06
11	.07	.08	.08	e.08	.08	.08	.08	.07	.06	.06	.07	.06
12	.07	.08	.08	e.08	.08	.08	.08	.07	.07	.06	.07	.06
13	.07	.08	.08	e.08	.08	.08	.08	.07	.06	.06	.07	.06
14	.07	.08	.08	e.08	.08	.08	.08	.07	.06	.06	.07	.06
15	.07	.08	.08	e.08	.08	.08	.08	.07	.06	.06	.07	.06
16	.07	.08	.08	e.08	.08	.08	.08	.07	.07	.06	.07	.06
17	.07	.08	.08	e.08	.08	.08	.08	.07	.07	.06	.07	.06
18	.07	.08	e.08	e.08	.08	.08	.08	.07	.07	.06	.07	.06
19	.07	.08	e.08	e.08	.08	.08	.08	.07	.07	.06	.07	.06
20	.07	.08	e.08	.08	.08	.08	.08	.07	.06	.06	.07	.06
21	.07	.08	e.08	.08	.08	.08	.08	.07	.07	.06	.07	.06
22	.07	.08	e.08	.08	.08	.08	.08	.07	.07	.07	.07	.06
23	.07	.08	e.08	.08	.08	.08	.08	.07	.06	.06	.07	.06
24	.08	.08	e.08	.08	.08	.08	.07	.07	.06	.06	.06	.06
25	.08	.08	e.08	.08	.08	.08	.07	.07	.06	.07	.06	.06
26	.08	.08	e.08	.07	.08	.08	.07	.06	.06	.07	.06	.06
27	.08	.08	e.08	.07	.08	.08	.07	.06	.06	.07	.07	.06
28	.07	.08	e.08	.08	.08	.08	.07	.06	.06	.07	.07	.06
29	.08	.08	e.08	.08	---	.08	.07	.06	.06	.07	.06	.06
30	.08	.08	e.08	.08	---	.08	.07	.06	.07	.07	.06	.06
31	.08	---	e.08	.08	---	.09	---	.06	---	.07	.07	---
TOTAL	2.31	2.40	2.48	2.46	2.24	2.50	2.39	2.11	1.92	2.00	2.12	1.83
MEAN	.075	.080	.080	.079	.080	.081	.080	.068	.064	.065	.068	.061
MAX	.08	.08	.08	.08	.08	.09	.09	.07	.07	.07	.07	.07
MIN	.07	.08	.08	.07	.08	.08	.07	.06	.06	.06	.06	.06
AC-FT	4.6	4.8	4.9	4.9	4.4	5.0	4.7	4.2	3.8	4.0	4.2	3.6

WTR YR 1991 TOTAL 26.76 MEAN .073 MAX .09 MIN .06 AC-FT 53

e Estimated

WHITEWATER DRAW BASIN

09537200 LESLIE CREEK NEAR McNEAL, AZ

LOCATION.--Lat 31°35'24", long 109°30'30", in SE¼NE¼ sec.20, T.21 S., R.28 E., Cochise County, Hydrologic Unit 15080301, on right bank 10 mi east of McNeal.

DRAINAGE AREA.--79.1 mi².

PERIOD OF RECORD.--October 1969 to September 1977, July 1982 to current year.

GAGE.--Water-stage recorder and concrete control with shallow sharp-crested V-notch weir. Elevation of gage is 4,620 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--17 years (water years 1970-77, 1983-91), 1.20 ft³/s, 869 acre-ft/yr; median of yearly mean discharges, 0.92 ft³/s, 670 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,600 ft³/s July 21, 1984, gage height, 8.54 ft, from rating curve extended above 12 ft³/s on basis of slope-area measurements of peak flow at gage height 7.33 ft and 8.54 ft; no flow for many days in 1976, 1977, and 1990.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, October 1977 to July 1982, 468 ft³/s, date unknown, gage height, 4.76 ft in gage well.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 27	2300	*300	*4.50

Minimum daily discharge, 0.13 ft³/s, July 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	.24	.28	.29	.25	.25	.27	.26	.22	.15	.22	.20
2	.26	.24	.28	.29	.25	.24	.26	.26	.22	.15	5.8	.19
3	.26	.25	.28	.30	.25	.24	.27	.26	.21	.15	.47	.18
4	.23	.25	.28	.30	.25	.25	.27	.26	.21	.14	.22	3.1
5	.23	.25	.28	.32	.25	.26	.27	.26	.20	.14	.20	2.0
6	.23	.25	.29	.31	.25	.24	.27	.26	.20	.16	.19	.24
7	.23	.26	.29	.29	.25	.24	.27	.25	.19	.17	.17	.22
8	.21	.26	.29	.29	.25	.25	.27	.25	.18	.17	.18	.21
9	.20	.26	.29	.28	.25	.25	.27	.25	.18	.18	.20	.23
10	.21	.25	.29	.28	.25	.25	.27	.24	.18	.17	.22	.24
11	.20	.25	.29	.28	.26	.25	.27	.24	.18	.15	.17	.22
12	.19	.25	.30	.28	.27	.25	.26	.24	.18	.15	.17	.23
13	.19	.25	.30	.28	.25	.25	.27	.23	.19	.15	.16	.21
14	.19	.25	.30	.28	.25	.24	.27	.23	.18	.17	.17	.20
15	.18	.25	.30	.28	.24	.25	.24	.23	.18	.18	.18	.23
16	.17	.25	.31	.29	.24	.26	.27	.23	.17	.17	.18	.23
17	.18	.25	.30	.30	.24	.25	.27	.22	.17	.16	.17	.25
18	.18	.25	.30	.30	.24	.25	.28	.22	.16	.16	.17	.25
19	.19	.26	.29	.29	.24	.25	.28	.22	.16	.15	.19	.25
20	.18	.26	.29	.28	.24	.25	.28	.22	.16	.17	.18	.25
21	.19	.27	.29	.27	.24	.26	.28	.22	.16	.17	.18	.25
22	.20	.27	.29	.27	.24	.25	.28	.22	.16	.16	.18	.25
23	.20	.27	.29	.27	.24	.25	.28	.22	.16	.18	.19	.26
24	.19	.27	.29	.27	.24	.24	.28	.22	.15	.18	.19	.40
25	.20	.28	.29	.25	.24	.24	.25	.21	.15	.22	.19	.27
26	.22	.31	.29	.25	.24	.25	.25	.21	.15	.21	.20	.27
27	.24	.28	.29	.25	.24	.26	.28	.21	.14	.21	16	.27
28	.24	.28	.30	.25	.26	.27	.28	.21	.14	.20	7.9	.28
29	.24	.28	.31	.25	---	.26	.28	.21	.15	.21	.25	.29
30	.24	.28	.30	.25	---	.26	.27	.20	.15	.24	.23	.29
31	.24	---	.29	.25	---	.27	.27	.21	---	.26	.21	---
TOTAL	6.67	7.82	9.06	8.64	6.91	7.78	8.11	7.17	5.23	5.43	35.33	11.96
MEAN	.22	.26	.29	.28	.25	.25	.27	.23	.17	.18	1.14	.40
MAX	.36	.31	.31	.32	.27	.27	.28	.26	.22	.26	.16	3.1
MIN	.17	.24	.28	.25	.24	.24	.24	.20	.14	.14	.16	.18
AC-FT	13	16	18	17	14	15	16	14	10	11	70	24

CAL YR	1990	TOTAL	385.14	MEAN	1.06	MAX	92	MIN	.00	AC-FT	764
WTR YR	1991	TOTAL	120.11	MEAN	.33	MAX	16	MIN	.14	AC-FT	238

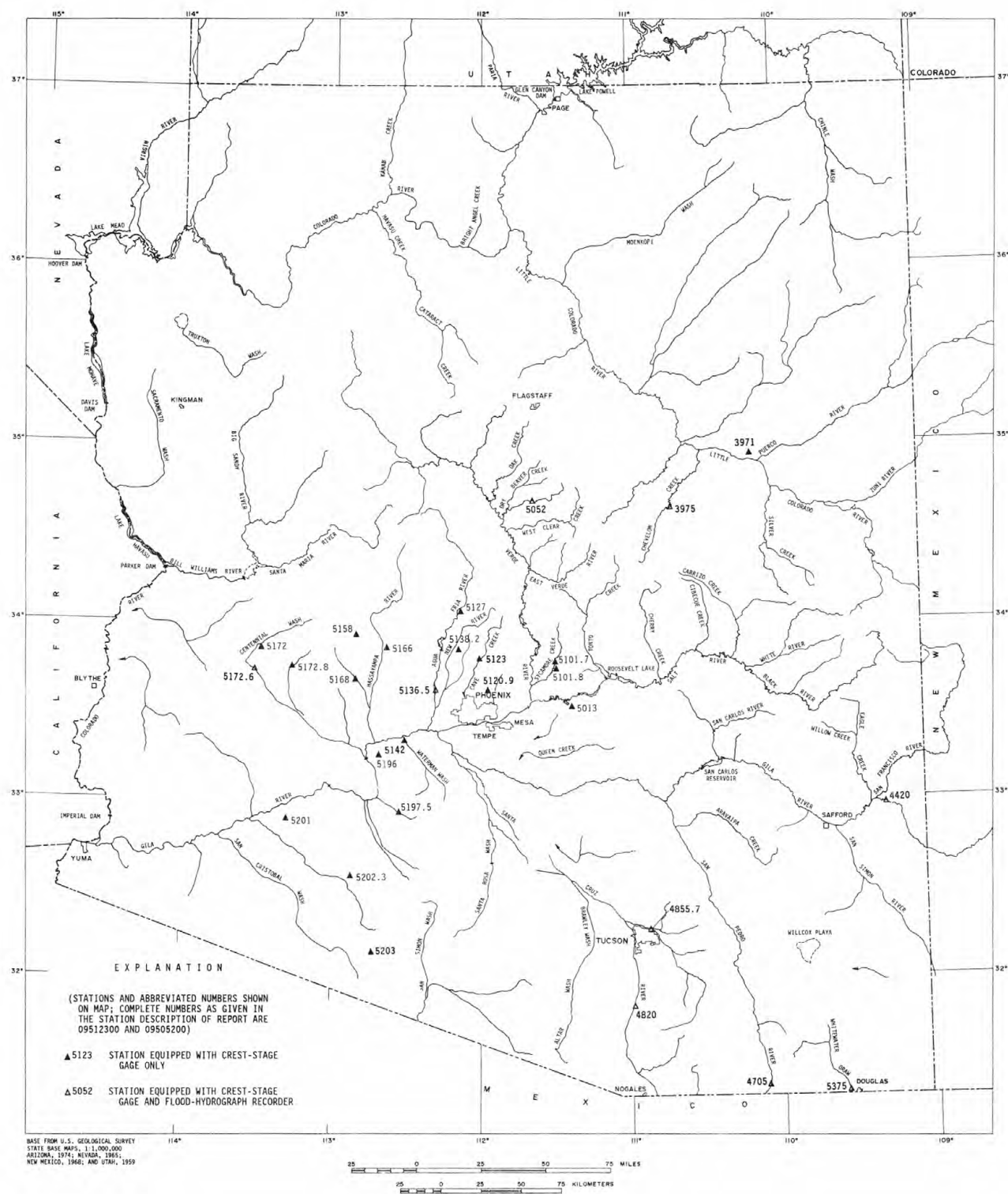


Figure 7.--Map of Arizona showing locations of partial-record gaging stations.

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.

Crest-stage partial-record stations

The following table contains annual maximum discharges of independent peaks at crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1991

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (ft)	Dis-charge (ft ³ /s)
Little Colorado River basin							
09397100	Leroux Wash near Holbrook, AZ	Lat 34°54'18", long 110°12'03", SE½NE½NE½ sec.3, T.17 N., R.20 E., Navajo County, Hydrologic Unit 15020009, near center of bridge in east-bound lane of Interstate Highway 40, 0.5 mi upstream from mouth and 2.5 mi west of Holbrook.	809	1980-91	1- 6-91	9.73	3,730
09397500	Chevelon Creek below Wildcat Canyon near Winslow, AZ	Lat 34°38'11", long 110°42'49", in SW½ sec.36, T.15 N., R.15 E., Navajo County, Hydrologic Unit 15020010, Sitgreaves National Forest, on right bank 0.4 mi downstream from Wildcat Canyon and 25 mi south of Winslow.	271	1947-70*, 1979, 1982-91	4- 7-91	7.97	2,150
Gila River basin							
09442000	Gila River near Clifton, AZ	Lat 32°57'57", long 109°18'35", in NE½SE½ sec.25, T.5 S., R.29 E., Greenlee County, Hydrologic Unit 15040002, on right bank 60 ft upstream from bridge on county road, 6 mi upstream from San Francisco River, and 6 mi south of Clifton.	4,010	1910-18*, 1927-89*, 1990-91	3- 2-91	11.72	9,730
09470500	San Pedro River at Palominas, AZ	Lat 31°22'48", long 110°06'38", in SW½SE½ sec.33, T.23 S., R.22 E., Cochise County, Hydrologic Unit 15050202, near left bank on downstream side of pier of bridge on State Highway 92, 0.7 mi east of Palominas, 2.5 mi upstream from Green Brush Draw, 4.5 mi downstream from international boundary, and 12 mi southwest of Bisbee.	a737	1930-33*, 1935-41*, 1950-81*, 1982-91	3- 2-91	7.18	1,680
09482000	Santa Cruz River at Continental, AZ	Lat 31°52'17", long 110°58'46", in SE½SE½ sec.11, T.18 S., R.13 E. (unsurveyed), Pima County, Hydrologic Unit 15050301, in Spanish land grant of San Ignacio de La Canoa, on right bank 0.8 mi northeast of Green Valley Post Office and 1.5 mi downstream of town of Continental.	b1,682	1940-46*, 1951-86*, 1987-91	9- 1-91	4.02	1,270

See footnotes at end of the table.

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (ft)	Dis-charge (ft ³ /s)
Gila River basin--Continued							
09485570	Alamo Wash at Tucson, AZ	Lat 32°15'31", long 110°53'01", in SE¼SE¼NW¼ sec.35 T.13 S., R.14 E., Pima County, Hydrologic Unit 15050302, 270 ft downstream from Glenn Street, 0.5 mi east of the intersection of Glenn Street and Swan Road in Tucson.	9.56	1979-91	1- 5-91	2.39	466
09501300	Tortilla Creek at Tortilla Flat, AZ	Lat 33°31'38", long 111°23'13", in NW¼ sec.13, T.2 N., R.9 E. (unsurveyed), Maricopa County, Hydrologic Unit 15060106, 600 ft upstream from State Highway 88 and Tortilla Flat Store, and 3.7 mi southeast of Mormon Flat Dam.	24.3	1966-83, 1991	1991	----	(c)
09505200	Wet Beaver Creek near Rimrock, AZ	Lat 34°40'29", long 111°40'17", in NW¼SW¼ sec.24, T.15 N., R.6 E., Yavapai County, Hydrologic Unit 15060202, in Coconino National Forest, on right bank 4.5 mi northeast of Rimrock and 5.7 mi upstream from Red Tank Draw.	111	1961-82*, 1983-91	3- 1-91	9.38	3,030
09510170	Camp Creek near Sunflower, AZ	Lat 33°45'35", long 111°29'44", in SW¼ sec.24, T.5 N., R.8 E., Maricopa County, Hydrologic Unit 15060203, on right bank at upstream side of culvert on State Highway 87, half a mile upstream from mouth and 7 mi south of Sunflower.	2.6	1963-66*, 1967-79, 1991	3- 1-91	1.61	64
09510180	Rock Creek near Sunflower, AZ	Lat 33°43'49", long 111°30'28", in SE¼ sec.35, T.5 N., R.8 E., Maricopa County, Hydrologic Unit 15060203, on left bank 300 ft from culvert on State Highway 87, 0.3 mi upstream from mouth, and 10 mi south of Sunflower.	15.2	1963-72, 1991	3- 1-91	6.05	1,140
09512090	Indian Bend Wash at Shea Boulevard at Phoenix, AZ	Lat 33°35'05", long 111°58'10", in SW¼SW¼SE¼ sec.20, T.3 N., R.4 E., Maricopa County, Hydrologic Unit 15060106, on left bank 500 ft upstream from Shea Boulevard bridge.	41.2	1984-91	9- 5-91	3.32	3,590
09512300	Cave Creek near Cave Creek, AZ	Lat 33°47'10", long 112°04'00", in SW¼ sec.12, T.5 N., R.3 E., Maricopa County, Hydrologic Unit 15060106, on left bank 200 ft upstream from Prescott to Mesa transmission line, 4.8 mi southwest of town of Cave Creek, and 5.0 mi upstream from Cave Creek Dam.	121	1958-67*, 1968-79, 1981-91	3- 1-91	6.10	4,780
09512700	Agua Fria River tributary No. 2 near Rock Springs, AZ	Lat 34°02'00", long 112°08'42", in SW¼ sec.15, T.8 N., R.2 E., Maricopa County, Hydrologic Unit 15070102, at culvert on Interstate Highway 17 (southbound lane), 1 mi south of Rock Springs, and 9 mi north of New River.	1.07	1963-80, 1991	3- 1-91	7.24	491
09513650	Agua Fria River at El Mirage, AZ	Lat 33°36'24", long 112°18'14", in NW¼NW¼ sec.18, T.3 N., R.1 E., Maricopa County, Hydrologic Unit 15070102, at Grand Avenue, 0.75 mi southeast of El Mirage.	41,628	1963-79, 1981-91	3-30-91	5.06	1,950
09513820	Deadman Wash near New River, AZ	Lat 33°50'30", long 112°08'40", in NW¼ sec.27, T.6 N., R.2 E., Maricopa County, Hydrologic Unit 15070102, 300 ft downstream from bridge on Interstate Highway 17, 4.5 mi south of New River.	11.3	1960-79, 1991	3- 1-91	6.33	1,030
09514200	Waterman Wash near Buckeye, AZ	Lat 33°19'49", long 112°30'33", in SW¼NE¼ sec.24, T.1 S., R.3 W., Maricopa County, Hydrologic Unit 15070101, 2.4 mi above mouth, 5.2 mi southeast of Buckeye.	420	1964-91	9- 5-91	3.73	413

See footnotes at end of the table.

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (ft)	Dis-charge (ft ³ /s)
Gila River basin--Continued							
09515800	Hartman Wash near Wickenburg, AZ	Lat 33°57'46", long 112°49'40", in SE¼ sec.12, T.7 N., R.6 W., Maricopa County, Hydrologic Unit 15070103, at U.S. Highway 60, 5.7 mi west of Wickenburg.	5.57	1964-79, e1983, 1991	3- -83 1991	5.56 ----	1,300 (c)
09516600	Ox Wash near Morristown, AZ	Lat 33°53'00", long 112°39'00", in NW¼ sec.11, T.6 N., R.4 W., Maricopa County, Hydrologic Unit 15070103, at U.S. Highway 60, 2.4 mi northwest of Morristown, and 7.6 mi southeast of Wickenburg.	6.31	1960, 1963-79, 1991	1991	----	(c)
09516800	Jack Rabbit Wash near Tonopah, AZ	Lat 33°39'32", long 112°49'40", in NE¼NW¼ sec.25, T.4 N., R.6 W., Maricopa County, Hydrologic Unit 15070103, 100 ft upstream from Wickenburg-Hassayampa Road, 4.5 mi upstream from Star Wash, and 14 mi northeast of Tonopah.	137	1964-79, e1983, 1991	9- -83 8-26-91	11.2 9.26	13,000 2,250
09517200	Centennial Wash tributary near Wenden, AZ	Lat 33°50'40", long 113°27'00", in SW¼SW¼ sec.24, T.6 N., R.12 W., Yuma County, Hydrologic Unit 15070104, at U.S. Highway 60, 5 mi northeast of Wenden.	2.79	1963-79, e1983, 1991	9- -83 8-12-91	4.10 2.82	435 169
09517260	Centennial Wash at Narrows Dam near Salome, AZ	Lat 33°43'29", long 113°30'46", in SW¼SE¼ sec.33, T.5 N., R.12 W., La Paz County, Hydrologic Unit 15070104, on left bank end of Narrows Dam, 7.4 mi southeast of Salome.	f684	1982-91	7- 6-91	6.23	87
09517280	Tiger Wash near Aguila, AZ	Lat 33°44'30", long 113°16'43", in SW¼SW¼ sec.26, T.5 N., R.10 W., Maricopa County, Hydrologic Unit 15070104, 17 mi south of Aguila.	85.5	1963-79, e1983, 1991	9- -83 9- 4-91	9.29 4.22	3,170 1
09519600	Rainbow Wash tributary near Buckeye, AZ	Lat 33°14'35", long 112°38'15", in NE¼ sec.23, T.2 S., R.4 W., Maricopa County, Hydrologic Unit 15070101, at U.S. Highway 80, 9.5 mi southwest of Buckeye.	g3.45 (1.02)	1963-79, e1983, 1991	2- -83 3-27-91	4.98 2.43	600 69
09519750	Bender Wash near Gila Bend, AZ	Lat 32°54'25", long 112°33'05", in NW¼ sec.15, T.6 S., R.3 W., Maricopa County, Hydrologic Unit 15070101, along side of Interstate 8, 10 mi southeast of Gila Bend. Prior to Oct. 1, 1966, at site 0.65 mi downstream.	68.8	1963-79, e1983, 1991	2- -83 1991	8.49 ----	3,610 (c)
09520100	Military Wash near Sentinel, AZ	Lat 32°50'43", long 113°16'44", in SW¼ sec.3, T.7 S., R.10 W., Maricopa County, Hydrologic Unit 15070201, at Interstate Highway 8, 4.1 mi west of Sentinel.	8.70	1963-79, e1983, 1991	2- -83 8-12-91	6.80 3.51	1,420 249
09520230	Crater Range Wash near Ajo, AZ	Lat 32°33'44", long 112°52'37", in NW¼NW¼ sec.15, T.10 S., R.6 W., Maricopa County, Hydrologic Unit 15070202, at State Highway 85, 4.1 mi north of Maricopa-Pima County line, and 13.5 north of Ajo.	1.49	1963-79, e1983, 1991	2- -83 1991	2.49 ----	270 (c)
09520300	Alamo Wash tributary near Ajo, AZ	Lat 32°06'00", long 112°46'15", in SW¼ sec.22, T.15 S., R.5 W. (unsurveyed), Pima County, Hydrologic Unit 15070203, at State Highway 85, 20 mi southeast of Ajo.	.90	1963-75, 1978, 1980, 1982-91	1- 5-91	----	h5

See footnotes at end of the table.

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (ft)	Dis- charge (ft ³ /s)
Whitewater Draw basin							
09537500	Whitewater Draw near Douglas, AZ	Lat 31°21'08", long 109°35'04", in SW¼SE¼ sec.10, T.24 S., R.27 E., Cochise County, Hydrologic Unit 15080301, on downstream side of pier of bridge on U.S. Highway 80, 1.5 mi upstream from international boundary and 2 mi west of Douglas.	1,023	1947-82*, 1983-91	11-26-90	7.05	52

- * Operated as a continuous-record gaging station.
- a Includes an area of 649 mi² in Mexico.
- b Includes an area of 395 mi² in Mexico.
- c Peak flow did not reach bottom of gage.
- d Includes 1,433 mi² above Lake Pleasant that is noncontributing except during occasional periods of spills from Waddell Dam; does not include the area tributary to McMicken Dam from which water is diverted to the Agua Fria River. Diversions from McMicken Dam have negligible effect on peak flows of the Agua Fria River.
- e Not previously published. Peak determined from floodmarks during the 1980-90 water years. Date of peak estimated on basis of precipitation records and streamflow records on nearby streams.
- f Revised
- g Portion of drainage basin is generally noncontributing because of a major stock pond. The noncontributing area is shown in parentheses.
- h About
- i Record furnished by International Boundary and Water Commission.

Discharge 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 one asterisk (*); measurements of peak flow by two asterisks (**).

Discharge measurements made at miscellaneous sites during water year 1991

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Gila River basin						
Pinal Creek	Salt River	Lat 33°32'23", long 110°52'26" in SE½SW½SW½ sec.6, T.2 N., R.15 E., Gila County, Hydrologic Unit 15060103, 1.8 mi downstream from Hicks crossing, 3.2 mi upstream from Inspiration Dam, 7.0 mi upstream from mouth, and 11 mi northwest Globe.	--	1988-90	11-28-90 1-24-91 3-20-91 5-15-91 7-24-91 9-25-91	2.33 3.57 4.56 4.29 3.12 1.38
Verde River	Salt River	Lat 34°51'48", long 112°25'50", in SW½SW½SW½ sec.12, T.17 N., R.2 W., Yavapai County, 500 ft below Granite Creek near Paulden.	--	1977	7- 2-91	*.10
Verde River	Salt River	Lat 34°52'01", long 112°25'18", in SE½NE½SW½ sec.12, T.17 N., R.2 W., Yavapai County, 0.7 mi below Granite Creek near Paulden.	--	1977	7- 2-91	*17.3
Verde River	Salt River	Lat 34°52'03", long 112°24'05", in NW½SE½ sec.7, T.17 N., R.1 W., Yavapai County, at Stewart Ranch.	--	1977	7- 3-91	*19.3
Verde River	Salt River	Lat 34°54'29", long 112°15'29", in NE½SW½SE½ sec.28, T.18 N., R.1 E., Yavapai County, at campgrounds crossing.	--	----	7- 3-91	*17.0
Duff Spring	Verde River	Lat 34°52'38", long 112°17'23", in SE½SE½SE½ sec.6, T.18 N., R.1 E. (unsurveyed), at mouth of Verde River.	--	----	7- 4-91	a0.05
Verde River	Salt River	Lat 34°52'39", long 112°17'20", in SE½SE½SE½ sec.6, T.18 N., R.1 E. (unsurveyed), below Duff Spring.	--	----	7- 4-91	*23.5
Verde River	Salt River	Lat 34°53'52", long 112°12'04", in NE½SE½ sec.36, T.18 N., R.1 E., Yavapai County, at Perkinsville.	--	1977	7- 2-91	*27.0
Verde River	Salt River	Lat 34°53'44", long 112°10'39", in SW½ sec.32, T.18 N., R.2 E., Yavapai County, below Perkinsville below Orchard Fault.	--	1977	7- 2-91	*29.5
Verde River	Salt River	Lat 34°52'45", long 112°09'26", in sec.4, T.17 N., R.2 E., Yavapai County, above railroad tunnel near Clarkdale.	--	1977	7- 2-91	*30.3
Mormon Pocket Spring	Verde River	Lat 34°53'27", long 112°08'15", in NW½NW½NE½ sec.3, T.17 N., R.2 E. (unsurveyed), Coconino County, above Mormon Pocket near Clarkdale.	--	----	7- 4-91	7.93
Verde River	Salt River	Lat 34°53'16", long 112°07'34", in sec.2, T.17 N., R.2 E., Yavapai County, at Mormon Pocket near Clarkdale.	--	1977	7- 4-91	*47.6
Sycamore Creek	Verde River	Lat 34°51'47", long 112°04'35", in SE½SE½ sec.7, T.17 N., R.3 E., Yavapai County, at mouth near Clarkdale.	--	1977	7- 2-91	*12.2
Verde River	Salt River	Lat 34°51'35", long 112°04'30", in NW½ sec.17, T.17 N., R.3 E., Yavapai County, 2,000 ft below Sycamore Creek.	--	1977	7- 2-91	*76.2

a Not previously published.

ANALYSIS OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	
		342453109241001 LITTLE COLORADO RIVER ABOVE SALADO SPRINGS NR ST JOHNS, AZ (LAT 34 24 53N LONG 109 24 10W)										
		JAN 1991										
30...	1100	1.6	2920	7.9	-1.0	0.5	626	12.4	106	790	320	
JUL												
31...	0840	6.4	888	8.0	21.0	19.0	622	7.0	93	250	31	
342600109224001 LITTLE COLORADO RIVER BELOW SALADO SPRINGS NR ST JOHNS, AZ (LAT 34 26 00N LONG 109 22 40W)												
JAN 1991												
30...	1535	5.5	3330	8.0	5.0	5.5	626	12.4	121	1000	520	
JUL												
31...	1150	9.1	1860	7.9	31.5	20.5	622	6.7	92	550	210	
343215109252001 A-13-27 13A UNSURV BIG HOLLOW WASH SPRING NR ST JOHNS, AZ (LAT 34 32 15N LONG 109 25 20W)												
JAN 1991												
31...	0900	0.35	1670	8.2	-6.0	0.0	633	10.8	90	180	0	
AUG												
02...	1015	0.24	1770	8.3	28.0	20.0	625	7.0	95	170	0	
342551109374501 A-12-26 19ABA CONCHO SPRING NR CONCHO, AZ (LAT 34 25 51N LONG 109 37 45W)												
JAN 1991												
31...	1305	2.7	172	7.6	8.0	15.0	615	8.0	99	66	0	
JUL												
31...	1520	2.8	190	7.9	24.0	15.0	610	7.4	91	70	0	
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
		342453109241001 LITTLE COLORADO RIVER ABOVE SALADO SPRINGS NR ST JOHNS, AZ (LAT 34 24 53N LONG 109 24 10W)										
		JAN 1991										
30...	200	71	340	5	19	581	0	476	640	370	2.1	
JUL												
31...	65	22	79	2	5.7	271	0	222	120	69	0.60	
342600109224001 LITTLE COLORADO RIVER BELOW SALADO SPRINGS NR ST JOHNS, AZ (LAT 34 26 00N LONG 109 22 40W)												
JAN 1991												
30...	270	82	410	6	25	595	0	488	730	440	2.0	
JUL												
31...	150	42	230	4	*13	417	0	342	380	230	1.3	
343215109252001 A-13-27 13A UNSURV BIG HOLLOW WASH SPRING NR ST JOHNS, AZ (LAT 34 32 15N LONG 109 25 20W)												
JAN 1991												
31...	43	18	300	10	6.0	503	0	412	310	76	2.2	
AUG												
02...	38	18	360	12	6.9	808	17	690	*180	78	2.9	
342551109374501 A-12-26 19ABA CONCHO SPRING NR CONCHO, AZ (LAT 34 25 51N LONG 109 37 45W)												
JAN 1991												
31...	13	8.2	7.5	0.4	2.9	101	0	82	3.7	4.0	<0.10	
JUL												
31...	14	8.5	7.8	0.4	2.5	104	0	85	2.8	3.4	0.10	

* Value verified.

< Actual value is known to be less than value shown.

MISCELLANEOUS STATION ANALYSES

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L (70301)	SOLIDS, DIS- SOLVED (TONS (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
342453109241001	LITTLE COLORADO RIVER ABOVE SALADO SPRINGS NR ST JOHNS, AZ (LAT 34 24 53N LONG 109 24 10W)										
JAN 1991											
30...	15	1940	2.64	<0.010	<0.100	<0.010	<0.010	--	560	10	310
JUL											
31...	15	510	0.69	0.020	0.081	0.030	0.020	0.06	130	10	29
342600109224001	LITTLE COLORADO RIVER BELOW SALADO SPRINGS NR ST JOHNS, AZ (LAT 34 26 00N LONG 109 22 40W)										
JAN 1991											
30...	18	2270	3.09	<0.010	<0.100	<0.010	0.020	0.06	690	<10	100
JUL											
31...	16	1270	1.72	<0.010	<0.050	0.030	0.020	0.06	410	9	52
343215109252001	A-13-27 13A UNSURV BIG HOLLOW WASH SPRING NR ST JOHNS, AZ (LAT 34 32 15N LONG 109 25 20W)										
JAN 1991											
31...	18	1030	1.40	<0.010	1.50	<0.010	<0.010	--	920	*9	20
AUG											
02...	*30	1130	1.54	<0.010	*<0.050	<0.010	<0.010	--	1300	*130	3
342551109374501	A-12-26 19ABA CONCHO SPRING NR CONCHO, AZ (LAT 34 25 51N LONG 109 37 45W)										
JAN 1991											
31...	29	120	0.16	<0.010	0.500	<0.010	0.080	0.25	<10	<3	<1
JUL											
31...	29	121	0.16	<0.010	0.380	<0.010	0.070	0.21	10	<3	<1

* Value verified.

< Actual value is known to be less than value shown.

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991--Continued

MISCELLANEOUS STATION ANALYSES

335122112160900 LAKE PLEASANT 1000 FT ABOVE WADDELL DAM

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
SEP 1991 27...	1010	3.30	453	8.5	30.0	26.0	1.0	718	6.7	88	<1	<1
DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	HY- DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
SEP 1991 27...	160	0	38	16	30	1	4.1	182	7	0	160	40
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
SEP 1991 27...	20	0.30	13	263	258	0.36	<0.010	<0.010	<0.050	<0.050	0.020	<0.010
DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTH- O DIS- SOLVED (MG/L AS P) (70507)	PHOS- PHORUS ORTH- O DIS- SOLVED (MG/L AS P) (00671)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	BORON, DIS- SOLVED (UG/L AS B) (01020)
SEP 1991 27...	0.38	0.40	0.010	0.020	<0.010	<0.010	8	10	<100	49	100	90
DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
SEP 1991 27...	<1	<1.0	<1	<1	3	1	40	<3	2	<1	10	1
DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	CYANIDE TOTAL (MG/L AS CN) (00720)	CYANIDE DIS- SOLVED (MG/L AS CN) (00723)
SEP 1991 27...	<0.10	<0.1	<1	<1	<1	<1.0	<10	<3	6.7	0.5	<0.010	<0.01

< Actual value is known to be less than value shown.

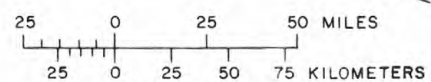


Figure 8.--Index map of ground-water areas in Arizona.

GROUND-WATER AREAS AND ABBREVIATIONS

AGF =	Agua Fria basin	LSC =	Lower Santa Cruz basin
ALT =	Altar Valley	LVR =	Lower Verde River
ARA =	Aravaipa Valley	MMU =	McMullen Valley
AVR =	Avra Valley	MNV =	Monument Valley
BIC =	Big Chino Valley	N-C =	New River-Cave Creek
BIS =	Big Sandy Valley	PSC =	Peach Springs Canyon
BWM =	Bill Williams	PRZ =	Puerco-Zuni
BLM =	Black Mesa	RAN =	Ranegras Plain
BRB =	Black River basin	SAC =	Sacramento Valley
BOD =	Bodaway Mesa	SAF =	Safford basin
BUT =	Butler Valley	SRV =	Salt River Valley
CDI =	Canyon Diablo	SBV =	San Bernardino Valley
CHV =	Chevelon	SFP =	San Francisco Peaks
CHN =	Chinle	SFR =	San Francisco River basin
COP =	Coconino Plateau	SSI =	San Simon basin
CHI =	Colorado River, Hoover Dam to Imperial Dam	SSW =	San Simon Wash
CON =	Concho	SHV =	Shivwits
DOU =	Douglas basin	SNO =	Snowflake
DUN =	Duncan basin	STJ =	St. Johns
GIL =	Gila Bend basin	TON =	Tonto basin
GRD =	Gila River from Painted Rock Dam to Texas Hill	TUB =	Tuba City
GSK =	Gila River from head of San Carlos Reservoir to Kelvin	USR =	Upper Salt River basin
GTD =	Gila River from Texas Hill to Dome	USP =	Upper San Pedro basin
GWA =	Grand Wash	USC =	Upper Santa Cruz basin
HAR =	Harquahala Plains	VER =	Upper Verde River
HAS =	Hassayampa basin	VRG =	Virgin River
HOL =	Holbrook	WAT =	Waterman Wash
HOP =	Hopi	WMD =	Western Mexican drainage
HOU =	House Rock	WHM =	White Mountains
HUA =	Hualapai Valley	WRB =	White River basin
KAI =	Kaibito	WIL =	Willcox basin
KAN =	Kanab	WMN =	Williamson Valley
LIC =	Little Chino Valley	YUM =	Yuma
LHA =	Lower Hassayampa		
LSP =	Lower San Pedro basin		

SITE INFORMATION

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
AGF	A-09-02 34DDD	04	025	340421	1120758	15070102	H	112	--	--
AGF	A-12-02 01DAC	04	025	342655	1120545	15070102	S	250	--	--
AGF	A-12-02 23BAA	04	025	342450	1120718	15070102	S	140	--	--
AGF	A-13-01 02CAD	04	025	343157	1121348	15070102	S	200	90.0	200
AGF	A-14-01 27ACC	04	025	343353	1121442	15070102	U	606	--	--
AGF	A-14-01 28BBB	04	025	343413	1121616	15070102	I	345	--	--
AGF	A-15-01 28ACC	04	025	343906	1121547	15070102	U	378	--	--
AGF	B-14-01 11DAA	04	025	343628	1121930	15070102	U	500	196	496
AGF	B-14-01 14ACC	04	025	343533	1121959	15070102	P	496	496	500
AGF	B-14-01 15ABA	04	025	343601	1122045	15060201	U	996	26	496
AGF	B-14-01 22ADA	04	025	343453	1122037	15070102	U	612	400	774
ALT	D-16-09 24DAC	04	019	320113	1112213	15050304	I	240	774	996
ALT	D-16-10 34BAB	04	019	320001	1111836	15050304	U	875	310	--
ALT	D-17-09 02DDA	04	019	315830	1112306	15050304	I	500	--	--
ALT	D-18-09 11BAC	04	019	315257	1112345	15050304	H	--	261	500
ALT	D-19-09 03ACA	04	019	314830	1112431	15050304	H	376	--	--
ALT	D-19-09 18AAA	04	019	314657	1112715	15050304	H	712	--	--
ALT	D-20-08 35BDB	04	019	313850	1112957	15050304	H	650	--	--
ALT	D-20-09 17ABA	04	019	314135	1112631	15050304	S	480	495	595
ALT	D-21-08 27ADA	04	019	313429	1113015	15050304	S	400	598	650
ALT	D-22-08 19DBC	04	019	312946	1113345	15080200	H	160	120	480
ALT	D-22-08 29DBA	04	019	312900	1113232	15050304	U	--	--	--
ALT	D-22-08 34ABD	04	019	312827	1113033	15080200	U	430	--	--
ARA	D-07-20 21BDB	04	009	324902	1101849	15050203	I	150	136	--
ARA	D-08-21 18DAD	04	009	324413	1091355	15040006	I	140	--	--
AVR	D-11-10 08DDD	04	019	322852	1112021	15050304	I	443	154	430
AVR	D-11-10 22ADD	04	019	322732	1111817	15050303	I	600	433	443
AVR	D-11-10 22DDD2	04	019	322706	1111817	15050304	-	638	145	--
AVR	D-11-10 25DDA2	04	019	322621	1111613	15050303	I	375	280	620
AVR	D-11-10 27CDC1	04	019	322614	1111855	15050303	I	--	--	--
AVR	D-11-10 27DAA	04	019	322636	1111814	15050304	U	3210	160	285
AVR	D-12-10 04DCC	04	019	322430	1111949	15050304	U	1600	--	--
AVR	D-12-10 09DCD	04	019	322338	1111935	15050303	I	1600	--	--
AVR	D-12-10 12CDD3	04	019	322340	1111656	15050304	-	1290	1000	1290
AVR	D-12-10 23ACD	04	019	322219	1111728	15050304	I	504	190	500
AVR	D-12-10 31DCD	04	019	322008	1112134	15050304	-	757	400	757
AVR	D-12-10 33CDC1	04	019	322009	1111953	15050304	U	1380	--	--
AVR	D-12-11 20AAA	04	019	322245	1111404	15050304	I	375	200	370
AVR	D-12-11 30DCD	04	019	322107	1111520	15050304	-	1300	1000	1300
AVR	D-13-10 05DDD	04	019	321917	1112020	15050304	U	587	237	587
AVR	D-13-10 06DDC	04	019	321915	1112130	15050304	I	420	207	415
AVR	D-13-10 22CDD	04	019	321638	1111848	15050304	I	600	300	588
AVR	D-13-10 23DCC	04	019	321639	1111738	15050304	U	700	255	650
AVR	D-13-10 26CCD	04	019	321546	1111759	15050304	I	700	310	685
AVR	D-13-10 26DCD	04	019	321546	1111729	15050304	I	705	319	695
AVR	D-13-11 11ACC2	04	019	321851	1111126	15050304	H	458	308	403
AVR	D-13-11 31CCC1	04	019	321456	1111602	15050304	U	736	408	458
AVR	D-13-11 31CDD1	04	019	321456	1111540	15050304	U	705	234	736
AVR	D-14-10 11AAA	04	019	321404	1111715	15050304	U	1010	270	705
AVR	D-14-10 12ABA	04	019	321256	1111629	15050304	Z	485	400	1000
AVR	D-14-11 04CAA	04	019	321425	1111340	15050304	I	581	370	480
AVR	D-14-11 06CCD	04	019	321403	1111354	15050304	I	635	0	561
AVR	D-14-11 06DCC	04	019	321404	1111532	15050304	U	700	280	635
AVR	D-14-11 07BAD	04	019	321348	1111544	15050304	I	700	240	641
AVR	D-14-11 08CCC	04	019	321310	1111500	15050304	I	590	641	700
AVR	D-14-11 27BCC	04	019	321102	1111258	15050304	P	1150	300	580
AVR	D-14-11 29DDD	04	019	321034	1111408	15050304	I	542	--	--
AVR	D-14-11 33CCD	04	019	320944	1111359	15050304	I	712	350	527
AVR	D-14-11 33DCD	04	019	320944	1111321	15050304	I	670	240	697
AVR	D-14-11 34BEC2	04	019	321022	1111252	15050304	P	1270	697	712
AVR	D-15-10 33CAC	04	019	320435	1111950	15050304	H	206	350	650
AVR	D-15-10 35AAA	04	019	320511	1111712	15050304	U	350	400	680
AVR	D-15-11 05CCD	04	019	320850	1111459	15050304	H	712	680	1270
AVR	D-15-11 09AAA	04	019	320847	1111306	15050304	U	1470	--	--
AVR	D-15-11 22CCC	04	019	320616	1111257	15050304	U	1130	660	1470

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
BIC	B-17-02 04DBD	04	025	345302	1122831	15060201	U	187	--	--
BIC	B-17-02 05CBA	04	025	345312	1123008	15060201	S	--	--	--
BIC	B-17-02 06BBB	04	025	345338	1123118	15060201	I	342	--	--
BIC	B-18-03 23BBC	04	025	345608	1123323	15060201	U	61.0	--	--
BIC	B-19-03 19CBD	04	025	350059	1123731	15060201	I	500	65.0	--
BIC	B-19-04 10ADA	04	025	350303	1123956	15060201	S	605	--	--
BIS	B-16-13 36CCC	04	015	344040	1133510	15030201	H	15.0	--	--
BIS	B-18-13 34CCD	04	015	345332	1133900	15030201	S	72.0	--	--
BIS	B-21-10 17CCD1	04	015	351153	1132143	15030201	U	500	400	500
BIS	B-22-08 15CCB	04	025	351712	1130654	15030201	U	--	--	--
BLM RES	01 058-05.09X05.82	04	005	362456	1105030	15020018	H	251	19.0	251
BLM RES	02 040-00.85X12.17	04	017	363423	1103055	15020018	H	820	12.0	523
BLM RES	02 040-04.03X14.68	04	017	363213	1103420	15020018	H	500	770	820
BLM RES	02 040-05.38X15.27 BMOB	04	017	363143	1103550	15020018	U	400	318	328
BLM RES	02 040-11.20X13.60	04	017	363309	1104205	14070006	H	300	328	500
BLM RES	03 077-11.59X14.61	04	005	360217	1111226	15020018	H	450	250	400
BLM RES	03 097-08.22X06.32	04	005	355428	1110846	15020016	H	358	260	300
BLM RES	04 056-02.85X14.19	04	017	361737	1101803	--	H	2670	75.0	450
BLM RES	04 074-08.95X02.95 BMOB	04	017	361225	1102407	15020017	H	2460	--	--
BLM RES	04 075-00.61X16.21 BMOB	04	017	360055	1103040	15020012	U	1680	1954	2506
BLM RES	04 075-05.09X12.30	04	017	360418	1103527	15020017	P	1780	1520	1680
BLM RES	06 094-03.23X11.05	04	017	355023	1101827	15020012	P	1110	1480	1780
BLM RES	06 095-06.50X08.61	04	017	355230	1103658	15020012	H	--	906	1110
BLM RES	06 096-02.73X03.65	04	005	355648	1104755	15020017	H	361	655	675
BLM RES	08 037-06.23X02.51	04	001	364248	1095146	14080204	H	107	890	990
BLM RES	08 037-12.81X16.98	04	001	363013	1095849	14080204	H	720	310	335
BLM RES	08 038-04.43X15.39	04	017	363137	1100447	14080204	P	1600	60.0	107
BLM RES	08 038-09.40X07.08 BMOB	04	017	363850	1101008	14080204	U	1340	619	--
BLM RES	08 039-00.70X01.57 BMOB	04	017	364338	1101546	14080204	U	868	1140	1570
BLM RES	08 039-02.11X02.94	04	017	364226	1101717	14080204	H	890	470	1340
BLM RES	08 039-08.31X05.09	04	017	364034	1102400	14080204	H	933	712	868
BLM RES	08 039-11.83X08.69	04	017	363727	1102745	14080204	H	314	740	890
BLM RES	08 054-10.96X00.63	04	001	362936	1095641	14080204	U	851	180	933
BLM RES	10 054-01.41X01.85	04	001	362823	1094631	14080204	H	360	130	314
BLM RES	10 054-01.47X09.39	04	001	362149	1094633	14080204	H	360	300	360
BUT	B-07-14 16AAA	04	012	335725	1134258	15030105	S	361	730	780
BUT	B-07-15 02DDC	04	012	335823	1134715	15030105	I	520	--	--
BUT	B-07-15 09DDD	04	012	335729	1134906	15030105	U	106	300	520
BUT	B-07-15 10ADA	04	012	335810	1134802	15030105	U	680	--	--
BUT	B-07-15 11CAA	04	012	335748	1134732	15030105	U	600	--	--
BUT	B-07-15 11DCD	04	012	335729	1134716	15030105	I	600	300	580
BUT	B-07-15 11DDC	04	012	335729	1134708	15030105	H	--	300	600
BUT	B-07-15 11DDD	04	012	335729	1134700	15030105	I	1000	--	--
BUT	B-07-15 12AAD	04	012	335807	1134551	15030105	I	500	175	405
BUT	B-07-15 12DAD	04	012	335744	1134552	15030105	I	673	--	--
BUT	B-07-15 13ACB	04	012	335717	1134625	15030105	I	540	150	605
BUT	B-07-15 13DBC	04	012	335648	1134621	15030105	U	601	340	540
BUT	B-07-15 14ACB	04	012	335713	1134729	15030105	U	570	386	586
BUT	B-07-15 14DCB	04	012	335647	1135726	15030105	U	600	586	601
BUT	B-07-15 15AAD1	04	012	335718	1134803	15030105	I	604	320	570
BUT	B-07-15 15AAD2	04	012	335718	1134804	15030105	U	600	--	--
BUT	B-07-15 15AAD3	04	012	335718	1134805	15030105	U	585	200	400
BUT	B-07-15 16DCC	04	012	335635	1134930	--	U	--	400	580
BUT	B-08-13 04DDD1	04	012	340333	1133637	15030105	U	1000	580	604
BUT	B-08-13 04DDD2	04	012	340336	1133642	15030105	U	1230	400	600
BUT	B-08-14 20DAB	04	012	340122	1134403	15030105	S	545	400	585
BUT	B-08-14 23CDD	04	012	340059	1134116	15030105	U	500	--	--
BUT	B-08-14 23DDD	04	012	340058	1134047	15030105	U	1000	331	1230
BUT	B-08-14 25BDC	04	012	340031	1134030	15030105	I	1500	450	500
BUT	B-08-14 29CDD	04	012	340008	1134430	15030105	U	1170	450	500
									500	1000
									400	1120
									1150	1500
									365	1170

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
BWM	B-09-09 04CBC	04	025	340852	1131225	15030204	U	860	--	--
BWM	B-10-14 14DBD	04	012	341222	1134059	15030204	I	100	60.0	100
BWM	B-10-14 23BAC	04	012	341153	1134123	15030204	I	--	--	--
BWM	B-11-04 18CCC	04	025	341714	1124318	15030203	I	325	75.0	--
BWM	B-11-06 19CBD	04	025	341648	1125552	15030203	I	312	--	--
BWM	B-11-10 31CBA	04	015	341508	1132038	15030203	U	3000	84.0	986
									2510	2510
BWM	B-11-11 31BBB1	04	012	341531	1132658	15030203	U	888	268	888
BWM	B-12-03 06CDD	04	025	342422	1123641	15030203	I	461	--	--
BWM	B-12-06W31AAD	04	025	342044	1125541	15030203	I	147	--	--
BWM	B-13-04 21DB UNSRV	04	025	342709	1124045	15030203	U	457	208	395
									417	--
BWM	B-13-04 21DB U PZ2	04	025	342709	1124045	15030203	U	457	412	446
									446	457
BWM	B-13-04 26BCC1 UNSRV	04	025	342626	1123914	15030203	U	1670	520	--
BWM	B-13-04 27AB U PZ1	04	025	342639	1123942	15030203	Z	--	--	--
BWM	B-13-04 27AB U PZ2	04	025	342639	1123942	15030203	Z	--	--	--
BWM	B-13-06 09DCD	04	025	342828	1125318	15030203	I	52.0	--	--
BWM	B-13-09 17BCC	04	025	342801	1131348	15030203	P	473	0	432
BWM	B-13-13 07DDDB2	04	015	342836	1133913	15030201	H	543	483	543
BWM	B-13-15 17CAC2	04	015	342753	1135119	15030204	U	1020	--	--
CDI	A-18-14 13ABD3	04	005	345750	1104828	15020008	U	293	--	--
CDI	A-18-15 28AAD	04	005	345603	1104503	15020008	U	500	200	500
CDI	A-19-16 06CDB	04	017	350417	1104133	15020008	S	195	143	195
CHI	B-04-19 33CCA	04	012	333829	1141348	15030106	H	--	--	--
CHI	B-16-20 13BCD	04	015	344342	1141845	15030103	U	525	--	--
CHI	B-16-20H11CCD	04	015	344405	1142607	15030103	H	880	750	880
CHI	B-20-22 24DDD	04	015	350557	1143345	15030101	P	515	--	--
CHI	B-21-21 21CBB	04	015	351122	1143200	15030101	H	490	108	490
CHI	B-25-20 15AAA	04	015	353337	1142352	15010014	S	700	--	--
CHI	B-30-20 06CAC UNSRV	04	015	360105	1142811	15010014	U	590	--	--
CHI	C-06-20 32ABD2	04	027	325157	1142007	15070201	H	502	462	--
CHN RES	10 071-05.55X01.98	04	001	361317	1093558	14080204	U	200	80.0	200
CHV	A-15-12 15DDC	04	005	344058	1110331	15020008	S	780	--	--
CON	A-11-24 22DBC	04	001	342006	1094708	15020005	U	850	--	--
CON	A-11-25 18DCC	04	001	342044	1094400	15020002	U	280	--	--
CON	A-13-26 06DCB	04	001	343302	1093720	15020002	U	447	74.0	--
CON	A-14-26W18DBC	04	001	343637	1093749	15020002	U	410	--	--
DOU	D-18-26 28AAA2	04	003	315042	1094143	15080301	H	390	131	331
DOU	D-18-27 08BAC	04	003	315318	1093721	15050201	H	360	348	360
DOU	D-19-26 09BBB	04	003	314806	1094233	15080301	U	515	158	512
DOU	D-19-26 23DAA	04	003	314557	1093924	15040006	U	400	190	400
DOU	D-19-26 29BAB2	04	003	314528	1094303	15080301	U	206	31.0	160
									160	206
DOU	D-19-26 33CDA	04	003	314358	1094148	15080301	U	252	40.0	229
DOU	D-20-25 09CAA1	04	003	314225	1094754	15080301	S	700	--	--
DOU	D-20-26 23DAA	04	003	314039	1093915	15040006	U	150	82.0	--
DOU	D-20-26 25CBC	04	003	313941	1093906	15080301	H	300	--	--
DOU	D-21-25 15DBB	04	003	313611	1094720	15080301	S	450	--	--
DOU	D-21-26 02BAA	04	003	313826	1094023	15080301	U	124	50.0	100
DOU	D-21-26 24BAA	04	003	313550	1093920	15040006	I	630	--	--
DOU	D-21-26 32DAD	04	003	313332	1094300	15080301	I	400	130	175
									20.0	323
									324	400
DOU	D-21-26 36DDD	04	003	313318	1093851	15080301	U	--	--	--
DOU	D-21-28 21ADD	04	003	313523	1092930	15080301	S	50.0	--	--
DOU	D-22-25 14ACD	04	003	313107	1094616	15080301	S	--	--	--
DOU	D-22-26 04DAD	04	003	313242	1094155	15080301	I	450	--	--
DOU	D-22-26 29BCC	04	003	312923	1094349	15080301	H	--	--	--
DOU	D-22-26 31CCD	04	003	312803	1094445	15080301	H	250	--	--
DOU	D-23-26 19CBC1	04	003	312448	1094500	15080301	I	326	132	150
									176	213
									266	296
DOU	D-23-27 09DAB	04	003	312638	1093559	15080301	I	500	116	496
DOU	D-23-27 19CBB	04	003	312458	1093842	15080301	I	302	68.0	302
DOU	D-23-28 08DDD	04	003	312615	1093042	15080301	S	--	--	--
DOU	D-23-28 31CCC	04	003	312248	1093238	15080301	S	--	--	--
DOU	D-24-27 05BDB	04	003	312226	1093728	15080301	I	330	--	--
DUN	19S 20W 16 222	35	023	323938	1085419	--	S	154	--	--
DUN	20S 20W 12 144	35	023	323458	1085146	--	S	330	--	--
DUN	20S 21W 01 131	35	023	323555	1085816	--	S	356	--	--
DUN	20S 21W 17 111	35	023	323425	1090221	--	S	171	--	--
DUN	D-05-30 17ABA	04	011	330016	1091637	15040002	S	--	--	--
DUN	D-06-30 01BAA	04	011	325655	1091350	15040002	P	303	260	--
DUN	D-07-31 04BCC	04	011	325114	1091058	15040002	I	75.0	--	--
DUN	D-07-31 34BAC	04	011	324707	1090939	15040002	H	--	--	--
DUN	D-08-32 17DC	04	011	324355	1090518	15040002	H	71.0	--	--
DUN	D-08-32 34ADD	04	011	324139	1090250	15040002	I	83.0	--	--
DUN	D-09-32 15BBB	04	011	323922	1090345	15040002	H	230	--	--

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
GIL	C-02-04 26BDA	04	013	331337	1123834	15070101	I	600	250	--
GIL	C-02-04 32ADA	04	013	331246	1124108	15070101	U	450	440	600
GIL	C-02-05 26CBA	04	013	331333	1124430	15070101	I	1000	160	430
									250	900
									900	1000
GIL	C-02-05 26CDD	04	013	331306	1124418	15070101	I	840	50.0	372
									658	840
GIL	C-03-04 06BBA	04	013	331210	1124257	15070101	I	545	100	486
									500	545
GIL	C-03-04 09BAA	04	013	331119	1124033	15070101	I	490	135	490
GIL	C-03-04 10CAA2	04	013	331053	1123929	15070101	U	500	0	200
									394	500
GIL	C-03-04 17ADD	04	013	331008	1124108	15070101	U	302	115	288
GIL	C-03-04 19CCD	04	013	330847	1124255	15070101	I	1110	197	624
									634	1110
GIL	C-03-04 23BAA	04	013	330932	1123828	15070101	U	372	141	339
									339	360
GIL	C-03-04 27BAA	04	013	330841	1123927	15070101	I	397	--	--
GIL	C-03-04 33ADC	04	013	330727	1124010	15070101	I	800	100	780
GIL	C-03-05 02CBB	04	013	331143	1124508	15070101	I	320	60.0	245
									274	320
GIL	C-04-04 08CCA	04	013	330522	1124153	15070101	I	700	250	700
GIL	C-04-04 09BAA1	04	013	330604	1124031	15070101	U	300	--	--
GIL	C-04-04 16DAD	04	013	330434	1123959	15070101	I	707	--	--
GIL	C-04-04 27DAA	04	013	330258	1123859	15070101	I	880	118	880
GIL	C-04-04 33ADD	04	013	330214	1123955	15070101	I	910	390	910
GIL	C-04-07 34CDC	04	013	330143	1125822	15070101	I	830	200	830
GIL	C-05-03 07ABA2	04	013	330047	1123614	15070101	S	--	--	--
GIL	C-05-03 29AAA	04	013	325813	1123453	15070101	U	1990	500	1870
GIL	C-05-03 29CBC2	04	013	325742	1123546	15070101	S	--	--	--
GIL	C-05-04 18ADD	04	013	325937	1124203	15070101	I	501	130	482
GIL	C-05-04 21CBD	04	013	325830	1124045	15070101	I	1010	80.0	498
									498	1000
									1000	1010
GIL	C-05-04 31ADD	04	013	325700	1124159	15070101	I	1220	80.0	505
									505	1100
									1100	1220
GIL	C-05-05 16CDC	04	013	325908	1124647	15070101	I	491	250	416
GIL	C-05-05 20DCD	04</								

See p. 351 for Ground-Water Areas and Abbreviations.
See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
HAR	B-01-08 06AAA	04	013	332749	1130639	15070103	I	759	650	759
HAR	B-01-09 10BBB	04	013	332658	1131040	15070104	U	1780	1210	1780
HAR	B-01-09 20BDC	04	013	332449	1131230	15070104	I	1500	744	1430
									1430	1500
HAR	B-01-10 01CCC	04	013	332704	1131450	15070104	I	918	340	--
HAR	B-02-08 17CAA	04	013	333057	1130607	15070104	U	1650	250	488
									488	1650
HAR	B-02-08 27BBA	04	013	332937	1130416	15070104	U	1540	320	420
									420	1120
HAR	B-02-08 30AAA2	04	013	332938	1130639	15070104	I	1180	500	1180
HAR	B-02-09 03BBB	04	013	333305	1131043	15070104	U	--	--	--
HAR	B-02-09 07ABB	04	013	333212	1131318	15070104	U	1690	400	600
									600	1690
HAR	B-02-09 14BAB	04	013	333120	1130925	15070104	I	1300	490	1220
									1220	1300
HAR	B-02-10 05ABB	04	013	333301	1131826	15070104	U	535	57	535
HAR	B-02-10 17DCA	04	013	333035	1131817	15070104	H	400	--	--
HAR	B-02-10 26DBB	04	013	332908	1131520	15070104	U	755	340	541
									541	755
HAR	B-03-11 08CAC	04	012	333651	1132459	15070104	H	554	420	540
									540	554
HAR	B-03-11 34BBB	04	012	333358	1132310	15070104	I	855	450	560
HAR	B-03-11 34BBB	04	012	333358	1132310	15070104	I	855	560	855
HAR	B-04-09 30AAC	04	013	333952	1131303	15070104	S	--	--	--
HAR	B-04-12 04CCA	04	012	334248	1133013	15070104	I	--	--	--
HAR	C-01-08 04BDA	04	013	332216	1130505	15070104	U	748	130	455
									450	455
									480	748
HAR	C-01-08 06DCC	04	013	332149	1130703	15070103	I	710	--	--
HAR	C-01-08 14DDD	04	013	332005	1130228	15070104	U	551	--	--
HAR	C-01-08 16DCC	04	013	332005	1130457	15070104	U	585	70.0	160
									160	585
HAR	C-01-09 11DCB	04	013	332103	1130904	15070104	I	--	250	400
HAR	C-01-09 18ACB	04	013	332040	1131314	15070104	U	893	0	559
HAS	B-04-04 19BAA	04	013	334052	1124219	15070103	U	--	--	--
HAS	B-04-05 05ABB	04	013	334325	1124720	15070103	S	712	400	--
HAS	B-04-05 22AAA	04	013	334056	1124450	15070103	U	1000	500	1000
HAS	B-05-04 24CCD	04	013	334513	1123805	15070102	S	800	400	--
HAS	B-05-05 22BCC	04	013	334543	1124630	15070103	S	580	--	--
HAS	B-06-04 02CCC	04	013	335303	1123916	15070103	P	1000	--	--
HAS	B-06-04 13DCD	04	013	335120	1123729	15070103	P	645	545	645
HAS	B-06-08 20ADC	04	013	335124	1130637	15070103	U	290	--	--
HAS	B-07-04 07BCC	04	013	335754	1124303	15070103	I	350	--	--
HAS	B-07-05 03DBC	04	013	335828	1124538	15070103	P	300	220	300
HAS	B-08-05 10DAA	04	025	340258	1124520	15070103	-	605	--	--
HAS	B-08-05 18CCC	04	025	340147	1124923	15070103	H	450	--	--
HAS	B-08-05 19CBC	04	025	340112	1124921	15070103	I	350	--	--
HAS	B-09-05 35DBB	04	025	340440	1124436	15070103	S	880	--	--
HAS	B-09-06 05ADD	04	025	340908	1125338	15070103	-	992	--	--
HOL	A-15-23 28DCC	04	017	343950	1095440	15020002	I	425	--	--
HOL	A-16-19 36CBC	04	017	344407	1101718	15020008	U	800	--	--
HOL	A-16-22 17CCD	04	017	344644	1100242	15020002	I	450	--	--
HOL	A-17-20 06ACD	04	017	345404	1101526	15020008	I	403	8.00	403
HOL	A-17-20 10DBA	04	017	345324	1101242	15020008	U	--	--	--
HOL	A-17-20 26DBC	04	017	345023	1101114	15020008	U	570	310	--
HOL	A-17-21 10CBA	04	017	345310	1100625	15020002	U	285	--	--
HOL	A-18-19 17ADC	04	017	345736	1102042	15020008	I	500	300	--
HOL	A-18-19 23DBD	04	017	345635	1101738	15020008	U	550	200	--
HOP	A-19-16 36DBB	04	017	350002	1103555	15020011	U	610	72.0	610
HUA	B-22-16 03CBB	04	015	351907	1135828	15010007	H	970	600	--
HUA	B-22-16 27DDD	04	015	351514	1135728	15010007	U	970	--	--
HUA	B-23-13 32ACA	04	015	352020	1134115	15010007	U	472	230	--
HUA	B-24-12 17CBC	04	015	352747	1133538	15010007	U	440	--	--
HUA	B-24-14 28CAD	04	015	352559	1134620	15010007	U	705	524	--
HUA	B-24-16 01DDD1	04	015	352911	1135521	15010007	I	700	--	--
HUA	B-25-09 26DBC	04	005	353109	1131228	15010007	U	1700	--	--
HUA	B-26-18 03AAA1	04	015	354036	1141106	15010007	H	705	570	697
HUA	B-28-17 31CCC	04	015	354552	1140850	15010007	U	800	--	--
HUA	B-30-17 14DCC	04	015	355855	1140435	15010005	U	650	--	--
KAI RES	01 058-10.73X06.78	04	005	362406	1105632	15020018	H	356	168	356
KAN	B-40-04 06AAC	04	015	365403	1124528	15010003	U	202	102	202

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
LHA	B-01-05 08DAB	04	013	332634	1124700	15070103	U	304	--	--
LHA	B-01-05 15CBB1	04	013	332541	1124545	15070103	U	140	--	--
LHA	B-01-05 27BBC	04	013	332416	1124543	15070103	I	384	0	384
LHA	B-01-06 03BBC	04	013	332744	1125154	15070104	H	400	240	400
LHA	B-01-06 11BCA	04	013	332648	1125044	15070101	I	--	--	--
LHA	B-01-06 23DCD	04	013	332427	1125013	15070101	H	460	205	--
LHA	B-02-04 29DCD	04	013	332848	1124057	15070103	S	--	--	--
LHA	B-02-05 29DAC	04	013	332858	1124707	15070103	U	270	150	210
LHA	B-02-06 09CBB	04	013	333147	1125303	15070104	I	1200	343	779
LHA	B-02-06 21BBA	04	013	333028	1125251	15070103	U	1030	--	--
LHA	B-02-06 33CAA	04	013	332817	1125234	15070104	U	1210	280	500
									500	1210
LHA	B-02-07 05BBC	04	013	333256	1130014	15070104	S	--	63	427
LHA	B-02-07 23CCA	04	013	332950	1125657	15070104	U	390	336	390
LHA	B-02-07 27AAB	04	013	332934	1125728	15070104	U	350	154	290
									300	350
LHA	C-01-05 03BAA1	04	013	332239	1124520	15070103	U	170	70.0	150
LHA	C-01-05 29ADC	04	013	331844	1124702	15070101	I	650	350	650
LHA	C-01-05 34ADC1	04	013	331751	1124457	15070101	U	443	250	--
LHA	C-01-06 14DBB	04	013	332026	1125026	15070104	I	1110	190	390
									390	1060
									1060	1110
LHA	C-01-06 19ABB	04	013	332000	1125438	15070103	I	1040	180	--
LHA	C-01-07 14BBB	04	013	332053	1125708	15070104	U	1200	300	600
									600	1200
LHA	C-02-05 16ABB	04	013	331544	1124610	15070101	I	112	28.0	104
LHA	C-02-05 16DAA	04	013	331518	1124548	15070101	I	590	--	--
LIC	B-14-02 14BAD	04	025	343549	1122618	15060202	U	110	--	--
LIC	B-15-01 01CDC	04	025	344212	1121907	15060202	S	475	--	--
LIC	B-15-01 25CDB	04	025	343847	1121904	15060202	U	355	--	--
LIC	B-15-02 17ABA	04	025	344106	1122915	15060202	S	430	--	--
LIC	B-16-02 03BBB1	04	025	344809	1122752	15060202	H	516	--	--
LIC	B-16-02 03DDC4	04	025	344723	1122657	15060202	H	120	--	--
LIC	B-16-02 11CBB1	04	025	344653	1122649	15060202	H	125	--	--
LIC	B-16-02 15AAA	04	025	344626	1122651	15060202	H	150	20.0	150
LIC	B-16-02 17BDC	04	025	344607	1122943	15060202	H	270	20.0	270
LIC	B-16-02 21BAA1	04	025	344534	1122829	15060202	U	413	201	413
LIC	B-16-02 34ABA2	04	025	344347	1122710	15060202	H	350	20	350
LIC	B-17-02N34ACC	04	025	344844	1122723	15060202	U	420	--	--
LIC	B-17-02N34DDD3	04	025	344819	1122656	15060202	H	125	--	--
LIC	B-17-02W27DCC	04	025	344911	1122724	15060202	I	750	--	--
LSC	D-03-02 23DAA	04	021	330914	1120658	15050303	U	780	--	--
LSC	D-03-02 23DBB	04	021	330917	1120718	15050303	U	--	--	--
LSC	D-03-02 23DCA	04	021	330903	1120712	15050303	-	780	--	--
LSC	D-03-05 29BCB	04	021	330828	1115228	15050100	I	174	36.0	156
LSC	D-03-06 17BDD	04	021	331007	1114547	15050100	I	1140	346	504
									504	1100
									1100	1140
LSC	D-03-06 27DBC	04	021	330816	1114338	15050100	H	336	250	255
									285	295
LSC	D-04-02 15CBC	04	021	330435	1120858	15050303	H	372	125	365
LSC	D-04-02 23ACC	04	021	330355	1120730	15050303	I	800	--	--
LSC	D-04-03 13DDD	04	021	330424	1115946	15050303	I	--	65	350
LSC	D-04-03 16CBB	04	021	330442	1120357	15050303	I	600	--	--
LSC	D-04-03 20DCD	04	021	330328	1120408	15050303	I	300	--	--
LSC	D-04-03 35DDD	04	021	330144	1120047	15050100	I	385	70	370
LSC	D-04-04 16CDD	04	021	330425	1115709	15050303	I	600	65.0	586
LSC	D-04-04 20CDD	04	021	330330	1115812	15050303	I	680	180	675
									675	680
LSC	D-04-10 30BDD	04	021	330311	1112142	15050100	I	300	100	300
LSC	D-04-11 07DBB	04	021	330541	1111528	15050100	I	--	--	--
LSC	D-05-02 22DAD	04	021	325830	1120804	15050303	U	800	388	800
LSC	D-05-02 36BAD	04	021	325714	1120633	15050303	I	1060	398	778
									778	1050
									1050	1060
LSC	D-05-03 03CCC	04	021	330053	1120248	15050303	I	455	150	430
LSC	D-05-03 12CDD1	04	021	325959	1120017	15050303	H	600	110	365
									380	580
LSC	D-05-03 25ADD	04	021	325743	1115945	15050303	I	550	115	535
LSC	D-05-03 29BCC1	04	021	325745	1120454	15050303	U	590	300	590
LSC	D-05-03 33DCB2	04	021	325633	1120322	15050303	I	1230	810	1200
									1210	1230
LSC	D-05-05 32CAB	04	021	325639	1115221	15050303	U	511	150	--
									2	236
									237	511
LSC	D-05-06 28CAA	04	021	325735	1114452	15050303	U	--	--	--
LSC	D-05-07 28DCC2	04	021	325712	1113830	15050100	U	389	200	--
LSC	D-05-07 33DDD	04	021	325618	1113808	15050100	I	268	--	--
LSC	D-05-07 34DDD	04	021	325618	1113705	15050100	I	500	92.0	200
									210	500

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
LSC	D-05-07W13CAD	04	021	325907	1113532	15050100	U	546	95.0	546
LSC	D-05-08 02AAA	04	021	330146	1112923	15050100	I	230	30.0	56
									91	108
									187	190
									192	196
									207	217
LSC	D-05-08 12AAD	04	021	330047	1112822	15050100	I	--	38	152
									164	220
LSC	D-05-08 17BBB2	04	021	330008	1113326	15050100	I	820	135	800
									810	820
LSC	D-05-08 31DDD	04	021	325640	1113334	15050100	I	241	126	221
LSC	D-05-09 03DAB	04	021	330120	1112425	15050100	I	450	--	--
LSC	D-05-09 18BDD1	04	021	325945	1112751	15050100	I	396	80	382
LSC	D-05-09 18BDD2	04	021	325944	1112750	--	I	950	490	620
									620	950
LSC	D-05-09 29ADA	04	021	325807	1112616	15050100	U	616	134	266
									336	342
									352	355
									378	384
									412	420
									432	440
LSC	D-05-09 31ADD	04	021	325707	1112718	15050100	I	556	155	442
LSC	D-06-02E01CDD2	04	021	325542	1120533	15050303	U	--	--	--
LSC	D-06-03 11CDD1	04	021	325430	1120022	15050303	U	600	70.0	--
LSC	D-06-03 15BDC	04	021	325404	1120130	15050303	I	1280	400	708
									677	1270
LSC	D-06-03 27CCC	04	021	325156	1120151	15050306	-	1250	550	1110
									1110	1250
LSC	D-06-03S02DDD2	04	021	325524	1115949	15050303	H	1130	285	1110
LSC	D-06-04 07CCC	04	021	325434	1115846	15050303	U	514	103	270
									318	508
LSC	D-06-04 36DDD	04	021	325102	1115237	15050303	U	1240	106	630
LSC	D-06-04S02CDD	04	021	325523	1115411	15050303	I	950	450	935
LSC	D-06-04S06DDD	04	021	325525	1115747	15050303	I	1210	200	725
									740	1210
LSC	D-06-05 09ADD	04	021	325502	1114936	15050303	U	166	--	--
LSC	D-06-05 16DAD1	04	021	325353	1114933	15050303	I	240	--	--
LSC	D-06-05 16DAD2	04	021	325356	1114932	15050303	I	--	--	--
LSC	D-06-05 19DDA PZ1	04	021	325256	1115140	15050303	U	1780	1160	1170
LSC	D-06-05 19DDA PZ2	04	021	325256	1115140	15050303	U	940	535	539
LSC	D-06-05 25BBB	04	021	325245	1114726	15050303	I	100	30.0	86
LSC	D-06-05 34BDD	04	021	325127	1114903	15050303	U	--	--	--
LSC	D-06-06 07AAA3	04	021	325519	1114524	15050303	I	620	155	610
LSC	D-06-06 09DAD	04	021	325448	1114322	15050303	I	600	280	600
LSC	D-06-06 12BDB	04	021	325509	1114055	15050303	I	640	90.0	195
									205	500
									507	640
LSC	D-06-06 16ADD	04	021	325409	1114320	15050303	I	1130	690	1010
									1010	1130
LSC	D-06-06 36DDA	04	021	325112	1114014	15050303	I	713	112	400
LSC	D-06-07 11DDD2	04	021	325432	1113504	15050100	U	406	150	315
LSC	D-06-07 34BBC	04	021	325142	1113705	15050303	I	500	225	495
LSC	D-06-07 35DDD	04	021	325102	1113504	15050100	I	2600	60	350
LSC	D-06-08 11ADA1	04	021	325503	1112848	15050100	U	365	110	360
LSC	D-06-08 14CCC	04	021	325338	1112947	15050100	I	450	55.0	440
LSC	D-06-08 27BDD2	04	021	325220	1113022	15050100	I	554	214	554
LSC	D-06-08 31CDD	04	021	325102	1113329	15050100	I	830	130	394
									402	406
LSC	D-06-08S02DAD	04	021	325536	1112848	15050100	I	700	119	688
LSC	D-06-08S04ADD1	04	021	325549	1113052	15050100	U	600	73.0	208
									220	596
LSC	D-06-09 19BBD	04	021	325328	1112735	15050100	U	500	--	--
LSC	D-06-09N06DAA1	04	021	325634	1112648	15050100	I	608	128	608
LSC	D-07-04 23DDD	04	021	324748	1115441	15050306	U	500	125	480
LSC	D-07-06 17DDD2	04	021	324825	1114423	15050303	U	155	50.0	100
									100	155
LSC	D-07-06 26DDD	04	021	324640	1114116	15050303	U	872	200	790
									100	382
									100	823
LSC	D-07-06 28DDD	04	021	324639	1114320	15050303	U	468	150	250
									250	468
LSC	D-07-06 35ACC	04	021	324613	1114141	15050303	I	825	400	550
									550	815
LSC	D-07-07 02ACC	04	021	325037	1113533	15050100	U	--	--	--
LSC	D-07-07 08BAA	04	021	325005	1113842	15050303	H	567	205	565
LSC	D-07-07 11CDD	04	021	324917	1113541	15050303	U	450	100	430
LSC	D-07-07 23ADD	04	021	324757	1113505	15050303	U	640	190	620
LSC	D-07-07 24DDD	04	021	324732	1113403	15050100	I	476	120	344
LSC	D-07-07 31DDA	04	021	324558	1113913	15050303	I	1600	730	747
									730	1160
									1150	1600
LSC	D-07-07 34CDD2	04	021	324548	1113639	15050303	U	900	130	886

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
LSC	D-07-08 05DCC	04	021	325011	1113225	15050100	I	408	120	395
LSC	D-07-08 09DDD	04	021	324917	1113054	15050100	U	500	100	485
LSC	D-07-08 17CDD	04	021	324827	1113227	15050100	U	564	150	557
LSC	D-07-08 30CDD	04	021	324641	1113331	15050100	I	601	--	--
LSC	D-07-08 31BBA	04	021	324637	1113346	15050100	U	828	560	580
LSC	D-07-08 33DDD	04	021	324548	1113056	15050100	I	950	450	515
									515	939
LSC	D-07-13 15CAC1	04	021	324919	1105857	15050100	S	125	--	--
LSC	D-08-06 22DDD2	04	021	324216	1114219	15050303	U	1050	--	--
LSC	D-08-06 35DDD2	04	021	324032	1114118	15050303	U	770	--	--
LSC	D-08-07 19DDD	04	021	324218	1113916	15050303	U	800	--	--
LSC	D-08-08 07DDD1	04	021	324405	1113301	15050303	U	450	--	--
LSC	D-08-08 07DDD2	04	021	324403	1113302	15050303	I	1270	250	1250
LSC	D-08-08 14DDD	04	021	324314	1112855	15050100	I	1020	170	600
									622	702
									180	622
									622	1022
LSC	D-08-08 18CDD1	04	021	324312	1113330	15050303	U	600	--	--
LSC	D-08-08 18CDD2	04	021	324311	1113332	15050303	I	1500	450	830
									830	1450
LSC	D-08-08 29BCC	04	021	324152	1113254	15050303	I	1680	1100	1390
									1380	1670
LSC	D-08-08 29BCD	04	021	324151	1113250	15050303	H	410	150	350
									345	404
									345	404
LSC	D-08-09 07ADD	04	021	324429	1112648	15050100	I	1380	550	1000
									1000	1380
LSC	D-08-10 04BBB2	04	021	324545	1111935	15050100	H	600	--	--
LSC	D-08-11 31BBB	04	021	324157	1111531	15050100	U	936	440	821
LSC	D-08-12 19DDC	04	021	324304	1110821	15050100	H	38.0	--	--
LSC	D-09-07 04ADD	04	021	324006	1113711	15050303	I	1240	190	1140
									1140	1240
LSC	D-09-07 22DAA	04	021	323727	1113610	15050303	I	1000	490	1000
LSC	D-09-07 25CDD	04	021	323611	1113434	15050303	U	1260	400	1210
LSC	D-09-07 25DDA2	04	021	323616	1113406	15050303	I	1120	580	1020
									985	1100
LSC	D-09-07 27DDD1	04	021	323608	1113609	15050303	U	640	--	--
LSC	D-09-08 17CDD	04	021	323756	1113231	15050303	U	547	--	--
LSC	D-09-08 20ADD2	04	021	323732	1113201	15050303	I	1600	--	--
LSC	D-09-08 29BCC	04	021	323635	1113300	15050303	U	1100	440	902
									880	1100
LSC	D-09-08 30DDD1	04	021	323612	1113306	15050303	U	600	180	580
LSC	D-09-08 31DAA	04	021	323541	1113305	15050303	U	1030	600	1030
LSC	D-09-10 19AAA	04	021	323755	1112043	15050303	U	600	240	486
									486	600
LSC	D-09-10 19ADD	04	021	323730	1112045	15050303	I	865	250	810
									822	865
LSC	D-09-13 07CBC	04	021	323942	1110302	15050100	S	275	--	--
LSC	D-09-13 20DBA	04	021	323759	1110115	15050100	S	--	--	--
LSC	D-10-09 10AAD1	04	021	323414	1112350	15050303	U	450	200	448
LSC	D-10-09 18AAC2	04	021	323321	1112710	15050303	S	--	--	--
LSC	D-10-10 05DAD	04	021	323442	1111945	15050303	I	580	170	450
LSC	D-10-10 20DCC	04	021	323152	1112007	15050303	S	290	--	--
LSC	D-10-11 17CAB2	04	021	323338	1111415	15050303	S	--	--	--
LSC	D-11-10 15AAD	04	019	322837	1111813	15050303	U	396	160	394
LSC	D-11-11 11DCD	04	019	322804	1111110	15050303	S	505	405	505
LSC	D-11-11 16CDD2	04	019	322805	1111331	--	I	906	360	594
									609	769
LSC	D-11-11 34ADD2	04	019	322554	1111158	15050303	I	787	340	779
LSC	D-12-11 12BDC	04	019	322411	1111038	15050303	I	575	270	538
LSC RES	D-03-04 35DCB	04	021	330715	1115457	15050100	I	--	--	--
LSC RES	D-04-03 09CDD PZ1	04	021	330517	1120323	15050303	U	1200	1200	1204
LSC RES	D-04-05 02BCB	04	021	330649	1114922	15050100	I	865	--	--
LSC RES	D-04-05 15BAD	04	021	330505	1114954	15050100	I	480	110	470
LSC RES	D-04-06 05ADD	04	021	330647	1114516	15050100	I	--	--	--
LSC RES	D-04-06 23BAA	04	021	330423	1114245	15050100	I	450	30.0	165
									68.0	445
LSC RES	D-04-08 02CCC	04	021	330614	1113027	15050100	U	485	--	--
LSP	D-06-16 08DAC5	04	021	325526	1104338	15050203	H	54.0	--	--
LSP	D-08-16 25DCD	04	021	324208	1103933	15050203	U	2140	--	--
LSP	D-12-18 24AAB	04	019	322253	1102700	15050203	I	--	--	--
LSP	D-12-19 19ADB	04	003	322247	1102616	15050203	U	80.0	--	--
LSP	D-15-20 10CAB	04	003	320836	1101723	15050203	I	--	--	--
LVR	A-03-06 15ABA	04	013	333635	1114321	15060203	P	735	450	735
LVR	A-10-10 03BAD	04	007	341436	1111900	15060105	U	--	--	--
LVR	A-10-10 03CCD	04	007	341356	1111919	15060105	U	380	260	380
LVR	A-10-10 04ABD	04	007	341442	1111953	15060105	U	--	--	--
LVR	A-10-10 04DBA	04	007	341418	1111949	15060105	H	--	--	--
LVR	A-10-10 05CCA	04	007	341408	1112120	15060203	U	150	--	--

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
LVR	A-10-10 09ADB	04	007	341338	1111944	15060105	H	100	43.0	100
LVR	A-10-10 11ACB	04	007	341336	1111748	15060105	U	--	--	--
LVR	A-11-10 27CCB	04	007	341547	1111925	15060203	P	400	100	400
LVR	A-11-10 27ddb	04	007	341551	1111842	15060203	P	400	100	400
LVR	A-11-10 31DAC	04	007	341504	1112146	15060203	P	330	100	330
LVR	A-11-10 32ACD	04	007	341518	1112054	15060203	H	400	44	400
LVR	A-11-10 34ABA	04	007	341537	1111843	15060105	P	600	250	600
LVR	A-11-10 34DDC	04	007	341448	1111843	15060105	P	350	200	350
LVR	A-11-10 35CCC	04	007	341447	1111825	15060105	H	200	75	115
									135	200
LVR	A-11-10 36ACD	04	007	341513	1111638	15060105	U	425	20	425
MMU	B-05-12 30DDD	04	012	334429	1133234	15070104	U	400	50.0	200
MMU	B-05-12 32ADB	04	012	334412	1133134	15070104	K	136	--	--
MMU	B-05-13 01ACB	04	012	334827	1133357	15070104	I	702	480	680
MMU	B-05-13 05CEB	04	012	334817	1133839	15070104	U	755	--	--
MMU	B-05-13 08DAA	04	012	334427	1133738	15070104	I	504	210	500
MMU	B-05-13 19BBD2	04	012	334557	1133932	15070104	U	430	330	430
MMU	B-05-13 28ACC	04	012	334452	1133704	15070104	U	723	122	--
MMU	B-06-11 05ADD	04	012	335334	1132507	15070104	U	800	--	--
MMU	B-06-12 13DCD	04	012	335122	1132733	15070104	I	1200	350	506
									506	1190
									1190	1200
MMU	B-06-12 15BBB	04	012	335211	1133019	15070104	U	1430	950	1000
MMU	B-06-12 19BBA	04	012	335119	1133312	15070104	I	--	--	--
MMU	B-06-13 28DBD2	04	012	334955	1133652	15070104	S	580	500	580
MMU	B-07-08 15BAA	04	013	335727	1130451	15070104	U	1810	505	790
									790	1810
MMU	B-07-08 20DDD	04	013	335545	1130621	15070104	U	1000	480	565
									568	1000
MMU	B-07-09 33ABB	04	013	335449	1131206	15070104	S	700	--	--
MMU	B-07-10 19AAA	04	013	335633	1131957	15070104	U	1500	359	449
									489	910
									910	1330
									1330	1500
MMU	B-07-10 33DDA	04	013	335404	1131751	15070104	H	575	--	--
MMU	B-07-12 26BCC	04	012	335518	1132913	15070104	U	340	5.00	--
									320	340
MMU	B-08-07 33ABC	04	013	335952	1125928	15070104	U	--	--	--
MMU	B-08-10 36BBB	04	013	340003	1131545	15070104	I	1350	287	772
									772	1350
N-C	A-04-02 11ADB	04	013	334230	1120709	15070102	T	900	425	600
N-C	A-04-02 14BBB	04	013	334153	1120802	15070102	U	1190	300	650
									650	1190
N-C	A-04-04 06BBB	04	013	334332	1115942	15060106	U	1280	584	1252
									1276	1285
N-C	A-05-01 10AAB	04	013	334745	1121426	15070102	H	438	315	--
N-C	A-05-02 04CAB	04	013	334814	1120947	15070102	H	600	390	600
N-C	A-05-02 10ABA	04	013	334750	1120824	15070102	C	519	106	519
N-C	A-05-04 09ABB	04	013	334756	1115704	15060106	U	--	--	--
N-C	A-06-02 30AAA	04	013	335033	1121114	15070102	S	230	--	--
N-C	A-06-04 21DAC	04	013	335052	1115647	15060106	H	350	--	--
N-C	A-07-02 24BDA	04	013	335623	1120636	15070102	H	--	--	--
N-C	A-07-02 34ACD	04	013	335434	1120821	15070102	U	--	--	--
N-C	B-05-01 14CAB	04	013	334625	1122011	15070102	K	1220	40	1220
PRZ	A-18-23 06CDC2	04	017	345901	1095640	15020007	U	170	--	--
PRZ	A-18-23 06DDC1	04	017	345902	1095613	15020007	I	165	--	--
PRZ	A-18-30 20CDD	04	001	345613	1091055	15020004	S	420	--	--
RAN	B-03-12 19AAA	04	012	333541	1133132	15030105	S	577	377	577
RAN	B-03-13 28ADC	04	012	333425	1134549	15030105	S	420	--	--
RAN	B-04-14 32BAA	04	012	333910	1134328	15030105	I	905	280	605
									605	905
RAN	B-04-15 13ADA	04	012	334132	1134458	15030105	I	952	300	610
									610	952
RAN	B-04-15 14CAA	04	012	334118	1134635	15030105	U	1000	213	719
									672	1000
RAN	B-05-15 06BAA2	04	012	334839	1135141	15030105	U	--	--	--
RAN	B-05-15 35BDD2	04	012	334357	1134732	15030105	U	800	250	626
									626	800
RAN	B-06-16 12AAA	04	012	335300	1135213	15030105	U	422	--	--
RAN	B-06-16 22ADA	04	012	335102	1135413	15030105	I	510	250	--
RAN	B-06-16 33AAA	04	012	334931	1135519	15030105	I	700	235	466
									466	583
									583	700
RAN	B-07-17 22ABC1	04	012	335622	1140056	15030105	U	176	--	--

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
SAC	B-15-16 07BDD	04	015	343923	1135833	15030103	U	--	--	--
SAC	B-17-17W19BAD	04	015	345044	1140808	15030103	U	450	--	--
SAC	B-20-18 22AAC	04	015	350633	1141037	15030103	U	800	--	--
SAC	B-21-17 24CBC	04	015	351123	1140322	15030103	P	267	--	--
SAC	B-21-17 34DDB	04	015	350937	1140442	15030103	U	80.0	--	--
SAC	B-21-18 21BCC	04	015	351135	1141259	15030103	H	--	--	--
SAF	D-04-22 35ADA	04	009	330239	1100312	15040005	S	75.0	--	--
SAF	D-05-23 02DBC	04	009	330128	1095724	15040005	U	--	--	--
SAF	D-05-23 03CAB	04	009	330135	1095838	15040005	I	--	--	--
SAF	D-05-23 25DCD	04	009	325743	1095606	15040005	U	--	--	--
SAF	D-05-24 08CCB2	04	009	330029	1095450	15040005	U	--	--	--
SAF	D-05-24 25BBC	04	009	325822	1095036	15040005	U	229	--	--
SAF	D-06-25 25CDD	04	009	325227	1094434	15040005	I	50.0	30.0	44.0
SAF	D-06-25 30DAC	04	009	325242	1094913	15040005	I	170	--	--
SAF	D-07-26 22BAB	04	009	324855	1094033	15040005	I	90.0	--	--
SAF	D-07-27 02ADD1	04	009	325111	1093245	15040005	I	--	--	--
SAF	D-08-26 33CCC1	04	009	324113	1094154	15040005	I	400	--	--
SAF	D-08-30 25DCB2	04	009	324211	1091333	15040006	S	480	--	--
SBV	D-24-30 16CCC	04	003	312006	1091806	15080302	S	100	35.0	--
SFP	A-20-06 02BEC	04	005	350856	1114416	15020015	P	1600	1050	1300
SFP	A-20-08 18BBB	04	005	350716	1113544	15020015	-	1210	1290	1600
SFP	A-21-06 35CBA	04	005	350924	1114401	15020015	P	1600	790	810
SFP	A-22-06 27ADA1	04	005	351551	1114411	15020015	U	66.0	816	826
SFP	A-22-07 32CBB	04	005	351442	1114100	15020015	H	140	829	894
SFP	A-25-06 20ACC	04	005	353210	1114624	15020016	-	139	829	894
SNO	A-12-22E19ADD	04	017	342532	1100229	15020002	I	320	1200	1600
SNO	A-13-21 10CDA	04	017	343150	1100630	15020005	U	416	22.0	40.0
SNO	A-13-21 24CCB	04	017	343009	1100435	15020005	I	328	60.0	66.0
SNO	A-13-21 34DCC2	04	017	342811	1100612	15020002	H	254	--	--
SRV	A-01-01 04AAA2	04	013	332753	1121517	15060106	U	514	150	355
SRV	A-01-01 19DCD1	04	013	332424	1121735	15070101	U	100	--	--
SRV	A-01-02 09AAB2	04	013	332702	1120916	15060106	I	500	140	465
SRV	A-01-02 19BAA	04	013	332521	1121141	15060106	I	208	480	--
SRV	A-01-02 26AAA	04	013	332423	1120700	15060106	I	430	60	199
SRV	A-01-03 05BAA	04	013	332752	1120425	15060106	U	--	20	125
SRV	A-01-03 18BBC	04	013	332600	1120548	15060106	I	410	65	375
SRV	A-01-03 28ABD	04	013	332415	1120310	15060106	P	435	--	--
SRV	A-01-04 18DAD	04	013	332532	1115840	15060106	U	200	162	382
SRV	A-01-05 06BDD	04	013	332738	1115259	15060106	U	300	50.0	122
SRV	A-01-05 26DDD	04	013	332337	1114818	15050100	I	360	139	200
SRV	A-01-06 03ADA	04	013	332746	1114306	15060106	U	664	90.0	--
SRV	A-01-06 08CCD2	04	013	332615	1114558	15060106	I	690	--	--
SRV	A-01-06 14AAA2	04	013	332613	1114205	15060106	P	800	280	676
SRV	A-01-07 11CAA	04	013	332636	1113623	15050100	H	--	400	780
SRV	A-01-07 18ACC	04	013	332547	1114027	15050100	U	1040	--	--
SRV	A-01-07 26AAC2	04	013	332414	1113600	15060106	P	1000	650	1000
SRV	A-01-07 32ACA	04	007	332317	1113916	15060106	U	683	700	900
SRV	A-01-08 10DCC	04	021	332614	1113111	15050100	C	300	560	679
SRV	A-01-08 25CBA	04	013	332357	1112924	15050100	H	450	679	683
SRV	A-02-01 14BBA	04	013	333122	1121404	15070102	I	700	100	300
SRV	A-02-01 31DAA	04	013	332816	1121723	15070102	I	413	340	--
SRV	A-02-02 18DDD	04	013	333036	1121110	15060106	I	390	180	685
SRV	A-02-03 07CAA	04	013	333152	1120529	15060106	U	202	200	413
SRV	A-02-04 22BDD	04	013	333009	1115604	15060106	U	567	180	215
SRV	A-02-04 23BCC2	04	013	333009	1115524	15060106	I	780	45	205
SRV	A-02-04 29DAB	04	013	332913	1115753	15060106	H	--	215	340
SRV	A-02-05 19ABA	04	013	333033	1115247	15060106	I	1110	50	192
SRV	A-02-06 32ACD	04	013	332825	1114529	15060106	I	800	370	491
SRV	A-02-07 33BCB	04	013	332833	1113853	15060106	U	--	483	567
SRV	A-03-01 21CBB	04	013	333513	1121617	15070102	-	505	300	750
SRV	A-03-02 22BAA	04	013	333546	1120832	15060106	U	851	770	780
SRV	A-03-02 24CCB	04	013	333505	1120654	15060106	I	835	400	643
									643	825
									825	--

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
SRV	A-03-02 29DDA2	04	013	333415	1121007	15060106	I	1000	500	980
SRV	A-03-03 32DAA	04	013	333338	1120357	15060106	P	520	275	450
									462	520
SRV	A-03-04 17BAA	04	013	333640	1115808	15060106	I	981	440	917
SRV	A-03-04 24CAA	04	013	333520	1115358	15060106	U	1280	220	700
SRV	A-03-05 21BBA	04	013	333546	1115108	15060106	I	480	460	480
SRV	A-03-05 25CAB	04	013	333427	1114757	15060106	H	705	--	--
SRV	A-03-07 06CDA	04	013	333746	1114031	15060203	P	--	--	--
SRV	A-04-01 18DAA	04	013	334120	1121722	15070102	U	771	200	716
SRV	A-04-01 22AAA	04	013	334052	1121414	15070102	U	723	201	701
SRV	A-04-01 30AAB2	04	013	334000	1121730	15070102	H	870	145	282
									600	--
									360	600
									600	860
SRV	A-04-02 19BCC	04	013	334033	1121207	15070102	U	672	154	652
									652	672
SRV	A-04-02 20CDD	04	013	334011	1121043	15070102	U	528	160	455
									465	528
SRV	A-04-02 32DDA	04	013	333837	1121007	15070102	U	1070	650	840
									846	1070
SRV	A-04-02 36AAA	04	013	333916	1120558	15060106	U	670	300	655
SRV	A-05-01 33BCC	04	013	334358	1121615	15070102	H	--	--	--
SRV	A-05-04 25DBD	04	013	334446	1115342	15060106	U	--	--	--
SRV	B-01-01 10AAA2	04	013	332658	1122027	15070102	I	900	100	886
SRV	B-01-01 12BAA2	04	013	332656	1121852	15070102	I	403	175	380
SRV	B-01-02 05CBB	04	013	332725	1122943	15070101	U	400	--	--
SRV	B-01-02 16BBB	04	013	332607	1122840	15070101	I	1100	700	998
									1010	1100
SRV	B-01-02 23AAB	04	013	332515	1122544	15070101	-	242	60.0	234
									234	242
SRV	B-01-02 28CBD	04	013	332348	1122832	15070101	I	186	36.0	--
SRV	B-01-02 36BEC	04	013	332320	1122532	15070101	U	305	35.0	164
SRV	B-01-03 19CBB	04	013	332445	1123625	15070101	I	300	160	287
SRV	B-01-03 21DBB	04	013	332449	1123350	15070101	I	425	85.0	425
SRV	B-01-03 34BBB	04	013	332330	1123319	15070101	I	200	74.0	186
SRV	B-01-04 27ABB	04	013	332416	1123901	15070101	I	350	70.0	350
SRV	B-02-01 14CBB	04	013	333052	1122024	15070102	U	708	145	690
SRV	B-02-01 18CBB2	04	013	333055	1122431	15070102	I	737	326	720
SRV	B-02-01 20BCC	04	013	333006	1122326	15070102	I	790	335	629
SRV	B-02-01 33BBB2	04	013	332840	1122227	15070102	I	318	110	278
SRV	B-02-02 02BAD	04	013	333258	1122607	15070102	I	715	--	--
SRV	B-02-02 04DCB	04	013	333223	1122809	15070102	U	480	--	--
SRV	B-02-02 22ABB	04	013	333028	1122707	15070102	U	1340	220	557
									557	1280
									557	1340
SRV	B-03-01 05ABB	04	013	333818	1122304	15070102	I	803	275	780
SRV	B-03-01 08ABB1	04	013	333725	1122303	15070102	U	1200	200	800
									800	1190
SRV	B-03-01 24BBB3	04	013	333539	1121923	15070102	I	1200	--	--
SRV	B-03-01 27BBB	04	013	333448	1121228	15070102	U	572	170	560
SRV	B-03-01 29BCC	04	013	333425	1122333	15070102	I	1400	--	--
SRV	B-03-01 34DBB1	04	013	333330	1122058	15070102	I	350	180	340
SRV	B-03-02 21ABA	04	013	333541	1122801	15070102	U	534	280	412
SRV	B-04-01 09BCD	04	013	334218	1122227	15070102	U	500	182	484
SRV	B-04-01 19BDC	04	013	334030	1122421	15070102	I	1000	230	485
									500	982
SRV	B-04-02 05DBB	04	013	334307	1122909	15070102	H	600	450	600
SRV	B-04-02 16AAD	04	013	334136	1122739	15070102	S	--	--	--
SRV	B-04-02 27DCD	04	013	333915	1122655	15070102	I	1000	220	484
									500	990
SRV	B-04-02 36BCB	04	013	333858	1122532	15070102	I	1030	450	--
SRV	B-04-03 04BDB	04	013	334314	1123437	15070102	H	562	--	--
SRV	B-04-03 14ABA	04	013	334147	1123203	15070102	H	605	500	580
SRV	B-05-02 24BAB	04	013	334603	1122527	15070103	H	600	--	--
SRV	B-05-02 35BAA	04	013	334418	1122617	15070102	I	1150	300	555
									555	1150
SRV	B-05-03 22ADD	04	013	333038	1123301	15070102	H	540	500	540
SRV	B-06-02 18DBB	04	013	335138	1123020	15070102	T	--	--	--
SRV	B-06-02 31BDD	04	013	334908	1123030	15070102	H	910	800	900
									902	910
SRV	B-06-03 05ADD	04	013	335331	1123515	15070102	H	--	--	--
SRV	B-06-03 33DCB	04	013	334848	1123429	15070102	C	800	--	--
SRV	C-01-02 08CDA	04	013	332102	1122841	15070101	U	185	--	--
SRV	C-01-03 08CBD	04	013	332108	1123511	15070101	U	520	429	520
SRV	C-01-04 03ABB	04	013	332238	1123859	15070101	U	--	--	--
SRV	C-01-04 07BDD	04	013	332121	1124209	15070101	I	210	60.0	190
SRV	C-01-04 26ABB	04	013	331906	1123800	15070101	I	450	--	--
SRV	D-01-01 13DDD1	04	013	332003	1121211	15050100	U	740	--	--
SRV	D-01-03 02BDB	04	013	332221	1120131	15060106	U	165	--	--
SRV	D-01-04 03BBB2	04	013	332240	1115638	15060106	I	285	130	250
									262	285

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
SRV	D-01-04 36DDD	04	013	331731	1115337	15050100	I	324	147	310
SRV	D-01-05 23DDD	04	013	331920	1114823	15050100	U	616	260	600
SRV	D-01-05 36DDD	04	013	331732	1114723	15050100	I	500	--	--
SRV	D-01-06 04DAA	04	013	332214	1114421	15050100	I	800	210	728
SRV	D-01-06 11CDD2	04	013	332102	1114245	15050100	I	--	--	--
SRV	D-01-06 24CCC2	04	013	331918	1114211	15050100	I	1010	260	996
SRV	D-01-06 27DDD2	04	013	331832	1114316	15050100	I	735	--	--
SRV	D-01-07 25ADD	04	013	331850	1113500	15050100	S	--	--	--
SRV	D-01-07 31BAC1	04	013	331816	1114052	15050100	U	500	150	480
SRV	D-01-08 21ADB PZ1	04	021	331953	1113150	15050100	U	830	806	830
SRV	D-01-08 21ADB PZ2	04	021	331953	1113150	15050100	U	470	461	470
SRV	D-02-03 22DDD	04	013	331407	1120148	15050100	I	242	100	242
SRV	D-02-05 07ADD	04	013	331608	1115233	15050100	I	224	125	210
SRV	D-02-05 20DDA	04	013	331411	1115129	15050100	U	656	200	--
									250	640
SRV	D-02-05 33AAD2	04	013	331256	1115027	15050100	I	615	390	613
SRV	D-02-06 12DDA1	04	013	331557	1114108	15050100	U	600	--	--
SRV	D-02-06 26DDD	04	013	331310	1114210	15050100	U	717	707	717
SRV	D-02-07 03CDD	04	013	331644	1113732	15050100	I	520	100	460
SRV	D-02-07 04ADD	04	013	331708	1113805	15050100	I	1520	460	520
									291	574
									574	814
									814	1510
									1510	1520
SRV	D-02-07 12DDD	04	013	331548	1113458	15050100	I	1200	250	585
SRV	D-02-07 25DDD3	04	013	331313	1113503	15050100	I	750	--	--
SRV	D-02-07 27DDA	04	013	331324	1113700	15050100	I	600	200	588
SRV	D-02-08 02CBB PZ1	04	021	331703	1113034	15050100	U	1520	1510	1520
SRV	D-02-08 02CBB PZ2	04	021	331703	1113034	15050100	U	864	855	864
SRV	D-02-08 20DDA	04	021	331410	1113244	15050100	I	804	240	790
SRV	D-02-08 27DDD	04	021	331314	1113040	15050100	I	614	260	600
SRV	D-02-08E07DDD	04	021	331550	1113348	15050100	I	--	250	585
SRV	D-02-09 36BDB	04	021	331236	1112239	15050100	P	890	870	890
SRV	D-02-10 16BCB	04	021	331532	1112009	15050100	P	425	--	--
SRV	D-02-10 21ADB	04	013	331440	1111924	15050100	U	--	--	--
SRV	D-02-12 07ABA	04	021	331640	1110908	15050100	I	21.0	--	--
SRV	D-03-08 04BBA	04	021	331219	1113229	15050100	I	1000	260	600
									612	620
									495	997
SRV	D-03-08 19ADD	04	021	330917	1113345	--	U	--	--	--
SRV	D-03-08 20BDC	04	021	330917	1113317	15050100	U	--	240	488
SRV	D-03-08 35BAA	04	021	330757	1113000	15050100	U	720	216	460
									476	720
SRV	D-03-09 09DCD PZ1	04	021	331042	1112543	15050100	-	1160	1150	1160
SRV	D-03-09 09DCD PZ2	04	021	331042	1112543	15050100	-	681	672	681
SRV	D-03-09 20DAA	04	021	330916	1112620	15050100	I	757	237	557
									557	757
SRV	D-03-09 32ABA	04	021	330757	1112634	15050100	U	600	248	418
SRV	D-04-09 05AAB2	04	021	330705	1112628	15050100	H	600	390	427
									420	600
SRV RES	A-02-05 08AAA	04	013	333217	1115123	15060106	U	1000	305	--
									305	550
									550	690
									700	990
									990	1000
SRV RES	A-02-05 10DDD1	04	013	333132	1114923	15060106	S	550	375	--
SRV RES	D-02-04 08DBA	04	013	331607	1115759	15050100	R	400	--	--
SRV RES	D-02-04 25DDD	04	013	331310	1115333	15050100	I	610	250	575
SSI	27S 21W 07 232A	35	023	315828	1090126	--	I	400	--	--
SSI	27S 21W S06 443	35	023	315846	1090116	--	S	180	159	180
SSI	28S 21W 31 133	35	023	314935	1090202	--	I	350	--	--
SSI	29S 22W 11 243A	35	023	314750	1090257	--	I	385	--	--
SSI	D-12-27 32AAB1	04	003	322110	1093624	15040006	U	250	--	--
SSI	D-12-28 15BCB	04	003	322337	1092858	15040006	I	1000	--	--
SSI	D-12-28 25DCC	04	003	322116	1092622	15040006	U	1700	720	860
									860	1340
SSI	D-12-30 02CCA	04	003	322448	1091532	15040006	S	--	--	--
SSI	D-13-28 22BCC	04	003	321721	1092859	15040006	I	892	--	--
SSI	D-13-29 18BDB	04	003	321817	1092537	15040006	S	860	--	--
SSI	D-13-29 24DCC2	04	003	321648	1092020	15040006	I	964	320	930
									930	940
SSI	D-13-29 28BBB	04	003	321643	1092354	15040006	I	660	--	--
SSI	D-13-31 29DDA	04	003	321607	1091135	15040006	U	740	--	--
SSI	D-14-31 08ABC1	04	003	321401	1091205	15040006	H	800	--	--
SSI	D-14-31 19BAC	04	003	321210	1091320	15040006	S	1140	200	--
SSI	D-14-31 22ADC	04	003	321200	1090945	15040006	I	800	65.0	--
SSI	D-14-31 25ADC2	04	003	321108	1090735	15040006	H	600	--	--
SSI	D-14-31 34ACC	04	003	321016	1090956	15040006	I	1000	--	--
SSI	D-14-31 35BCC	04	003	321016	1090926	15040006	I	800	500	800
SSI	D-16-32 21CCB	04	003	320056	1090511	15040006	U	340	--	--
SSI	D-17-32N06AAB	04	003	315901	1090623	15040006	U	--	--	--
SSI	D-18-32 26BBC	04	003	315012	1090304	15040006	I	1000	--	--

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
STJ	A-11-28 22BDA2	04	001	342024	1092203	15020001	U	550	160	550
STJ	A-12-28 07CDB	04	001	342700	1092512	15020002	I	720	710	720
STJ	A-13-27 15BDC	04	001	343200	1092758	15020002	U	574	285	--
STJ	A-13-28 27BDC	04	001	343020	1092140	15020002	I	162	--	--
STJ	A-13-29 35AAA	04	001	342946	1091335	15020003	S	327	210	--
TON	A-05-11 18AAA	04	007	334653	1111541	15060105	S	--	--	--
TON	A-06-11 05CAD	04	007	335322	1111507	15060105	U	69.0	--	--
TON	A-09-10 05AAA	04	007	340932	1112040	15060105	S	--	--	--
TON	A-09-10 20BAA	04	007	340654	1112112	15060105	S	100	--	--
TON	A-09-10 32BDB	04	007	340458	1112118	15060105	S	--	--	--
TON	A-10-10 02DDB1	04	007	341405	1111736	15060105	H	160	40	160
TON	A-10-10 22CAB2	04	007	341142	1111912	15060105	H	100	60	85
TON	A-10-10 23DDB	04	007	341128	1111734	15060105	H	--	--	--
TON	A-10-10 25BBA	04	007	341116	1111713	15060105	H	80.0	30	40
									50	70
TON	A-10-10 27CAA	04	007	341049	1111900	15060105	S	--	--	--
TON	A-10-10 28BDC2	04	007	341058	1112015	15060105	H	67.0	40	67
TON	A-10-10 29ACA	04	007	341102	1112052	15060105	U	180	40	180
TUB RES	03 077-07.55X06.55	04	005	360918	1110807	15020018	N	705	100	705
TUB RES	03 077-13.05X06.81	04	005	360904	1111402	15020018	H	475	--	--
TUB RES	03 077-13.36X06.44	04	005	360924	1111422	15020018	P	442	142	--
TUB RES	03 077-13.38X05.87	04	005	360953	1111424	15020018	P	612	256	556
TUB RES	03 077-13.77X08.52	04	005	360734	1111448	15020018	H	229	63.0	229
USC	D-10-13 12DDA	04	021	323418	1105654	15050301	S	600	460	600
USC	D-10-14 29DCA	04	021	323139	1105508	15050301	S	407	322	407
USC	D-11-13 33DCC	04	019	322527	1110110	15050301	U	--	590	638
									635	690
USC	D-11-14 04BBC2	04	019	323029	1105534	15050301	H	300	--	--
USC	D-12-12 22ADC	04	019	322227	1110559	15050301	I	315	--	--
USC	D-12-12 22DCD	04	019	322200	1110604	15050301	U	--	--	--
USC	D-12-13 12DAA	04	019	322407	1105741	15050301	U	650	215	320
									340	380
									395	600
									620	640
USC	D-12-13 17AAA	04	019	322342	1110145	15050301	P	565	420	555
USC	D-12-13 18BCC	04	019	322318	1110345	15050301	P	646	320	340
									380	450
									450	646
USC	D-12-13 20DAD	04	019	322217	1110150	15050301	-	565	--	--
USC	D-12-13 22BBB	04	019	322248	1110037	15050301	H	268	--	--
USC	D-12-13 24DBB1	04	019	322221	1105805	15050301	-	418	--	--
USC	D-12-13 30DAC	04	019	322123	1110256	15050301	P	317	217	317
USC	D-12-13 31DCD1	04	019	322022	1110302	15050301	P	355	--	--
USC	D-12-13 32BCD	04	019	322043	1110240	15050301	U	303	--	--
USC	D-12-13 36BCC	04	019	322049	1105837	15050302	U	515	--	--
USC	D-13-12 02BBA	04	019	322015	1110532	15050301	P	258	--	--
USC	D-13-12 12ABA	04	019	321923	1110403	15050301	U	180	60.0	178
USC	D-13-12 12CAA	04	019	321853	1110417	15050301	U	350	165	347
USC	D-13-13 06DDD	04	019	321927	1110247	15050301	P	267	196	236
USC	D-13-13 08DCB	04	019	321841	1110210	15050302	P	275	--	--
USC	D-13-13 13BBA	04	019	321830	1105832	15050302	P	242	--	--
USC	D-13-13 14ABA	04	019	321825	1105902	15050302	P	650	--	--
USC	D-13-13 16AAA	04	019	321829	1110044	15050302	I	295	128	295
USC	D-13-13 16BDB	04	019	321813	1110124	15050302	P	--	--	--
USC	D-13-13 16CCD	04	019	321745	1110128	15050301	P	301	95.0	298
USC	D-13-13 17AAA	04	019	321828	1110144	15050302	P	490	108	215
USC	D-13-13 17ABC	04	019	321824	1110209	15050302	U	230	90.0	225
USC	D-13-13 19CDC	04	019	321650	1110322	15050301	P	450	190	445
USC	D-13-13 21BAA	04	019	321736	1110115	15050301	P	303	120	297
USC	D-13-13 24DBD2	04	019	321703	1105754	15050302	U	350	140	300
USC	D-13-13 28CCB	04	019	321606	1110137	15050301	U	303	--	--
USC	D-13-13 33ABB	04	019	321550	1110106	15050301	P	267	--	--
USC	D-13-13 33DAC	04	019	321517	1110050	15050301	H	175	35.0	175
USC	D-13-13 34CDC	04	019	321505	1110026	15050301	P	468	72.0	172
USC	D-13-13 36DDC	04	019	321504	1105750	15050302	P	375	103	350
									370	375
USC	D-13-14 21CDC2	04	019	321650	1105512	15050302	U	--	--	--
USC	D-13-14 22DCD	04	019	321650	1105405	15050302	U	60.0	--	--
USC	D-13-14 26BBB	04	019	321644	1105322	15050302	U	200	90.0	195
USC	D-13-14 26CCC2	04	019	321559	1105323	--	H	610	112	390
USC	D-13-14 26CCD1	04	019	321555	1105319	15050302	I	190	40.0	185
USC	D-13-14 26DAC1	04	019	321612	1105240	15050302	I	100	20	60
USC	D-13-14 26DAC2	04	019	321612	1105237	--	U	100	50	100
USC	D-13-14 26DDC	04	019	321558	1105239	--	I	--	--	--
USC	D-13-14 27ADA1	04	019	321630	1105332	15050302	H	70.0	30.0	70.0
USC	D-13-14 27BAC2	04	019	321637	1105405	15050302	U	224	--	--
USC	D-13-14 27BAC4	04	019	321636	1105413	--	U	160	113	160
USC	D-13-14 27DDC3	04	019	321555	1105345	--	I	240	200	240
USC	D-13-14 28DAD	04	019	321612	1105433	--	H	150	50	130

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
USC	D-13-14 29CBB2	04	019	321616	1105631	15050302	P	502	111	492
USC	D-13-14 30CCC2	04	019	321559	1105734	15050302	U	415	180	380
									400	415
USC	D-13-14 32ADA	04	019	321538	1105537	15050302	P	500	186	500
USC	D-13-14 34AAA1	04	019	321555	1105334	--	I		40	130
USC	D-13-14 34AAD	04	019	321546	1105337	15050302	H	385	--	--
USC	D-13-14 34ABB	04	019	321549	1105356	15050302	U	470	120	470
USC	D-13-14 34ACB2	04	019	321537	1105359	15050302	U	435	90.0	430
USC	D-13-14 34DCC2	04	019	321504	1105359	15050302	U	260	75.0	218
USC	D-13-14 35ADD	04	019	321530	1105235	15050302	P	600	0	324
									324	376
USC	D-13-14 35CCA	04	019	321514	1105317	15050302	P	500	91.0	432
									432	500
USC	D-13-14 35DDD	04	019	321504	1105232	--	T	520	201	511
USC	D-13-14 36CBD	04	019	321518	1105216	15050302	P	300	110	296
USC	D-13-14 36CCD	04	019	321504	1105216	15050302	U	302	110	302
USC	D-13-15 21ABB	04	019	321734	1104850	15050302	P	353	335	353
USC	D-13-15 22CDA	04	019	321701	1104757	15050302	U	353	--	--
USC	D-13-15 22CDC	04	019	321648	1104804	15050302	P	237	35.0	233
USC	D-13-15 27DDC	04	019	321554	1104734	15050302	U	174	--	--
USC	D-13-15 30DBD	04	019	321606	1105035	15050302	-	263	--	--
USC	D-13-15 30DDC	04	019	321557	1105034	15050302	U	175	--	--
USC	D-13-15 31ADA2	04	019	321542	1105027	15050302	U	150	--	--
USC	D-13-15 31DDC	04	019	321506	1105036	15050302	P	402	110	245
USC	D-13-15 33CBB	04	019	321523	1104918	15050302	U	--	0	16.0
USC	D-13-15 34AAC	04	019	321545	1104736	15050302	U	185	89.0	185
USC	D-13-15 34CDB1	04	019	321512	1104807	15050302	P	300	--	--
USC	D-13-16 29CCD	04	019	321600	1104402	15050302	U	402	--	--
USC	D-14-13 01DAB2	04	019	321431	1105748	15050301	P	--	--	--
USC	D-14-13 11BAB	04	019	321400	1105921	15050302	U	250	160	250
USC	D-14-13 13CBC	04	019	321241	1105832	15050301	P	274	50.0	190
									200	274
USC	D-14-13 23ABD	04	019	321209	1105854	15050301	P	274	25.0	180
USC	D-14-13 24DAA	04	019	321157	1105740	15050301	U	800	240	585
									550	800
USC	D-14-13 27ADD2	04	019	321110	1105942	15050301	P	203	--	--
USC	D-14-13 35CAB	04	019	321008	1105920	15050302	P	207	--	--
USC	D-14-13 35CAC1	04	019	321003	1105921	15050301	P	476	--	--
USC	D-14-13 35CDB	04	019	320957	1105918	15050301	U	168	--	--
USC	D-14-13 35DCB	04	019	320958	1105902	15050301	P	255	41.0	250
USC	D-14-13 36ACA1	04	019	321024	1105756	15050301	U	219	80.0	140
									140	220
USC	D-14-13 36ACA2	04	019	321023	1105752	15050301	U	305	95.0	304
USC	D-14-14 02BDB	04	019	321443	1105313	15050203	-	325	120	270
USC	D-14-14 03CBC	04	019	321424	1105431	15050302	P	511	173	511
USC	D-14-14 04DAC2	04	019	321426	1105446	15050301	P	800	207	780
USC	D-14-14 08ADA	04	019	321355	1105539	15050302	U	352	110	352
USC	D-14-14 08BAA	04	019	321407	1105608	15050301	P	449	--	--
USC	D-14-14 08BAB	04	019	321407	1105618	15050302	P	510	--	--
USC	D-14-14 09ABC	04	019	321401	1105500	15050302	P	536	--	--
USC	D-14-14 09BCD	04	019	321345	1105525	--	P	1010	300	480
									510	590
									630	670
									695	1010
USC	D-14-14 14CAA	04	019	321248	1105304	15050301	U	463	135	300
									300	302
USC	D-14-14 14CAC	04	019	321240	1105313	15050203	U	530	--	--
USC	D-14-14 16CCC FZ1	04	019	321229	1105532	15050301	U	1340	1300	1310
USC	D-14-14 16CCC FZ2	04	019	321229	1105532	15050301	U	1280	1040	1044
USC	D-14-14 16CCC FZ3	04	019	321229	1105532	15050301	U	914	500	504
USC	D-14-14 16CCC FZ4	04	019	321229	1105532	15050301	U	436	228	232
USC	D-14-14 17DBD	04	019	321424	1105559	15050302	U	300	--	--
USC	D-14-14 20CBB	04	019	321156	1105633	15050301	U	300	--	--
USC	D-14-14 21BCC	04	019	321202	1105530	15050301	P	434	0	154
									154	284
									279	434
USC	D-14-14 21CAA	04	019	321146	1105435	15050301	P	502	295	502
USC	D-14-14 24CAA1	04	019	321156	1105203	15050301	P	1000	520	540
									508	746
									728	1000
USC	D-14-14 24CDD	04	019	321134	1105159	15050301	P	850	246	682
USC	D-14-14 24DDD	04	019	321135	1105130	15050301	U	685	762	850
									419	675
									675	685
USC	D-14-14 35AAA	04	019	321038	1105228	15050301	U	401	215	388
USC	D-14-15 01ADD1	04	019	321437	1104519	15050302	U	87.0	20.0	85.0
USC	D-14-15 02DDA1	04	019	321418	1104620	15050302	U	490	--	--
USC	D-14-15 06BBB	04	019	321455	1105119	--	P	542	261	537
USC	D-14-15 07BBA2	04	019	321404	1105115	15050302	P	500	225	500
USC	D-14-15 08CBD	04	019	321334	1105012	15050302	P	460	--	--
USC	D-14-15 15DAD	04	019	321242	1104726	15050302	P	445	--	--
USC	D-14-15 16CDB	04	019	321236	1104905	15050302	U	422	--	--

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
USC	D-14-15 17CAA	04	019	321247	1104955	15050302	P	702	--	--
USC	D-14-15 17CCD	04	019	321227	1105009	15050302	P	735	--	--
USC	D-14-15 18CDA	04	019	321237	1105058	15050301	P	690	--	--
USC	D-14-15 18DDD	04	019	321228	1105032	15050302	P	1020	249	550
									535	840
									825	1020
USC	D-14-15 20BAB	04	019	321218	1105008	15050302	P	1050	255	540
USC	D-14-15 21ADB	04	019	321213	1104834	15050302	-	450	--	--
USC	D-14-15 26CBC	04	019	321053	1104719	15050302	P	750	300	750
USC	D-14-15 28CBA	04	019	321103	1104914	15050302	U	454	--	--
USC	D-14-15 28CCC	04	019	321042	1104920	15050302	U	581	--	--
USC	D-14-15 28DAA	04	019	321103	1104826	15050302	P	--	--	--
USC	D-14-15 28DDD	04	019	321040	1104825	15050302	U	687	--	--
USC	D-14-15 29CBB	04	019	321103	1105024	15050302	U	697	718	750
USC	D-14-15 30ABC	04	019	321122	1105049	15050203	U	697	--	--
USC	D-14-16 05DBD2	04	019	321421	1104329	--	U	37.0	18	37
USC	D-14-16 19CCB	04	019	321140	1104515	15050302	-	795	201	--
USC	D-15-13 01ACC	04	019	320923	1105806	15050301	U	226	--	--
USC	D-15-13 01BCB1	04	019	320932	1105834	15050301	P	500	235	300
USC	D-15-13 02ACB	04	019	320933	1105903	15050301	P	302	94.0	290
USC	D-15-13 02BBA1	04	019	320947	1105926	15050301	P	182	--	--
USC	D-15-13 02BDA	04	019	320937	1105912	15050302	P	350	85.0	325
USC	D-15-13 02CAA	04	019	320915	1105912	15050302	P	320	120	300
USC	D-15-13 02DAB	04	019	320916	1105850	15050301	P	402	0	312
									304	402
USC	D-15-13 12DBA	04	019	320826	1105754	15050301	P	900	107	500
									490	700
									685	900
USC	D-15-13 13ABC1	04	019	320750	1105805	--	U	110	--	--
USC	D-15-13 13CBA	04	019	320732	1105826	15050301	P	743	0	386
									386	743
USC	D-15-13 13CCC	04	019	320713	1105831	15050301	-	518	0	301
USC	D-15-14 03DAD	04	019	320910	1105330	15050301	E	2500	800	1000
									1000	1800
									1800	2500
USC	D-15-14 06CAA	04	019	320916	1105707	15050301	H	501	87	501
USC	D-15-14 06DCB2	04	019	320904	1105704	15050301	I	1020	120	500
									500	1020
USC	D-15-14 07CBC	04	019	320818	1105728	15050203	U	370	--	--
USC	D-15-14 13BBA	04	019	320800	1105215	15050301	P	400	220	--
USC	D-15-14 13CBC	04	019	320728	1105226	15050301	P	306	206	306
USC	D-15-14 18CBB	04	019	320726	1105737	15050301	U	320	--	--
USC	D-15-15 04BBA	04	019	320942	1104911	15050302	U	1310	391	1240
									1240	1310
USC	D-15-15 06BBB	04	019	320941	1105125	15050301	P	492	270	489
USC	D-15-15 16CBB PZ1	04	019	320732	1104922	15050301	U	600	466	470
USC	D-15-15 16CBB PZ2	04	019	320732	1104922	15050301	U	1450	670	674
USC	D-15-15 16CBB PZ3	04	019	320732	1104922	15050301	U	1840	1476	1480
USC	D-15-15 25DBC2	04	019	320535	1104548	15050301	H	883	--	--
USC	D-16-13 34AAB2	04	019	315958	1105952	15050301	N	935	494	681
									660	933
USC	D-16-14 07DCB2	04	019	320252	1105704	15050301	P	705	0	543
									543	555
USC	D-16-14 17DAD	04	019	320203	1105540	15050301	U	466	160	335
									260	460
									460	503
USC	D-16-14 20ADA	04	019	320136	1105540	15050301	U	650	155	525
USC	D-16-14 20BBB	04	019	320143	1105636	15050301	P	403	90.0	365
USC	D-16-14 25DDD2	04	019	320010	1105140	15050301	U	1000	300	590
									587	987
USC	D-16-14 33BDD	04	019	315953	1104900	15050301	U	826	--	--
USC	D-16-14S06CCD	04	019	320335	1105727	15050301	I	206	40.0	206
USC	D-16-15 05CBC PZ1	04	019	320402	1105028	15050301	U	327	318	326
USC	D-16-15 05CBC PZ2	04	019	320402	1105028	15050301	U	558	536	540
USC	D-16-15 05CBC PZ3	04	019	320402	1105028	15050301	U	990	954	958
USC	D-16-15 09BBB	04	019	320345	1104926	15050301	U	1000	350	500
									500	1000
USC	D-16-16 09DCD2	04	019	320253	1104237	15050302	T	759	--	--
USC	D-17-14 21ACD	04	019	315511	1105452	15050301	I	230	--	--
USC	D-17-15 02DCD	04	019	315840	1104643	15050301	U	849	550	849
USC	D-17-18 09BCC	04	019	315816	1103106	15050302	S	--	--	--
USC	D-17-18 13DDD	04	019	315656	1102707	15050302	H	434	--	--
USC	D-18-13 01CDA	04	019	315313	1105808	15050301	U	253	--	--
USC	D-18-13 24BCB2UNSURV	04	019	315106	1105834	15050301	I	1100	0	325
									325	607
									613	855
									840	1100
USC	D-18-17 32DBA	04	019	314926	1103735	15050302	S	226	--	--
USC	D-19-13 05ACA2	04	019	314827	1110158	15050301	H	350	--	--
USC	D-19-13 09CAA	04	019	314728	1110111	15050301	I	--	--	--
USC	D-19-16 15ABA	04	019	314718	1104138	15050302	U	300	--	--

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
USC	D-20-11 21DAA	04	019	314024	1111253	15050301	H	--	--	--
USC	D-20-12 02DAC	04	023	314256	1110446	15050301	I	--	--	--
USC	D-20-12 03BBB	04	023	314332	1110640	15050301	U	370	--	--
USC	D-20-13 06CBA	04	023	314303	1110328	15050301	I	197	30.0	--
USC	D-20-16 24DAD2	04	023	314041	1103920	15050302	H	341	--	--
USC	D-21-13 19DBC	04	023	313506	1110307	15050301	H	100	--	--
USC	D-21-16 09ABA	04	023	313748	1104245	15050301	H	276	84.0	276
USC	D-22-13 25DDD UNSURV	04	023	312848	1105732	15050301	U	105	--	--
USC	D-22-13 35DCD UNSURV	04	023	312756	1105848	15050301	U	90.0	20.0	90.0
USC	D-22-15 12AAD2	04	023	313225	1104533	15050301	S	60.0	--	--
USC	D-22-17 31ADA1	04	023	312848	1103848	15050301	U	--	--	--
USC	D-23-13 36ADB	04	023	312313	1105743	15050301	P	400	90.0	200
									190	400
USC	D-23-14 22CDD1	04	023	312428	1105405	15050301	U	36.0	--	--
USC	D-23-14 36BCB1	04	023	312316	1105227	15050301	P	75.0	70.0	75.0
USC	D-23-17 16DAC	04	023	312552	1103656	15050301	S	--	--	--
USC	D-23-17 26BDD UNSURV	04	023	312417	1103514	15050301	I	34.0	--	--
USC	D-24-14 18CBC	04	023	312020	1105726	15050301	P	500	260	490
USC	D-24-15 04DDD1UNSURV	04	023	312147	1104828	15050301	U	264	0	264
USC	D-24-15 04DDD2UNSURV	04	023	312146	1104827	15050301	P	665	230	--
									402	665
USC RES	D-15-13 23AAD2	04	019	320659	1105842	15050301	P	365	340	360
USC RES	D-15-13 23CCB2	04	019	320627	1105934	15050301	U	280	--	--
USC RES	D-16-13S02BBA2	04	019	320424	1105927	15050301	I	232	--	--
USP	D-17-21 05CAC	04	003	315857	1101328	15050202	S	--	--	--
USP	D-17-21 32BAB	04	003	315508	1101334	15050202	S	520	500	520
USP	D-18-20 06BDD	04	003	315356	1102030	15050202	S	350	--	--
USP	D-18-21 06AAB1	04	003	315417	1101400	15050202	H	60.0	--	--
USP	D-19-21 12DBA2	04	003	314738	1100906	15050202	S	250	--	--
USP	D-20-17 24CDD	04	023	314026	1103349	15050202	S	230	130	230
USP	D-20-17 35ABB	04	023	313929	1103442	15050202	S	--	--	--
USP	D-20-18 03CAA	04	023	314323	1102939	15050202	H	200	--	--
USP	D-20-18 17BCB	04	023	314150	1103204	15050202	U	248	248	250
USP	D-20-18 33BBB	04	023	313927	1103104	15050202	U	--	--	--
USP	D-20-20 02DDD	04	003	314300	1101554	15050202	S	--	--	--
USP	D-20-20 07BDB	04	003	314244	1102043	15050202	H	300	213	300
USP	D-21-20 16ADA1	04	003	313639	1101835	15050202	U	807	340	360
									370	410
									440	520
									590	640
									680	790
USP	D-21-20 30BA UNSURV	04	003	313458	1102112	15050202	U	796	414	775
									787	796
USP	D-21-21 27DBB	04	003	313431	1101145	15050202	H	600	--	--
USP	D-21-21 31BDC	04	003	313343	1101506	15050202	P	620	200	600
USP	D-21-22 06ACD2	04	003	313808	1100838	--	I	--	--	--
USP	D-22-20 10ABB	04	003	313224	1101756	15050202	P	805	520	800
USP	D-22-21 23CBA	04	003	313009	1101111	15050202	H	180	--	--
USP	D-23-21 06CCC2	04	003	312712	1101521	15050202	S	675	--	--
USP	D-23-22 18BBB	04	003	312614	1100919	15050202	U	--	--	--
USP	D-24-23 06AAA1	04	003	312244	1100216	15050202	H	250	50.0	250
USR	A-01-15 04CBD1	04	007	332717	1105019	15060103	U	194	191	194
									192	195
USR	A-01-15 04CBD2	04	007	332717	1105019	15060103	U	117	112	115
									114	117
USR	A-01-15 04CBD4	04	007	332717	1105019	15060103	U	99.3	94.1	97.1
USR	A-01-15 09DBC1	04	007	332629	1104958	15060103	U	118	115	118
USR	A-01-15 09DBC2	04	007	332629	1104958	15060103	U	82.8	79.5	82.5
USR	A-01-15 09DBC3	04	007	332629	1104958	15060103	U	62.7	59.4	62.4
USR	A-01-15 09DBC5	04	007	332629	1104958	15060103	U	160	155	158
USR	A-01-15 09DBC7	04	007	332629	1104958	15060103	-	64.8	48	63
USR	A-01-15 09DCD1	04	007	332611	1104951	15060103	U	110	106	109
USR	A-01-15 09DCD2	04	007	332611	1104951	15060103	U	65.0	61.7	64.7
USR	A-01-15 09DCD3	04	007	332611	1104951	15060103	U	91.3	88	91
USR	A-01-15 34BDD1	04	007	332310	1104951	15060103	-	89	59	89
USR	A-02-07 02BAA	04	013	333309	1113625	15060106	H	--	--	--
USR	A-02-15 07BDD1	04	007	333151	1105205	15060103	U	55.8	50.6	53.6
USR	A-02-15 07BDD2	04	007	333151	1105205	15060103	U	125	120	123
USR	A-02-15 07BDD3	04	007	333151	1105205	15060103	U	82.0	76.8	79.8
USR	A-02-15 07BDD4	04	007	333151	1105205	15060103	U	227	222	225
USR	A-02-15 07BDD5	04	007	333151	1105205	15060103	-	71	51	71
USR	A-02-15 07BDD6	04	007	333151	1105205	15060103	-	22	17	22
USR	A-02-15 18ACA1	04	007	333108	1105156	15060103	-	80	70.5	80
USR	A-02-15 18ACA2	04	007	333108	1105156	15060103	-	27	17	27
USR	A-02-15 18ACA3	04	007	333108	1105156	15060103	U	20.7	10.5	20.5
USR	A-02-15 29DBD1	04	007	332904	1105048	15060103	U	112	106	109
									109	112
USR	A-02-15 29DBD2	04	007	332904	1105048	15060103	U	68.4	62.0	65.0
									65.1	68.1
USR	A-02-15 29DBD4	04	007	332904	1105048	15060103	U	181	176	179

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
VER	A-13-05 05BDC	04	025	343254	1115054	15060203	P	120	60.0	120
VER	A-14-10 32DBD	04	005	343314	1111838	15060203	U	600	102	600
VER	A-15-03 12ADB1	04	025	344250	1115834	15060202	U	400	30.0	175
									175	400
VER	A-15-04 02CCB4	04	025	344312	1115408	15060202	I	300	178	300
VER	A-15-04 04DDC1	04	025	344307	1115527	15060202	H	250	--	--
VER	A-17-05 15ABD	04	025	345134	1114900	15060202	U	805	572	--
VER	A-17-06 30BBB	04	005	344957	1114631	15060202	U	465	--	--
VER	A-18-07 15CCB2	04	005	345619	1113855	15060202	-	232	112	196
									202	232
VER	A-18-07 15CCC1	04	005	345612	1113852	15060202	P	200	110	195
VER	A-18-07 22BAA2	04	005	345608	1113827	15060202	P	1330	904	1300
VRG	B-41-15 33CAB	04	015	365434	1135547	15010010	H	98.0	78.0	98.0
WAT	C-02-01 19ADA	04	013	331434	1122331	15070101	I	802	297	621
									639	800
									800	802
WAT	C-02-01 20BAD	04	013	331440	1122302	15070101	U	800	--	--
WAT	C-02-01 33AAA	04	013	331300	1122132	15070101	I	1030	240	--
WAT	C-02-01 33CDD	04	013	331214	1122155	15070101	I	1070	200	--
WAT	C-02-02 05CDC	04	013	331637	1122925	15070101	U	1090	421	461
									461	938
									938	1040
									1040	1090
WAT	C-02-02 09CCC	04	013	331543	1122838	15070101	I	973	--	--
WAT	C-02-02 10CCC	04	013	331545	1122732	15070101	I	750	300	722
WAT	C-02-02 12ACC	04	013	331610	1122502	15070101	U	870	80.0	305
									305	730
									730	870
WAT	C-02-02 25CCC	04	013	331311	1122529	15070101	I	882	290	868
WAT	C-02-02 27CCC	04	013	331307	1122737	15070101	I	940	295	497
									497	895
									895	940
WAT	C-03-01 07ACC	04	013	331057	1122358	15070101	U	--	--	--
WAT	C-03-01 19DCC	04	013	330846	1122355	15070101	U	600	450	566
WAT	C-03-01 21DCC	04	013	330846	1122151	15070101	I	1170	200	471
									471	1020
									1020	1170
WAT	C-03-01 28DDD	04	013	330751	1122134	15070101	I	1170	300	1100
									1100	1170
WAT	C-04-01 23CDB	04	013	330338	1122002	15070101	U	610	470	563
									603	610
WAT	D-03-01 07BBB2	04	013	331114	1121817	15070101	U	1530	810	900
									950	1530
WAT	D-04-01 28CDD	04	013	330239	1121552	15070101	U	750	300	750
WHM	A-05-30 13DBC	04	001	334929	1090753	15040004	P	282	262	282
WHM	A-05-31 17CAA	04	001	334943	1090553	15040004	H	100	20.0	--
WHM	A-07-27 01CCA1	04	001	340137	1092701	15020001	H	100	80.0	--
WHM	A-07-27 01CDB	04	001	340135	1092700	15020001	H	100	40.0	100
WHM	A-07-30 14BDD	04	001	340010	1090901	15020001	H	226	160	--
WHM	A-10-22 30ABA	04	017	341429	1100252	15020005	H	750	550	--
WIL	D-09-23 08ABC	04	009	324018	1100054	15050201	S	--	--	--
WIL	D-11-24 17DAA	04	009	322840	1095439	15050201	I	--	--	--
WIL	D-11-24 30AAA	04	009	322718	1095541	15050201	I	--	--	--
WIL	D-12-23 12DBA	04	003	322415	1095654	15050201	I	269	--	--
WIL	D-12-24 20CBB	04	003	322234	1095530	15050201	I	200	--	--
WIL	D-13-24 03ADA	04	003	322008	1095234	15050201	-	--	--	--
WIL	D-13-24 05CCB2	04	003	321941	1095531	15050201	I	240	0	201
WIL	D-13-24 16BBB	04	003	321834	1095430	15050201	-	1360	--	--
WIL	D-14-24 14BBA2	04	003	321323	1095217	15050201	H	--	--	--
WIL	D-14-24 30DBA	04	003	321115	1095552	15050201	S	56.0	--	--
WIL	D-14-26 18BDD	04	003	321303	1094352	15050201	I	500	80.0	495
WIL	D-15-24 08CAD	04	003	320830	1095509	15050201	I	250	--	--
WIL	D-15-25 25ADA	04	003	320614	1094424	15050201	I	500	--	--
WIL	D-15-25 25CDD	04	003	320542	1094439	15050201	I	566	--	--
WIL	D-16-24 21CCC	04	003	320119	1095450	15050201	I	884	90.0	484
									484	884
WIL	D-16-25 09ADD	04	003	320330	1094751	15050201	U	445	35.0	350
									350	445
WIL	D-16-25 13CDD	04	003	320213	1094516	15050201	I	381	75.0	378
WIL	D-16-25 14AAD	04	003	320248	1094545	15050201	I	--	--	--
WIL	D-16-25 36AAA	04	003	320022	1094446	15050201	I	516	--	--
WIL	D-16-26 02AAD	04	003	320435	1093943	15050201	U	700	--	--
WIL	D-16-26 05DAD	04	003	320409	1094245	15050201	I	700	--	--
WIL	D-16-26 06DDA	04	003	320403	1094347	15050201	U	662	135	155
									338	380
									420	490
									494	662

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
WIL	D-16-26 14DAA	04	003	320232	1093942	15050201	I	--	--	--
WIL	D-16-26 29AAA	04	003	320114	1094247	15050201	I	540	--	--
WIL	D-16-28 04BBB	04	003	320445	1093024	15050201	S	--	--	--
WIL	D-17-24 01DAC	04	003	315855	1095101	15050201	H	128	68.0	126
WIL	D-17-25 08BCC	04	003	315816	1094945	15050201	I	500	--	--
WIL	D-17-26 04ADD	04	003	315910	1094145	15050201	I	500	140	395
WIL	D-17-26 12BAA	04	003	315835	1093908	15050201	I	395	115	286
									300	395
WIL	D-17-27 21BCA	04	003	315642	1093626	15050201	I	951	280	320
									320	951
WIL	D-17-27 28BAA	04	003	315602	1093607	15050201	I	701	198	701
WIL	D-17-27 35BCB	04	003	315454	1093430	15050201	I	400	200	400
WIL	D-17-27 35CCB	04	003	315429	1093429	15050201	I	400	200	400
WIL	D-17-28 06CDA	04	003	315855	1093201	15050201	I	1000	300	425
									425	1000
WMD	C-17-08 09ADD UNSURV	04	019	315743	1130502	15080102	U	101	--	--
WMD	C-17-08 11DCD UNSURV	04	019	315712	1130321	15080102	U	18.7	--	--
WMD	C-18-05 07AAA	04	019	315252	1124846	15080102	U	84.0	--	--
WMD	C-18-06 01DBB2	04	019	315315	1125010	15080102	U	--	--	--
WMN	B-16-04 14BBB	04	025	344636	1123944	15060201	I	352	55.0	--
YUM	C-08-22 25DAC3	04	027	324212	1142748	15070201	U	84.0	--	--
YUM	C-08-23 27DDD	04	027	324202	1143553	15030107	I	163	135	--
YUM	C-09-21 07AAD	04	027	324005	1142636	15070201	U	401	165	--
YUM	C-09-22 11BBB	04	027	324011	1142939	15030108	U	600	160	300
YUM	C-10-23 15AAA	04	027	323402	1143550	15030108	I	300	112	140
									270	285
YUM	C-10-23 31BBB1	04	027	323124	1143955	15030108	U	120	--	--
YUM	C-11-24 23BCE	04	027	322737	1144153	15030108	U	1040	165	--
YUM	C-12-22 06DAA	04	027	322450	1143242	15030108	U	202	168	--

See p. 351 for Ground-Water Areas and Abbreviations.

CODES USED TO IDENTIFY STATE, COUNTY, AND
PRIMARY USE OF WATER

STATE AND COUNTY CODES				PRIMARY USE OF WATER	
04	ARIZONA	35	NEW MEXICO	C	COMMERCIAL
	001 APACHE		023 HIDALGO	E	POWER
	003 COCHISE			H	DOMESTIC
	005 COCONINO			I	IRRIGATION
	007 GILA			K	MINING
	009 GRAHAM			N	INDUSTRIAL
	011 GREENLEE			P	PUBLIC SUPPLY
	012 LA PAZ			R	RECREATION
	013 MARICOPA			S	STOCK
	015 MOHAVE			T	INSTITUTIONAL
	017 NAVAJO			U	UNUSED
	019 PIMA			Z	OTHER
	021 PINAL				
	023 SANTA CRUZ				
	025 YAVAPAI				
	027 YUMA				

WATER-LEVEL INFORMATION

GROUND- WATER AREA	LOCAL WELL NUMBER	LAND- SURFACE ALTITUDE	DATE RECORDS BEGAN		WATER LEVEL IN FEET BELOW LAND SURFACE					1991
			DATE	HIGHEST	DATE	LOWEST	DATE			
AGF	A-09-02 34DDD	2020	19780504	19840209	34.7	19901105	45.6	19901105	45.6	
AGF	A-12-02 01DAC	4070	19780831	19901105	124	19780831	130.1	19901105	124	
AGF	A-12-02 23BAA	3870	19780905	19850129	37.75	19901105	43	19901105	43	
AGF	A-13-01 02CAD	4603	19730400	19800401	82.3	19810206	93.4	19910204	89.6	
AGF	A-14-01 27ACC	4659.91	19670318	19850305	47.17	19830824	63.35	19910204	51.8	
AGF	A-14-01 28BBB	4714.98	19561205	19850305	12.44	19890823	63.9	19910204	57.6	
AGF	A-15-01 28ACC	5072	19790227	19850826	304.3	19790227	320.35	19910205	312.9	
AGF	B-14-01 11DAA	5043.52	19790124	19870223	320.6	19830524	325.81	19901114	323	
AGF	B-14-01 11DAA							19910207	323.4	
AGF	B-14-01 11DAA							19910508	323.5	
AGF	B-14-01 11DAA							19910808	324.4	
AGF	B-14-01 14ACC	5111.16	19640000	19780419	362.5	19830228	373.6	19910204	370.6	
AGF	B-14-01 15ABA	5117.42	19711014	19711014	454.3	19900821	567.2	19910204	565.4	
AGF	B-14-01 22ADA	5184.1	19710301	19880622	324.6	19910204	341.7	19910204	341.7	
ALT	D-16-09 24DAC	2650	19550927	19590106	145.68	19750321	185	19901213	146.7	
ALT	D-16-10 34BAB	3096	19640504	19901213	602.7	19850605	606	19901213	602.7	
ALT	D-17-09 02DDA	2744	19550927	19841206	181.2	19880531	192	19901213	183	
ALT	D-18-09 11BAC	2915	19570110	19851204	242.6	19760118	266	19901213	245.6	
ALT	D-19-09 03ACA	3054	19580103	19861210	318.4	19770114	332	19901213	323.1	
ALT	D-19-09 18AAA	3277	19810324	19901213	442.6	19851204	448.3	19901213	442.6	
ALT	D-20-08 35BDB	3463	19720114	19901213	457.8	19770114	481	19901213	457.8	
ALT	D-20-09 17ABA	3254	19520916	19621221	267.65	19750307	322.1	19901213	296.5	
ALT	D-21-08 27ADA	3465	19510613	19851204	310.1	19570925	338.5	19901213	316.6	
ALT	D-22-08 19DBC	3610	19501018	19850605	72.57	19771220	100.2	19901213	78.16	
ALT	D-22-08 29DBA	3598	19640110	19871214	136.24	19701216	152.5	19901213	137.26	
ALT	D-22-08 34ABD	3450	19640110	19750620	116.9	19831207	200.59	19901213	191.9	
ARA	D-07-20 21BDB	3515	19530723	19530723	7.23	19590212	89.32	19901205	51.3	
ARA	D-08-21 18DAD	3880	19550201	19840125	19.6	19770202	43.4	19901206	35.96	
AVR	D-11-10 08DDD	1884	19520106	19520106	150.7	19771221	293.5	19901210	243.2	
AVR	D-11-10 22ADD	1915	19400228	19400228	140.66	19761207	261.1	19901210	237.7	
AVR	D-11-10 22DDD2	1921	19810113	19910123	231	19811217	251.8	19910123	231	
AVR	D-11-10 25DDA2	1953	19490226	19490226	174	19770104	335.3	19901210	251.5	
AVR	D-11-10 27CDC1	1922	19490120	19490120	149.2	19800103	263.1	19901213	239.95	
AVR	D-11-10 27DAA	1935	19530105	19530105	182.18	19760202	317.3	19901210	255.5	
AVR	D-12-10 04DCC	1977	19621214	19621214	246.38	19811217	290.2	19910116	278.29	
AVR	D-12-10 09DCD	1984	19800103	19910116	287.71	19811217	303.7	19910116	287.71	
AVR	D-12-10 12CDD3	1994	19811217	19910201	277.35	19811217	308.1	19910201	277.35	
AVR	D-12-10 23ACD	2025.8	19520000	19520000	190	19821206	227.5	19901210	224.9	
AVR	D-12-10 31DCD	2065	19801200	19811217	338.1	19851219	342.4	19901115	339.74	
AVR	D-12-10 33CDC1	2067.8	19621213	19621213	290.45	19800103	374.1	19901115	350.57	
AVR	D-12-11 20AAA	2016.02	19511011	19511011	220.67	19770113	354.2	19901210	305.1	
AVR	D-12-11 30DCD	2051	19801200	19801200	267.6	19910123	280.63	19901213	280.63	
AVR	D-13-10 05DDD	2090	19571226	19571226	270	19801200	379.3	19901115	362.81	
AVR	D-13-10 06DDC	2084	19520000	19520000	218.5	19801200	374.5	19901115	362.61	
AVR	D-13-10 12CDD	2166	19531228	19531228	292	19801200	433.6	19910201	417.01	
AVR	D-13-10 23DCC	2166.64	19520300	19530108	265.9	19770113	412.6	19910107	376.55	
AVR	D-13-10 26CCD	2190	19510620	19520129	270.74	19801200	404.4	19910107	388.45	
AVR	D-13-10 26DCD	2190	19530225	19530225	273.4	19801200	394.4	19910107	378.93	
AVR	D-13-11 11ACC2	2393	19671227	19910501	238.45	19701215	343.9	19901210	243.4	
AVR	D-13-11 11ACC2							19910501	238.45	
AVR	D-13-11 31CCC1	2210.84	19530306	19530306	276.25	19770221	410.4	19901210	373.3	
AVR	D-13-11 31CCC1							19910102	372.46	
AVR	D-13-11 31CDD1	2213.04	19510620	19510620	264.94	19851218	368.1	19901102	365.15	
AVR	D-14-10 11AAA	2242	19790302	19910201	397.25	19790302	403.3	19910201	397.25	
AVR	D-14-10 12ABA	2240	19630111	19630111	362.78	19761207	429	19901210	394.1	
AVR	D-14-11 04CAA	2261	19530300	19530300	294.4	19770113	392.6	19901210	384.9	
AVR	D-14-11 06CCD	2230	19520129	19520129	274.05	19831229	373.4	19910102	371.72	
AVR	D-14-11 06DCC	2236	19530306	19530306	283.14	19861215	375.2	19910102	370.49	
AVR	D-14-11 07BAD	2242	19511100	19511100	280	19770101	374.3	19910102	371.27	
AVR	D-14-11 08CCC	2257	19540102	19540102	291.6	19721201	370.6	19901210	366.4	
AVR	D-14-11 08CCC							19910102	363.8	
AVR	D-14-11 27BCC	2297	19771200	19781100	325.2	19901218	352.87	19901218	352.87	
AVR	D-14-11 29DDD	2317.9	19530119	19530119	293.7	19910731	376.24	19901030	363.41	
AVR	D-14-11 29DDD							19901129	364.14	
AVR	D-14-11 29DDD							19901227	362.7	
AVR	D-14-11 29DDD							19901231	362.43	
AVR	D-14-11 29DDD							19910129	358.88	
AVR	D-14-11 29DDD							19910228	361.2	
AVR	D-14-11 29DDD							19910313	361.34	
AVR	D-14-11 29DDD							19910430	361.95	
AVR	D-14-11 29DDD							19910530	363.72	
AVR	D-14-11 29DDD							19910611	364.6	
AVR	D-14-11 29DDD							19910731	376.24	
AVR	D-14-11 29DDD							19910829	366.5	
AVR	D-14-11 29DDD							19910930	366.39	
AVR	D-14-11 33CCD	2336	19540210	19540210	308.01	19901218	360.53	19901218	360.53	
AVR	D-14-11 33DCD	2328	19530306	19530306	289.94	19901218	356.63	19901218	356.63	
AVR	D-14-11 34BBC2	2309	19750207	19750207	320	19901227	349.17	19901227	349.17	
AVR	D-15-10 33CAC	2529.6	19400314	19460823	149.27	19771220	206.3	19901213	160.5	
AVR	D-15-10 35AAA	2529.6	19400314	19481007	212.17	19731220	232.08	19901213	222.1	
AVR	D-15-11 05CCD	2368	19530306	19530306	281.14	19901210	357.4	19901210	357.4	
AVR	D-15-11 09AAA	2350	19771200	19771200	330.2	19901218	359.56	19901218	359.56	
AVR	D-15-11 22CCC	2500	19670120	19670120	358.8	19901229	391.25	19901229	391.25	

See p. 351 for Ground-Water Areas and Abbreviations.

WATER-LEVEL INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	LAND-SURFACE ALTITUDE	DATE RECORDS BEGAN	DATE	HIGHEST	DATE	LOWEST	DATE	1991
BIC	B-17-02 04DBD	4350	19650121	19860206	99.2	19720900	118	19901106	102
BIC	B-17-02 05CBA	4380	19720900	19840124	136.4	19720900	156	19901106	138.8
BIC	B-17-02 06BBB	4200	19521009	19840124	128.2	19630205	138.78	19901106	130.6
BIC	B-18-03 23BBC	4420	19521009	19660210	8.89	19571217	17.76	19901106	17.2
BIC	B-19-03 19CBD	4525	19721101	19840124	59.4	19740205	66.2	19901106	62.4
BIC	B-19-04 10ADA	4563	19720601	19860206	65.4	19720601	85	19901106	68.1
BIS	B-16-13 36CCC	1880	19450112	19800305	9.04	19561023	13.64	19901105	12.93
BIS	B-18-13 34CCD	2479	19590129	19760205	40.1	19790326	66	19901105	42.47
BIS	B-21-10 17CCD1	5058	19800708	19851226	116.7	19830217	127	19901106	127
BIS	B-22-08 15CCB	5502	19800705	19900117	487.7	19800705	492.5	19901106	490.2
BLM RES	01 058-05.09X05.82	5722	19540704	19890110	48.4	19540704	60	19910412	48.9
BLM RES	02 040-00.85X12.17	6670	19590811	19590811	317.5	19850328	418.7	19910412	414.3
BLM RES	02 040-04.03X14.68	6435	19521210	19670822	280.4	19810107	290.45	19910412	286.3
BLM RES	02 040-05.38X15.27	6345	19720404	19770301	215.85	19830126	216.79	19910412	216.1
BLM RES	02 040-11.2 X13.6	6264	19500613	19910412	171.8	19500613	176.5	19910412	171.8
BLM RES	03 077-11.59X14.61	5260	19550630	19860422	192.8	19790717	235.2	19910409	202.9
BLM RES	03 097-08.22X06.32	5381	19531029	19900227	229.6	19850620	238.6	19910409	229.7
BLM RES	04 056-02.85X14.19	6644	19830816	19830816	1094.4	19910419	1153.5	19910419	1153.5
BLM RES	04 074-08.95X02.95	6340	19770420	19770420	736	19910220	804.6	19910220	804.6
BLM RES	04 075-00.61X16.21	5858	19720405	19770201	330.99	19910410	377.6	19910410	377.6
BLM RES	04 075-05.09X12.3	5985	19630626	19630626	432	19910410	491.9	19910410	491.9
BLM RES	06 094-03.23X11.05	5809	19700610	19700610	292.5	19900123	406.3	19910419	397.9
BLM RES	06 095-06.5 X08.61	5650	19830816	19850805	250.2	19890214	260.8	19910419	259.3
BLM RES	06 096-02.73X03.65	5623	19540708	19540708	212	19910409	270.8	19910409	270.8
BLM RES	08 037-06.23X02.51	5200	19531113	19880504	38.4	19531113	46.9	19910423	43.3
BLM RES	08 037-12.81X16.98	6024	19570815	19670907	438.3	19850718	536.4	19910423	535.4
BLM RES	08 038-04.43X15.39	5950	19651001	19651001	405	19850718	478.2	19910423	427
BLM RES	08 038-09.4 X07.08	5650	19720405	19770301	132.07	19910411	184.6	19910411	184.6
BLM RES	08 039-00.7 X01.57	5735	19590725	19590725	54.5	19810107	139.65	19910411	130
BLM RES	08 039-02.11X02.94	5885	19760317	19790717	227	19900228	275.8	19910424	272.2
BLM RES	08 039-08.31X05.09	6040	19720207	19790306	120.2	19810107	128.15	19910412	124.8
BLM RES	08 039-11.86X08.69	6262	19670822	19670822	99.42	19710403	119.88	19910422	117.3
BLM RES	08 054-10.93X00.63	5863	19720405	19900130	373.5	19720415	377	19910411	373.5
BLM RES	10 054-01.41X01.85	5775	19531202	19910423	254.7	19850718	257.5	19910423	254.7
BLM RES	10 054-01.47X09.39	5757	19540804	19540804	170	19840814	211.4	19910423	197.7
BUT	B-07-14 16AAA	1618	19850212	19910107	347.1	19861204	349.4	19910107	347.1
BUT	B-07-15 02DDC	1425	19670525	19720216	148.3	19820125	165.3	19910107	160.3
BUT	B-07-15 09DDD	1365	19670525	19741213	94.2	19870311	105.8	19910107	103.3
BUT	B-07-15 10ADA	1404	19840629	19891127	139.1	19840629	150.2	19910107	141
BUT	B-07-15 11CAA	1416	19850326	19891127	150	19860109	155.8	19910107	151.6
BUT	B-07-15 11DCD	1427	19840629	19891127	169.2	19840629	180.9	19910107	169.9
BUT	B-07-15 11DDC	1431	19850212	19891127	170.8	19860109	176.4	19910107	171.6
BUT	B-07-15 11DDD	1444	19660512	19670525	166.72	19840629	189.6	19910107	178
BUT	B-07-15 12AAD	1478	19840629	19891127	212.3	19840629	221.1	19910107	213.5
BUT	B-07-15 12DAD	1484	19670525	19670525	213.88	19740916	242.5	19910107	225.4
BUT	B-07-15 13ACB	1478	19840629	19891127	211.4	19840629	218.6	19910107	211.7
BUT	B-07-15 13DBC	1493	19840629	19910107	228.4	19840629	234.6	19910107	228.4
BUT	B-07-15 14ACB	1430	19840629	19910107	169.7	19840629	182	19910107	169.7
BUT	B-07-15 14DCB	1440	19840629	19891127	176.4	19840629	185.6	19910107	176.5
BUT	B-07-15 15AAD1	1402	19850212	19891127	142.8	19880315	151.7	19910107	144.5
BUT	B-07-15 15AAD2	1402	19850316	19891127	143.2	19860109	150.5	19910107	143.8
BUT	B-07-15 15AAD3	1402	19850316	19891127	142.8	19860109	149.9	19910107	143.5
BUT	B-07-15 16DCC	1350	19870311	19910107	94.6	19891127	95.68	19910107	94.6
BUT	B-08-13 04DDD1	1790	19740917	19861204	512.4	19740917	530	19910107	513.3
BUT	B-08-13 04DDD2	1785	19860109	19861204	508.5	19860109	509.4	19910107	508.6
BUT	B-08-14 20DAB	1522	19481109	19481109	242	19840624	247.8	19910107	246.9
BUT	B-08-14 23CDD	1600	19800211	19840626	322.4	19800211	326.94	19910107	323.6
BUT	B-08-14 23DDD	1618	19650824	19710224	332	19710127	380.5	19910107	346.6
BUT	B-08-14 25BDC	1645	19690123	19741125	367.7	19840626	372.2	19910107	372
BUT	B-08-14 29CDD	1490	19790929	19810213	210	19790929	215.2	19910107	210.4
BWM	B-09-09 04CBC	2360	19790518	19860129	643.6	19790518	649.3	19901105	646.9
BWM	B-10-14 14DBD	881	19810402	19830308	14.32	19910213	21.8	19910213	21.8
BWM	B-10-14 23BAC	891	19790524	19830308	30.25	19900213	39.2	19910213	36.6
BWM	B-11-04 18CCC	4455	19730427	19800410	8.9	19780221	21.69	19901107	15.8
BWM	B-11-06 19CBD	3258	19530724	19850220	36.2	19690219	77.95	19901107	41.9
BWM	B-11-10 31CBA	2160	19810401	19900212	640	19860129	642.2	19910218	641.5
BWM	B-11-11 31BBB1	1350	19790619	19910218	53.2	19790619	57.15	19910218	53.2
BWM	B-12-03 06CDD	4590	19760921	19850220	405.5	19800409	408.8	19901107	405.8
BWM	B-12-06W31AAD	3470	19791018	19810408	83.5	19901107	93.9	19901107	93.9
BWM	B-13-04 21DB UNSRV	4260	19730101	19840207	97	19730101	110	19901107	102.77
BWM	B-13-04 21DB U PZ2	4260	19730130	19850220	105.3	19730130	109.8	19901107	108.7
BWM	B-13-04 26BCC1 UNSRV	4380	19730117	19850128	243.2	19730417	255.4	19901107	245
BWM	B-13-04 27AB U PZ1	4360	19810319	19901107	141.65	19820119	144.52	19901107	141.65
BWM	B-13-04 27AB U PZ2	4360	19800117	19850220	260.3	19800117	284.5	19901107	262.5
BWM	B-13-06 09DCD	3500	19450117	19450117	13.98	19561025	32.83	19901107	16
BWM	B-13-09 17BCC	2590	19791109	19791109	31.61	19900209	47.8	19901105	46.95
BWM	B-13-13 07DBB2	1770	19850221	19901105	142.2	19880211	149.8	19901105	142.2
BWM	B-13-15 17CAC2	2080	19790208	19900214	666.9	19790208	668.4	19901106	667.2

See p. 351 for Ground-Water Areas and Abbreviations.

WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	LAND- SURFACE ALTITUDE	DATE RECORDS BEGAN	DATE	WATER LEVEL IN FEET BELOW LAND SURFACE					1991
					HIGHEST	DATE	LOWEST	DATE		
CDI	A-18-14 13ABD3	5158	19530826	19530826	268.96	19780309	278.2	19901107	277.6	
CDI	A-18-15 28AAD	5180	19690904	19850307	263.6	19790103	268.7	19901107	265.9	
CDI	A-19-16 06CDB	4830	19650430	19861219	38.9	19901107	41.5	19901107	41.5	
CHI	B-04-19 33CCA	917	19740403	19850117	25.8	19760203	33.18	19910110	30.9	
CHI	B-16-20 13BCD	980	19880211	19890110	22.5	19880211	27.8	19901108	24	
CHI	B-16-20H11CCD	690	19870114	19870114	212.3	19901108	215.9	19901108	215.9	
CHI	B-20-22 24DDD	905	19840621	19840621	418.3	19900201	425.8	19901108	424.8	
CHI	B-21-21 21CBB	980	19840614	19901108	377.7	19880211	401.4	19901108	377.7	
CHI	B-25-20 15AAA	2814	19840621	19901107	596.9	19890111	597.8	19901107	596.9	
CHI	B-30-20 06CAC UNSURV	1350	19840620	19850829	56.07	19900131	57.7	19901107	57.5	
CHI	C-06-20 32ABD2		19861101	19890223	239.8	19880120	240.2	19910110	239.8	
CHN RES	10 071-05.55X01.98	5425	19660324	19850327	16.08	19660712	29.35	19910423	16.7	
CHV	A-15-12 15DDC	6503	19660505	19901107	671.1	19890118	686.2	19901107	671.1	
CON	A-11-24 22DBC	6650	19741218	19870415	707	19810126	710.05	19901105	707.4	
CON	A-11-25 18DCC	6430	19460700	19580821	22	19780223	28.48	19901105	26.7	
CON	A-13-26 06DCB	5640	19740601	19840201	82.2	19901105	217.05	19901105	217.05	
CON	A-14-26W18DBC	5430	19530730	19600420	14.9	19780914	63.03	19901105	36.1	
DOU	D-18-26 28AAA2	4268	19650211	19650211	89.01	19900129	195.9	19901206	190.6	
DOU	D-18-27 08BAC	4405	19840111	19900215	201.9	19840907	205.4	19901206	203.9	
DOU	D-19-26 09BBB	4240	19650223	19650223	76	19901206	166.6	19901206	166.6	
DOU	D-19-26 23DAA	4300	19650312	19650312	179.79	19790213	291.9	19901206	285.3	
DOU	D-19-26 29BAB2	4205	19491221	19500209	39.07	19910811	123	19901114	121.7	
DOU	D-19-26 29BAB2							19910214	122.1	
DOU	D-19-26 29BAB2							19910513	121.9	
DOU	D-19-26 29BAB2							19910811	123	
DOU	D-19-26 33CDA	4188.9	19490713	19490713	51.9	19901206	148.8	19901206	148.8	
DOU	D-20-25 09CAA1	4559.2	19511108	19630219	153.12	19840606	414.4	19901206	197.7	
DOU	D-20-26 23DAA	4168	19540119	19540119	78.4	19830216	116.9	19901206	111.5	
DOU	D-20-26 25CBB	4160	19840313	19870219	112.2	19840907	145.38	19901206	115	
DOU	D-21-25 15DBB	4218.55	19490310	19490310	109.75	19880222	146.37	19901206	146.3	
DOU	D-21-26 02BAA	4130	19470826	19470826	36.6	19820826	116.9	19901029	101.24	
DOU	D-21-26 02BAA							19901206	101.5	
DOU	D-21-26 02BAA							19901228	100.86	
DOU	D-21-26 02BAA							19910128	100.52	
DOU	D-21-26 02BAA							19910215	100.41	
DOU	D-21-26 02BAA							19910322	100.42	
DOU	D-21-26 02BAA							19910424	99.12	
DOU	D-21-26 02BAA							19910529	102.49	
DOU	D-21-26 02BAA							19910620	102.12	
DOU	D-21-26 02BAA							19910729	102.07	
DOU	D-21-26 02BAA							19910827	103.32	
DOU	D-21-26 02BAA							19910923	103.3	
DOU	D-21-26 24BAA	4196	19460131	19460131	112	19860206	193.2	19901206	186.2	
DOU	D-21-26 32DAD	4075	19460500	19460500	41.21	19901206	86.1	19901206	86.1	
DOU	D-21-26 36DDD	4200	19730209	19740117	210.8	19810129	236.5	19901206	224.5	
DOU	D-21-28 21ADD	4685	19770920	19850306	9	19770920	50	19901206	12.7	
DOU	D-22-25 14ACD	4138	19520129	19550111	89.13	19800128	111.7	19901206	99.7	
DOU	D-22-26 04DAD	4095	19461022	19461022	60.54	19890524	136.3	19901206	120	
DOU	D-22-26 29BCC	4059	19520129	19520129	48.61	19750221	68.6	19901206	62	
DOU	D-22-26 31CCD	4090	19460615	19460615	65.6	19840606	82.32	19901206	75.05	
DOU	D-23-26 19CBB1	4150	19540119	19540119	121.15	19810122	143.4	19901206	132.4	
DOU	D-23-27 09DAB	4055	19650522	19650522	116	19901206	192.1	19901206	192.1	
DOU	D-23-27 19CBB	4002	19840313	19851202	57.7	19840606	75.5	19901206	62.7	
DOU	D-23-28 08DDD	4259	19520107	19870819	62.5	19840907	74.29	19901206	64.4	
DOU	D-23-28 31CCC	4040	19700500	19700500	196	19901206	256.1	19901206	256.1	
DOU	D-24-27 05BDB	4000	19420526	19420526	54.3	19740117	71.9	19901206	71.2	
DUN	19S 20W 16 222	4097	19550712	19870206	84.8	19550712	107	19901212	85	
DUN	20S 20W 12 144	4206	19870203	19891128	274.3	19901212	275.8	19901212	275.8	
DUN	20S 21W 01 131	4153	19550615	19891128	318.7	19550615	323.07	19901212	318.8	
DUN	20S 21W 17 111	3990	19860515	19870203	126.6	19860515	127.6	19901212	127.4	
DUN	D-05-30 17ABA	3890	19870728	19901212	502.6	19880527	505.1	19901212	502.6	
DUN	D-06-30 01BAA	3645	19870211	19870211	190.7	19891128	193	19901212	191.6	
DUN	D-07-31 04BCC	3544	19391206	19680219	21.91	19560808	40.98	19901212	25.8	
DUN	D-07-31 34BAC	3590	19870206	19880531	39.31	19901212	45.4	19901212	45.4	
DUN	D-08-32 17DC	3705	19391103	19641012	57.52	19450808	69.68	19901212	63.94	
DUN	D-08-32 34ADD	3730	19400130	19410506	38.12	19550630	82.23	19901212	42	
DUN	D-09-32 15BBB	3810	19870203	19870203	127.1	19901212	129.4	19901212	129.4	
GIL	C-02-04 26BDA	900	19570214	19570214	246.79	19750121	303.4	19901214	280.3	
GIL	C-02-04 32ADA	820	19520401	19520401	187.15	19660119	250.7	19901214	236.8	
GIL	C-02-05 26CBA	756	19660203	19810120	72.4	19660203	134.35	19901214	100.2	
GIL	C-02-05 26CDD	748	19451218	19451218	49.2	19660114	131.2	19901214	93.9	
GIL	C-03-04 06BBA	748	19451218	19451218	62.5	19660114	170.2	19901214	135.8	
GIL	C-03-04 09BAA	807	19510213	19510213	154.95	19610000	324.14	19901214	225.1	
GIL	C-03-04 10CAA2	859	19660119	19861216	242.4	19720112	299.6	19901214	275.9	

WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL		LAND- SURFACE ALTITUDE	DATE		WATER LEVEL IN FEET BELOW LAND SURFACE				
	NUMBER			RECORDS BEGAN	DATE	HIGHEST	DATE	LOWEST	DATE	1991
GIL	C-03-04	17ADD	745	19610125	19861216	124.4	19610125	196.64	19901113	164.3
GIL	C-03-04	17ADD							19910212	156.3
GIL	C-03-04	17ADD							19910517	159.1
GIL	C-03-04	17ADD							19910813	177.1
GIL	C-03-04	19CCD	700	19650617	19860211	38.8	19650617	139.6	19901214	89.6
GIL	C-03-04	23BAA	895	19530506	19530506	277.3	19670405	334.9	19901214	315.4
GIL	C-03-04	27BAA	812	19520401	19520401	191.5	19610119	324.02	19901214	235.9
GIL	C-03-04	33ADC	740	19790226	19861216	124.4	19830208	182	19901214	161.5
GIL	C-03-05	02CBB	735	19531230	19800321	12	19660111	119.05	19901214	34.85
GIL	C-04-04	08CCA	682	19660114	19860211	31.1	19660114	120.28	19901214	69.8
GIL	C-04-04	09BAA1	705	19530424	19530424	70.9	19650414	153.47	19901214	96.9
GIL	C-04-04	16DAD	695	19660105	19860211	79.9	19770111	198.8	19901214	107.04
GIL	C-04-04	27DAA	745	19660216	19860211	145.9	19870610	240	19910123	161
GIL	C-04-04	33ADD	697	19711201	19861216	91.7	19830208	143.3	19910123	104.7
GIL	C-04-07	34CDC	580	19530415	19840124	6.79	19771213	54.5	19910123	29.9
GIL	C-05-03	07ABA2	930	19790331	19870611	357.2	19790331	381	19910124	360.2
GIL	C-05-03	29AAA	1013.6	19790621	19891204	441.2	19820120	453.9	19910124	442.1
GIL	C-05-03	29CBC2	991	19810226	19881205	420	19810226	433.9	19910124	421.5
GIL	C-05-04	18ADD	655	19530422	19530422	26.44	19771212	108	19910123	64.4
GIL	C-05-04	21CBD	738	19660216	19660216	165.85	19780323	206.5	19910123	179.2
GIL	C-05-04	31ADD	746	19660216	19660216	159.7	19790202	197.7	19910123	189.5
GIL	C-05-05	16CDC	627	19740312	19810225	15.6	19771228	63	19910123	46.7
GIL	C-05-05	20DCD	655	19720106	19800320	65.92	19880614	153.5	19910123	86.5
GIL	C-05-06	02BBC	595	19660104	19840124	5.8	19720113	73.8	19910123	18
GIL	C-05-06	11CDA	617	19530417	19810129	7.4	19720113	74.6	19910123	21.9
GIL	C-05-06	17DAD	658	19771213	19790816	64.4	19771213	118.5	19910123	88.3
GIL	C-05-06	31CBB	718	19720105	19840124	151.1	19790816	244	19910123	154.5
GIL	C-06-04	12CDD	980	19660323	19660323	376.2	19910124	414.7	19910124	414.7
GIL	C-06-05	02DDD	755	19790301	19831110	175.6	19891127	199.1	19910124	191.25
GIL	C-06-05	04CBA	729	19790301	19800319	154.2	19881205	189.4	19910123	167
GIL	C-06-07	11CCC	718	19720105	19910123	135.7	19790816	232.7	19910123	135.7
GIL	C-07-06	04DDD	827	19650511	19650511	272.5	19750122	334.9	19910123	297.5
GIL	C-07-06	09CCC	818	19680104	19680104	281.12	19771214	305.5	19910123	291.9
GRD	C-04-10	02CBB	710	19850122	19890130	289.7	19870127	298.2	19910124	293.6
GRD	C-04-10	22ABB	608	19540119	19830114	101.1	19840129	174.9	19910124	136.8
GRD	C-06-12	19BBA	383	19450504	19840126	22.8	19500316	44.86	19910111	28.07
GSK	D-03-15	29ABA	2740	19520522	19740213	9.4	19570910	102.11	19901210	93.5
GSK	D-04-14	21BCD	1790	19520414	19740213	0.58	19901210	8.5	19901210	8.5
GTD	C-06-14	28BBA	405	19560816	19740104	74.53	19750109	139.86	19910111	106.6
GTD	C-07-16	27CCC	280	19560313	19600303	3.87	19560313	18.88	19910111	5.17
GTD	C-07-16	33DAA	278	19640129	19760116	7.35	19640129	21.18	19910111	13.5
GTD	C-08-17	12DDD	263	19770209	19800208	5.49	19790109	15.19	19910111	11.6
GTD	C-08-17	20DCC	248	19740104	19800208	7.63	19780127	14.81	19910111	8.7
GTD	C-08-18	27AAD	231	19460205	19840126	1.9	19530212	27.06	19910111	3.8
GTD	C-09-19	04CDD	208	19460131	19800208	8.7	19460131	23.6	19910111	11.6
GTD	C-16-07	27BAD UNSURV	1355	19580612	19770928	15.2	19580612	36	19901102	26.19
GTD	C-16-07	27BAD UNSURV							19910116	26.62
GTD	C-16-07	27BAD UNSURV							19910615	26.09
GTD	C-16-07	27BAD UNSURV							19910817	26.67
GTD	C-16-07	27BAD UNSURV							19910910	26.79
HAR	B-01-08	06AAA	1117	19610501	19610501	250.1	19841126	489.2	19910123	403
HAR	B-01-09	10BBB	1148	19580901	19580901	184	19811230	522.6	19910123	422.1
HAR	B-01-09	20BDC	1167	19791213	19910123	478	19851204	540.9	19910123	478
HAR	B-01-10	01CCC	1236	19530101	19530101	257	19791212	497.3	19910123	451.9
HAR	B-02-08	17CAA	1180	19631001	19631001	380.6	19841130	529	19910123	445.1
HAR	B-02-08	27BBA	1204	19631001	19631001	354.8	19851202	486.8	19910123	461
HAR	B-02-08	30AAA2	1144	19661201	19661201	410.5	19830202	509.4	19910123	426.1
HAR	B-02-09	03BBB	1260	19711220	19910124	494.1	19841128	557.3	19910124	494.1
HAR	B-02-09	07ABB	1260	19520901	19520901	270	19841128	310.6	19910124	301.4
HAR	B-02-09	14BAB	1193	19791213	19910123	436.4	19841129	520.5	19910123	436.4
HAR	B-02-10	05ABB	1330	19630301	19630301	333.7	19890726	394.4	19901113	392.1
HAR	B-02-10	05ABB							19910212	392.4
HAR	B-02-10	05ABB							19910516	392.9
HAR	B-02-10	05ABB							19910813	394
HAR	B-02-10	17DCA	1296	19780201	19780201	334	19891206	367.3	19910123	367.1
HAR	B-02-10	26DBB	1230	19841129	19841129	254	19910123	260.2	19910123	260.2
HAR	B-03-11	08CAC	1444	19580501	19580501	437	19910124	470.2	19910124	470.2
HAR	B-03-11	34BBB	1373	19780202	19780202	403.5	19880613	447.4	19910124	428
HAR	B-04-09	30AAC	1767	19830124	19910124	325.5	19860610	334.4	19910124	325.5
HAR	B-04-12	04CCA	1640	19630214	19710121	388	19910124	465.4	19910124	465.4
HAR	C-01-08	04BDA	1060	19631201	19631201	187.3	19841128	417.1	19910123	369.2
HAR	C-01-08	06DCC	1086	19590501	19590501	136.5	19841128	448.6	19910123	389.7
HAR	C-01-08	14DDD	990	19600401	19600401	32	19881212	263.8	19910123	252
HAR	C-01-08	16DCC	1035	19561201	19561201	74	19870612	356.8	19910123	351.3
HAR	C-01-09	11DCB	1158	19550412	19550412	195.7	19841129	532.9	19910123	468
HAR	C-01-09	18ACB	1305	19661129	19661129	495	19851204	680.1	19901113	636
HAR	C-01-09	18ACB							19910212	633.9
HAR	C-01-09	18ACB							19910516	631.2
HAR	C-01-09	18ACB							19910813	628.9

See p. 351 for Ground-Water Areas and Abbreviations.

WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	LAND- SURFACE ALTITUDE	DATE RECORDS		WATER LEVEL IN FEET BELOW LAND SURFACE					1991
			BEGAN	DATE	HIGHEST	DATE	LOWEST	DATE		
HAS	B-04-04 19BAA	1417	19821008	19891211	170.1	19880608	236.7	19910115	178.8	
HAS	B-04-05 05ABB	1620	19550302	19881207	379.5	19790313	383.2	19910115	379.7	
HAS	B-04-05 22AAA	1525	19871021	19910515	291	19871021	291.8	19901113	291.4	
HAS	B-04-05 22AAA							19910218	291.1	
HAS	B-04-05 22AAA							19910515	291	
HAS	B-04-05 22AAA							19910813	291.3	
HAS	B-05-04 24CCD	1720	19710300	19860611	413	19800228	445.3	19910115	418.3	
HAS	B-05-05 22BCC	1738	19690508	19910115	474.4	19771111	482.5	19910115	474.4	
HAS	B-06-04 02CCC	1970	19771012	19880602	179.7	19771012	296.8	19910102	190.6	
HAS	B-06-04 13DCD	1970	19770607	19861211	430.6	19800227	455.6	19910102	434.8	
HAS	B-06-08 20ADC	2199	19570501	19820813	260.1	19801202	268.9	19910124	261.8	
HAS	B-07-04 07BCC	2030	19780104	19880126	11.69	19780104	19	19901105	15.3	
HAS	B-07-05 03DBC	2160	19780418	19820218	101.2	19901105	120.2	19901105	120.2	
HAS	B-08-05 10DAA	2580	19780426	19820218	411.6	19790314	425.3	19901105	420.1	
HAS	B-08-05 18CCC	2455	19780202	19901105	323.1	19800227	332.4	19901105	323.1	
HAS	B-08-05 19CBC	2425	19780131	19870115	288.7	19800227	302	19901105	289.2	
HAS	B-09-05 35DBB	2640	19780223	19901105	403.4	19780223	409	19901105	403.4	
HAS	B-09-06 05ADD	2955	19780207	19901105	820.05	19800410	825.2	19901105	820.05	
HOL	A-15-23 28DCC	5352	19500823	19500823	7.6	19671005	44.32	19901106	32.9	
HOL	A-16-19 36CBC	5685	19680508	19740130	609.7	19860213	621.2	19901106	616.7	
HOL	A-16-22 17CCD	5180	19640924	19730319	48.22	19780111	62.7	19901106	53.4	
HOL	A-17-20 06ACD	5040	19530730	19770110	6.2	19890821	16.3	19901105	15.6	
HOL	A-17-20 10DBA	5060	19691107	19720202	7.7	19810123	16.45	19901105	15.5	
HOL	A-17-20 26DBC	5360	19691202	19700301	296.68	19890821	300.6	19901105	300.6	
HOL	A-17-21 10CBA	5165	19520703	19820224	49.5	19720310	55.9	19901105	53.3	
HOL	A-18-19 17ADC	5015	19680220	19780111	32.3	19680904	61.55	19901105	61.4	
HOL	A-18-19 23DBD	5030	19620306	19820224	24.15	19890821	39.9	19901105	35.1	
HOP	A-19-16 36DBB	4890	19571100	19790209	30.89	19571100	40	19901107	35.4	
HUA	B-22-16 03CBB	3325	19800318	19800318	542.6	19910108	552.7	19910108	552.7	
HUA	B-22-16 27DDD	3373.6	19860101	19860101	601	19910807	607.4	19901112	606.8	
HUA	B-22-16 27DDD							19910211	606.7	
HUA	B-22-16 27DDD							19910507	607	
HUA	B-22-16 27DDD							19910807	607.4	
HUA	B-23-13 32ACA	3768	19440229	19440229	194.78	19780203	258.3	19901106	249	
HUA	B-24-12 17CBC	4255	19530723	19790327	141.7	19550602	147.53	19901106	145.3	
HUA	B-24-14 28CAD	3353	19431012	19440404	491.52	19910107	549	19910107	549	
HUA	B-24-16 01DDD1	2961	19650428	19800128	440.7	19700127	453.6	19910109	450.6	
HUA	B-25-09 26DBC	5480	19800924	19800924	1334	19860101	1343	19910111	1341.5	
HUA	B-26-18 03AAA1	3300	19800320	19800320	553.6	19860101	559	19910110	558.4	
HUA	B-28-17 31CCC	3004	19650428	19840126	652.5	19650428	654.95	19910110	652.8	
HUA	B-30-17 14DCC	3186	19800424	19830218	384.7	19800424	407.9	19901113	391.2	
HUA	B-30-17 14DCC							19910211	391.3	
HUA	B-30-17 14DCC							19910507	391.4	
HUA	B-30-17 14DCC							19910807	391.9	
KAI RES	01 058-10.73X06.78	5771	19530604	19530604	188	19820608	222.2	19910424	220.6	
KAN	B-40-04 06AAC	5140	19750722	19810107	79.2	19901107	83.52	19901107	83.52	
LHA	B-01-05 08DAB	1056.8	19560509	19561205	88.66	19850607	102.8	19910117	94.9	
LHA	B-01-05 15CBB1	980	19620320	19871221	32.6	19810218	42.1	19910117	33.8	
LHA	B-01-05 27BBC	977	19531201	19700123	63.7	19630205	75.69	19910117	73.2	
LHA	B-01-06 03BBC	1069	19531216	19871218	99.9	19810217	112.4	19910117	100.7	
LHA	B-01-06 11BCA	1040.7	19561205	19670224	80.23	19760109	95.9	19910117	85.7	
LHA	B-01-06 23DCD	987	19680805	19680805	138.1	19891130	145.2	19910117	144.6	
LHA	B-02-04 29DCD	1187	19521223	19521223	216.8	19851205	226.9	19910117	223.7	
LHA	B-02-05 29DAC	1127	19620315	19620315	134.19	19910117	142.4	19910117	142.4	
LHA	B-02-06 09CBB	1175	19770627	19861208	297.1	19850606	342.6	19910115	313.7	
LHA	B-02-06 21BBA	1136	19610324	19610324	183.64	19850606	293.4	19910115	258.1	
LHA	B-02-06 33CAA	1075	19550526	19550526	111.36	19850606	264.8	19910117	210.3	
LHA	B-02-07 05BBC	1340	19700115	19700115	394.6	19910115	455.4	19910115	455.4	
LHA	B-02-07 23CCA	1140	19610321	19610321	186.45	19891030	294.1	19901113	289.7	
LHA	B-02-07 23CCA							19910212	284.5	
LHA	B-02-07 23CCA							19910516	287.7	
LHA	B-02-07 23CCA							19910813	293.7	
LHA	B-02-07 27AAB	1146.2	19531203	19531203	162.83	19860609	299.6	19910115	292.2	
LHA	C-01-05 03BAA1	931	19511109	19520131	68.6	19700115	137.1	19910117	92.2	
LHA	C-01-05 29ADC	788	19560116	19790406	38.42	19630205	79.94	19910117	44.57	
LHA	C-01-05 34ADC1	778	19560116	19910117	16.6	19690129	49.53	19910117	16.6	
LHA	C-01-06 14DEB	891.2	19531201	19531201	157.44	19860609	258.1	19910117	201	
LHA	C-01-06 19ABB	890	19610405	19610405	174.56	19810129	239.9	19910117	211	
LHA	C-01-07 14BBB	939	19630311	19630311	204.68	19851203	271.8	19910117	263.4	
LHA	C-02-05 16ABB	763	19560116	19881208	9.8	19630717	39.9	19910117	9.9	
LHA	C-02-05 16DAA	762	19560116	19860109	12.5	19700113	32.5	19910117	16.2	

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WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	LAND- SURFACE ALTITUDE	DATE RECORDS		WATER LEVEL IN FEET BELOW LAND SURFACE					1991
			BEGAN	DATE	HIGHEST	DATE	LOWEST	DATE		
LIC	B-14-02 14BAD	5170	19810120	19850306	16.97	19900822	34.24	19910206	29.85	
LIC	B-15-01 01CDC	4913	19630326	19630326	344.6	19810618	376.68	19910205	365.1	
LIC	B-15-01 25CDB	4927	19810206	19811022	287.2	19910205	292.4	19910205	292.4	
LIC	B-15-02 17ABA	5056	19400317	19910205	297.6	19620426	306.91	19910205	297.6	
LIC	B-16-02 03BBB1	4539	19801023	19801023	34.5	19850827	53.22	19910206	50.8	
LIC	B-16-02 03DDC4	4590	19801024	19820825	9.24	19910206	41.1	19910206	41.1	
LIC	B-16-02 11CBB1	4610	19380421	19820825	11.67	19900301	57.43	19910206	51.73	
LIC	B-16-02 15AAA	4644	19801029	19810922	45.76	19910206	90.38	19910206	90.38	
LIC	B-16-02 17BDC	4700	19810210	19870401	161.1	19810820	182.5	19910205	166.3	
LIC	B-16-02 21BAA1	4738	19480300	19480300	152.29	19750000	236.64	19910205	216.9	
LIC	B-16-02 34ABA2	4800	19830328	19890228	261.6	19850826	276	19910205	266.4	
LIC	B-17-02N34ACC	4510	19401022	19800401	3.65	19890823	17.84	19910206	9.1	
LIC	B-17-02N34DDD3	4515	19820302	19820302	28.4	19850826	48.5	19910206	29.9	
LIC	B-17-02W27DCC	4470	19620321	19650322	2.1	19820521	17.95	19910206	9.6	
LSC	D-03-02 23DAA	1095	19821222	19901211	73.4	19821222	90	19901211	73.4	
LSC	D-03-02 23DBB	1105	19821222	19901211	81	19821222	100.4	19901211	81	
LSC	D-03-02 23DCA	1108	19821222	19901211	99.1	19821222	116.9	19901211	99.1	
LSC	D-03-05 29BCE	1197	19460101	19460101	29	19830105	100.4	19910103	62.3	
LSC	D-03-06 17BDD	1288	19830113	19861201	134.7	19830113	195.6	19910103	148.1	
LSC	D-03-06 27DBC	1384	19830112	19881205	206.6	19830112	245.5	19910103	210.1	
LSC	D-04-02 15CBC	1227	19510212	19510212	109.5	19780110	368.7	19901211	357.9	
LSC	D-04-02 23ACC	1187	19530217	19530217	94.3	19881031	505.6	19901211	249.9	
LSC	D-04-03 13DDD	1177	19580115	19580115	114.81	19870609	301.9	19901211	209	
LSC	D-04-03 16CBB	1152	19530217	19530217	43.5	19860610	164.8	19901211	139.4	
LSC	D-04-03 20DCD	1165	19520205	19520205	53.41	19871216	225.9	19901211	151.2	
LSC	D-04-03 35DDD	1200	19500308	19500308	73.9	19850621	291.3	19901211	187.6	
LSC	D-04-04 16CDD	1189	19500308	19510212	69.11	19770106	291.5	19901211	207.5	
LSC	D-04-04 20CDD	1193	19630124	19901211	140.2	19870609	194.4	19901211	140.2	
LSC	D-04-10 30BDD	1490	19520206	19520206	83.21	19780125	177.7	19901213	152.4	
LSC	D-04-11 07DBB	1560	19770105	19851219	17.3	19770105	47.5	19901213	38.3	
LSC	D-05-02 22DAD	1322	19710107	19710107	570.5	19881101	609.3	19901210	607	
LSC	D-05-02 36BAD	1317	19580222	19580222	320	19841114	695.7	19901119	673.1	
LSC	D-05-02 36BAD							19910212	667.9	
LSC	D-05-02 36BAD							19910515	663.9	
LSC	D-05-02 36BAD							19910814	662.4	
LSC	D-05-03 03CCC	1195	19830119	19901210	181.9	19861212	215.2	19901210	181.9	
LSC	D-05-03 12CDD1	1215	19550120	19550120	130.22	19870609	240.3	19901210	199.9	
LSC	D-05-03 25ADD	1240	19510202	19510202	119.45	19790207	277.8	19901210	210.9	
LSC	D-05-03 29BCC1	1257	19471201	19471201	190	19881024	328.5	19901119	318.7	
LSC	D-05-03 29BCC1							19910212	317.3	
LSC	D-05-03 29BCC1							19910607	317.2	
LSC	D-05-03 29BCC1							19910814	316.6	
LSC	D-05-03 33DCB2	1245	19690115	19690115	472.65	19860611	634.4	19901210	587.8	
LSC	D-05-05 32CAB	1332	19540216	19540216	184.42	19901210	347.5	19901210	347.5	
LSC	D-05-06 28CAA	1465	19710106	19710106	242.47	19841029	338.2	19901210	338.2	
LSC	D-05-07 28DCC2	1412	19630130	19901212	161.4	19680123	209.35	19901212	161.4	
LSC	D-05-07 33DDD	1402	19490302	19490302	73	19860612	207.3	19901212	147.8	
LSC	D-05-07 34DDD	1406	19490228	19490228	85.8	19860612	199.4	19901212	134.4	
LSC	D-05-07W13CAD	1386	19530218	19881102	83.5	19670118	143.5	19901212	98.4	
LSC	D-05-08 02AAA	1419	19770104	19851219	68.7	19770104	176.8	19901213	129.2	
LSC	D-05-08 12AAD	1418	19510222	19851219	45.8	19770105	158.6	19901213	118.4	
LSC	D-05-08 17BBB2	1409	19770103	19881108	107.9	19860612	171.4	19901212	133.2	
LSC	D-05-08 31DDD	1417	19530218	19901212	110.5	19641223	209.1	19901212	110.5	
LSC	D-05-09 03DAB	1475	19530217	19530217	97.97	19770105	239.3	19901213	182.7	
LSC	D-05-09 18BDD1	1464	19830218	19851219	130.4	19880607	177.1	19901213	164.8	
LSC	D-05-09 18BDD2	1464	19841109	19851219	154	19880607	208.1	19901213	186.8	
LSC	D-05-09 29ADA	1520	19420619	19440206	114.24	19751026	244.3	19901213	188.7	
LSC	D-05-09 31ADD	1505	19520306	19530217	158.24	19841114	208.9	19901213	194.5	
LSC	D-06-02E01CDD2	1318	19841120	19901210	676.8	19841120	710.2	19901210	676.8	
LSC	D-06-03 11CDD1	1275	19510103	19510103	140.54	19901210	220.9	19901210	220.9	
LSC	D-06-03 15BDC	1290	19830119	19901210	627.5	19860611	666.5	19901210	627.5	
LSC	D-06-03 27CCC	1365	19770104	19770104	708	19851218	757.5	19901210	719.3	
LSC	D-06-03S02DDD2	1267	19710111	19740108	198.2	19770103	291.8	19901210	239.1	
LSC	D-06-04 07CCC	1289	19420312	19420312	111.2	19891128	269.5	19901210	269.2	
LSC	D-06-04 36DDD	1347	19560103	19560103	236	19851218	517.7	19901210	493.8	
LSC	D-06-04S02CDD	1295	19710107	19710107	472.7	19820115	585.1	19901210	568.4	
LSC	D-06-04S06DDD	1277	19580115	19580115	223.2	19841107	606.9	19901210	573.9	
LSC	D-06-05 09ADD	1332	19400926	19430506	42.17	19570118	56.86	19901212	46.1	
LSC	D-06-05 16DAD1	1347	19510201	19871218	40.4	19560126	98.6	19901212	46.5	
LSC	D-06-05 16DAD2	1346	19841113	19851217	37.7	19901212	46.7	19901212	46.7	
LSC	D-06-05 19DDA PZ1	1338	19650622	19650622	327.2	19720925	348.2	19901212	327.3	
LSC	D-06-05 19DDA PZ2	1338	19711027	19871218	312.6	19711027	336.05	19901212	313.4	
LSC	D-06-05 25BBB	1377	19460101	19881107	27.3	19550119	67.08	19901212	37.4	
LSC	D-06-05 34BDD	1369	19490302	19770210	58.5	19540215	95.04	19901211	64.6	
LSC	D-06-06 07AAA3	1385	19600125	19600125	114.19	19810121	203.1	19901212	173	
LSC	D-06-06 09DAD	1395	19840207	19870604	300.1	19841031	316.6	19901211	309.6	
LSC	D-06-06 12BDB	1416	19510201	19510201	59.28	19670126	176.51	19901210	142.8	
LSC	D-06-06 16ADD	1398	19630425	19630425	60	19841031	321.8	19901211	312.9	
LSC	D-06-06 36DDA	1443	19510205	19510220	74.6	19880602	144.9	19901211	127.8	
LSC	D-06-07 11DDD2	1431	19490228	19490228	96.18	19750306	240.5	19901210	133.8	
LSC	D-06-07 34BBC	1461	19770107	19871223	227.2	19880602	295.5	19901211	250.9	
LSC	D-06-07 35DDD	1477	19751121	19770107	234	19880602	417.8	19901211	374.5	

WATER-LEVEL INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	LAND-SURFACE ALTITUDE	DATE RECORDS BEGAN	DATE	HIGHEST	DATE	LOWEST	DATE	1991
LSC	D-06-08 11ADA1	1473	19830110	19891204	96.1	19851218	136.6	19901210	96.2
LSC	D-06-08 14CCC	1456	19770118	19901210	107.7	19770118	190.3	19901210	107.7
LSC	D-06-08 27BDD2	1470	19841113	19901210	126	19860612	183.5	19901210	126
LSC	D-06-08 31CDD	1485	19490217	19490217	121.3	19751124	206	19901211	172.5
LSC	D-06-08S02DAD	1472	19510221	19510221	107.85	19770117	185.6	19901210	133
LSC	D-06-08S04ADD1	1432	19411031	19411229	53.14	19680123	175.3	19901210	97.1
LSC	D-06-09 19BBD	1517	19520306	19520306	102	19770117	192.2	19901210	119.9
LSC	D-06-09N06DAA1	1522	19520306	19540217	160.92	19870616	261.3	19901210	240.3
LSC	D-07-04 23DDD	1360	19851217	19901211	411.3	19851217	470.8	19901211	411.3
LSC	D-07-06 17DDD2	1440	19490208	19500309	62.9	19670119	119.55	19901210	113.5
LSC	D-07-06 26DDD	1485	19480813	19480813	81.35	19670119	185.95	19901211	174.9
LSC	D-07-06 28DDD	1464	19490208	19490208	80.9	19630128	205.61	19901211	115.1
LSC	D-07-06 35ACC	1482	19841107	19901210	486.1	19881104	502.7	19901210	486.1
LSC	D-07-07 02ACC	1482	19440822	19441226	91.46	19841119	222.6	19901211	173.3
LSC	D-07-07 08BAA	1468	19690122	19861208	293.5	19820122	393	19901210	336.5
LSC	D-07-07 11CDD	1494	19420311	19420311	85.93	19850620	299.7	19901211	216.4
LSC	D-07-07 23ADD	1513	19480529	19480529	142	19840315	302	19901211	234.7
LSC	D-07-07 24DDD	1523	19490217	19490217	161.4	19860611	314.8	19901211	234.8
LSC	D-07-07 31DDA	1509	19841108	19901210	505.4	19881107	519.4	19901210	505.4
LSC	D-07-07 34CDD2	1529	19520206	19520206	170.17	19810120	279.8	19901211	265.5
LSC	D-07-08 05DCC	1501	19490217	19490217	127.46	19700106	265.61	19901211	181.6
LSC	D-07-08 09DDD	1515	19751121	19901211	189	19770118	260.8	19901211	189
LSC	D-07-08 17CDD	1520	19751121	19901211	224.9	19751121	311	19901211	224.9
LSC	D-07-08 30CDD	1536	19490217	19490217	167.11	19860611	315.7	19901211	246
LSC	D-07-08 31BBA	1534	19650308	19901211	294.9	19850620	381.2	19901211	294.9
LSC	D-07-08 33DDD	1564	19490217	19490217	155	19840322	399.7	19901211	295.3
LSC	D-07-13 15CAC1	3600	19521015	19831209	7.13	19521015	53.73	19901213	20.7
LSC	D-08-06 22DDD2	1518	19851217	19901213	177.6	19860611	194.9	19901213	177.6
LSC	D-08-06 35DDD2	1542	19490207	19490207	100.8	19820118	200.29	19901213	169
LSC	D-08-07 19DDD	1548	19520204	19520204	159.04	19700514	229.7	19901213	221.8
LSC	D-08-08 07DDD1	1575	19410819	19420305	126.5	19870605	245.7	19901212	240
LSC	D-08-08 07DDD2	1575	19841031	19901212	331.3	19880607	403.1	19901212	331.3
LSC	D-08-08 14DDD	1611	19490222	19490222	188.04	19841112	464.4	19901214	417.9
LSC	D-08-08 18CDD1	1583	19420305	19420305	135.51	19770114	397.4	19901212	309.9
LSC	D-08-08 18CDD2	1583	19770114	19901212	347.5	19860611	446.6	19901212	347.5
LSC	D-08-08 29BCC	1607	19841112	19901212	423.5	19881104	486.1	19901212	423.5
LSC	D-08-08 29BCD	1607	19841112	19901212	289.9	19870605	374.7	19901212	289.9
LSC	D-08-09 07ADD	1635	19810218	19901212	429.9	19861212	473.9	19901212	429.9
LSC	D-08-10 04BBB2	1939	19650304	19670221	307.01	19801211	364.8	19901213	346.6
LSC	D-08-11 31BBB	2105	19680510	19760122	431.3	19901213	446.15	19901213	446.15
LSC	D-08-12 19DDC	2680	19521007	19831208	3.11	19560925	16.94	19901213	10.1
LSC	D-09-07 04ADD	1584	19570117	19570117	219.4	19860611	271	19901212	253.8
LSC	D-09-07 22DAA	1614	19830223	19901213	252.8	19860611	282.5	19901213	252.8
LSC	D-09-07 25CDD	1646	19821215	19901213	379	19870605	427.7	19901213	379
LSC	D-09-07 25DDA2	1652	19841119	19901213	477.5	19870605	546.2	19901213	477.5
LSC	D-09-07 27DDD1	1623	19460701	19460701	182	19841119	234.7	19901213	215.1
LSC	D-09-08 17CDD	1666	19420306	19420306	165	19870902	411.3	19901114	361.4
LSC	D-09-08 17CDD							19910212	356.6
LSC	D-09-08 20ADD2	1666	19841106	19841106	453.1	19881107	534	19901212	473.8
LSC	D-09-08 29BCC	1664	19841115	19910213	410.4	19870902	499.6	19901114	420.9
LSC	D-09-08 29BCC							19910213	410.4
LSC	D-09-08 29BCC							19910514	424.1
LSC	D-09-08 29BCC							19910812	443.1
LSC	D-09-08 30DDD1	1668	19690123	19901213	305.7	19690123	354.7	19901213	305.7
LSC	D-09-08 31DAA	1666	19841115	19901213	471.3	19850618	570.6	19901213	471.3
LSC	D-09-10 19AAA	1840	19530210	19550328	181.1	19680117	226.7	19901213	202.6
LSC	D-09-10 19ADD	1836	19531216	19531216	188.67	19800110	291.85	19901213	241.8
LSC	D-09-13 07CBC	3115	19521002	19550923	43.03	19530106	111.53	19901213	49.75
LSC	D-09-13 20DBA	3360	19820127	19901213	309.2	19820127	319.5	19901213	309.2
LSC	D-10-09 10AAD1	1800	19551206	19551206	226.58	19770211	345.3	19901213	294.3
LSC	D-10-09 18AAC2	1764	19770107	19901213	313.3	19811206	318.6	19901213	313.3
LSC	D-10-10 05DAD	1855	19481112	19481112	157.55	19870603	244.5	19901213	232.6
LSC	D-10-10 20DCC	1862	19490118	19490118	155.43	19730118	226	19901213	207.1
LSC	D-10-11 17CAB2	2140	19841023	19841023	467.4	19901213	470.1	19901213	470.1
LSC	D-11-10 15AAD	1909	19521212	19521212	167.09	19770106	228	19910123	213.34
LSC	D-11-11 11DCD	2148	19581212	19581212	379.42	19841127	454.2	19901213	452.6
LSC	D-11-11 16CDD2	1968	19841126	19901210	282.1	19841126	298.6	19901210	282.1
LSC	D-11-11 34ADD2	2008	19841127	19901210	294.4	19841127	312.8	19901210	294.4
LSC	D-12-11 12BDC	2060	19521103	19521103	226.7	19821220	353.3	19901210	272.4
LSC RES	D-03-04 35DCB	1188	19830107	19910103	98.2	19880610	139.7	19910103	98.2
LSC RES	D-04-03 09CDD PZ1	1147	19720301	19860610	141	19720301	241.7	19901211	150.3
LSC RES	D-04-05 02BCB	1225	19830114	19881205	51.8	19830114	94	19910103	61
LSC RES	D-04-05 15BAD	1292	19830107	19891204	77.4	19830107	132.2	19910103	101.8
LSC RES	D-04-06 05ADD	1254	19830112	19860527	66.6	19830112	110.4	19910103	81.3
LSC RES	D-04-06 23BAA	1287	19620516	19850627	42.9	19830112	92.9	19910103	70.1
LSC RES	D-04-08 02CCC	1532	19410612	19410612	157.96	19700211	242.8	19901214	239.6
LSP	D-06-16 08DAC5	2040	19680308	19880112	35	19810131	41	19901210	36.8
LSP	D-08-16 25DCD	2910	19480700	19480700	375	19780106	496.7	19901211	493.1
LSP	D-12-18 24AAB	2940	19660408	19850108	33	19740212	75.4	19901212	73
LSP	D-12-19 19ADB	3000	19491207	19840111	19.5	19761217	53.6	19901212	51.6
LSP	D-15-20 10CAB	3319	19620509	19790213	36.3	19760126	47.1	19901212	41

See p. 351 for Ground-Water Areas and Abbreviations.

WATER-LEVEL INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	LAND-SURFACE ALTITUDE	DATE RECORDS BEGAN	DATE	WATER LEVEL IN FEET BELOW LAND SURFACE					1991
					HIGHEST	DATE	LOWEST	DATE		
LVR	A-03-06	15ABA	1674	19700600	19700600	331	19891211	356.5	19901206	352.9
LVR	A-10-10	03BAD	4985	19861125	19861125	139.9	19910717	181.4	19910312	173.6
LVR	A-10-10	03BAD							19910717	181.4
LVR	A-10-10	03CCD	4930	19881125	19890525	62.71	19900705	83.3	19901107	79
LVR	A-10-10	03CCD							19910312	79
LVR	A-10-10	03CCD							19910717	70
LVR	A-10-10	04ABD	4940	19750702	19790507	22.87	19910717	120.1	19901107	119.7
LVR	A-10-10	04ABD							19910312	119.7
LVR	A-10-10	04ABD							19910717	120.1
LVR	A-10-10	04DBA	4960	19780123	19790406	66.94	19910717	170	19901107	163.6
LVR	A-10-10	04DBA							19910312	159.3
LVR	A-10-10	04DBA							19910717	170
LVR	A-10-10	05CCA	4820	19750703	19790507	18.45	19811119	28.06	19901106	25.49
LVR	A-10-10	05CCA							19910312	24.93
LVR	A-10-10	05CCA							19910717	22.9
LVR	A-10-10	09ADB	4970	19750716	19790406	14.2	19900705	29.39	19901107	27.7
LVR	A-10-10	09ADB							19910312	25.9
LVR	A-10-10	09ADB							19910717	27
LVR	A-10-10	11ACB	4828	19861125	19910312	5.1	19910717	8.95	19901107	8.21
LVR	A-10-10	11ACB							19910312	5.1
LVR	A-10-10	11ACB							19910717	8.95
LVR	A-11-10	27CCB	5000	19630418	19630418	92	19750702	197	19901108	122.11
LVR	A-11-10	27CCB							19910312	121.1
LVR	A-11-10	27CCB							19910717	118
LVR	A-11-10	27DDB	5052	19750701	19860114	87.6	19790412	128.7	19901106	96.5
LVR	A-11-10	31DAC	5060	19750701	19850524	156.14	19780201	170.8	19901107	162.7
LVR	A-11-10	31DAC							19910312	162
LVR	A-11-10	31DAC							19910717	160.1
LVR	A-11-10	32ACD	5140	19811217	19910717	242	19811217	263.92	19901107	243.6
LVR	A-11-10	32ACD							19910312	243.2
LVR	A-11-10	32ACD							19910717	242
LVR	A-11-10	34ABA	5070	19710331	19820610	76.8	19710331	235	19901107	92.46
LVR	A-11-10	34ABA							19910312	92.82
LVR	A-11-10	34DDC	5040	19780302	19800507	47.98	19861124	122.35	19901107	92.4
LVR	A-11-10	34DDC							19910312	89.65
LVR	A-11-10	35CCC	5060	19820119	19820119	83.44	19900516	121.4	19901107	113.5
LVR	A-11-10	35CCC							19910312	109.6
LVR	A-11-10	35CCC							19910717	107.9
LVR	A-11-10	36ACD	4750	19861125	19910312	9.85	19900830	12.91	19901107	12.19
LVR	A-11-10	36ACD							19910312	9.85
LVR	A-11-10	36ACD							19910717	11.1
MMU	B-05-12	30DDD	1739	19530227	19731207	88.4	19700220	122.6	19910109	113.7
MMU	B-05-12	32ADB	1697	19530227	19530227	52.55	19891204	108.6	19910109	106.4
MMU	B-05-13	01ACB	1862	19801204	19801204	365.4	19891205	387.8	19910109	384.3
MMU	B-05-13	05CBB	2018	19580700	19580700	259	19910109	479.1	19910109	479.1
MMU	B-05-13	08DAA	1922	19620330	19620330	181.79	19910109	429.2	19910109	429.2
MMU	B-05-13	19BBD2	1955	19801205	19860101	299	19910109	336.4	19910109	336.4
MMU	B-05-13	28ACC	1918.3	19561123	19571011	194.44	19910109	274	19910109	274
MMU	B-06-11	05ADD	1992	19460327	19460327	16	19910813	228.9	19901114	228.5
MMU	B-06-11	05ADD							19910213	228.7
MMU	B-06-11	05ADD							19910516	228.8
MMU	B-06-11	05ADD							19910813	228.9
MMU	B-06-12	13DCD	1976	19570507	19570507	171.58	19891201	463.4	19910109	458.5
MMU	B-06-12	15BBB	1955	19580702	19600418	185.5	19910109	366.9	19910109	366.9
MMU	B-06-12	19BBB	1967	19651204	19651204	242.6	19891205	449.6	19910109	446
MMU	B-06-13	28DBD2	2009	19810825	19810825	479.3	19910109	524.3	19910109	524.3
MMU	B-07-08	15BAA	2257	19590401	19590401	457.85	19910108	594.1	19910108	594.1
MMU	B-07-08	20DDD	2224	19580930	19580930	412.3	19910108	618.3	19910108	618.3
MMU	B-07-09	33ABB	2235	19801230	19801230	580.6	19910108	605.8	19910108	605.8
MMU	B-07-10	19AAA	2054	19760817	19801210	327.6	19871210	347.8	19910108	341.9
MMU	B-07-10	33DDA	2203.52	19510220	19510220	392.66	19910109	514.6	19910109	514.6
MMU	B-07-12	26BCC	2098	19810825	19810825	320	19830127	322	19910109	321.8
MMU	B-08-07	33ABC	2426	19801117	19860101	412	19910107	415	19910107	415
MMU	B-08-10	36BBB	2198	19580530	19580530	392.68	19891129	521.8	19910108	521.5
N-C	A-04-02	11ADB	1430	19700408	19891201	362.2	19850625	369.4	19901221	362.8
N-C	A-04-02	14BBB	1397	19481115	19481115	278.2	19821020	486.8	19901218	475.6
N-C	A-04-04	06BBB	1730	19780100	19780100	491	19910814	539.2	19901112	536.2
N-C	A-04-04	06BBB							19910214	537
N-C	A-04-04	06BBB							19910515	538.2
N-C	A-04-04	06BBB							19910814	539.2
N-C	A-05-01	10AAB	1574	19820902	19861203	210.3	19870609	239.8	19901220	213.3
N-C	A-05-02	04CAB	1615	19820827	19881208	216.9	19870609	220.6	19901220	218.7
N-C	A-05-02	10ABA	1650	19770518	19830105	287.6	19770518	291	19901220	289.2
N-C	A-05-04	09ABB	2125	19850102	19871222	587.9	19850102	603	19901206	597.4
N-C	A-06-02	30AAA	1721	19761214	19880606	193.2	19810305	214	19901220	193.2
N-C	A-06-04	21DAC	2180	19761110	19810310	65.4	19901206	158.6	19901206	158.6
N-C	A-07-02	24BDA	2160	19770400	19810310	15.8	19891204	55.2	19901220	46
N-C	A-07-02	34ACD	2020	19871216	19880606	35.1	19901220	43.1	19901220	43.1
N-C	B-05-01	14CAB	1503	19821001	19870605	437.1	19821001	564.7	19910104	445.3

See p. 351 for Ground-Water Areas and Abbreviations.

WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	LAND- SURFACE ALTITUDE	DATE RECORDS BEGAN	DATE	WATER LEVEL IN FEET BELOW LAND SURFACE					1991
					HIGHEST	DATE	LOWEST	DATE		
PRZ	A-18-23 06CDC2	5250	19670111	19700306	27.37	19681017	36.68	19901106	29.6	
PRZ	A-18-23 06DDC1	5250	19670111	19670111	28	19830118	37.1	19901106	31.3	
PRZ	A-18-30 20CDD	6381	19690710	19901107	357	19760129	366.8	19901107	357	
RAN	B-03-12 19AAA	1410	19780120	19910124	367.6	19881214	387.6	19910124	367.6	
RAN	B-03-13 28ADC	1338	19841128	19910124	314.7	19870612	315.5	19910124	314.7	
RAN	B-04-14 32BAA	1235	19780922	19780922	240	19890119	285.3	19910108	279.2	
RAN	B-04-15 13ADA	1239	19781118	19781118	270	19890119	332.3	19910108	320.9	
RAN	B-04-15 14CAA	1175	19880111	19900228	245.6	19890504	278.1	19901113	254.7	
RAN	B-04-15 14CAA							19910212	249.3	
RAN	B-04-15 14CAA							19910516	262.1	
RAN	B-04-15 14CAA							19910814	270.2	
RAN	B-05-15 06BAA2	1156	19790110	19790110	227.7	19810212	251.45	19910109	229.8	
RAN	B-05-15 35BDD2	1208	19771223	19771223	230	19890119	289.3	19910108	287.9	
RAN	B-06-16 12AAA	1205	19670808	19670808	275.8	19820125	297.2	19910109	286.2	
RAN	B-06-16 22ADA	1121	19480608	19610526	167.4	19840118	198.1	19910108	186.2	
RAN	B-06-16 33AAA	1064	19540331	19570122	121.21	19770211	149.98	19910108	130.2	
RAN	B-07-17 22ABC1	925	19450109	19451003	26.92	19910109	51.95	19910109	51.95	
SAC	B-15-16 07BDD	2340	19860212	19901106	934.8	19890112	935.3	19901106	934.8	
SAC	B-17-17W19BAD	1835	19730118	19860129	382.8	19750123	387.19	19901106	383.4	
SAC	B-20-18 22AAC	2495	19640504	19730118	732.9	19810217	767.7	19901107	745.9	
SAC	B-20-18 22AAC							19901113	744.3	
SAC	B-20-18 22AAC							19910212	744.4	
SAC	B-20-18 22AAC							19910507	744.1	
SAC	B-20-18 22AAC							19910807	744.5	
SAC	B-21-17 24CBC	3330	19780417	19780417	118	19901107	132.4	19901107	132.4	
SAC	B-21-17 34DDDB	3050	19520215	19901107	56.7	19530213	62.59	19901107	56.7	
SAC	B-21-18 21BCC	2665	19840116	19840116	897	19850115	900.5	19901108	897.6	
SAF	D-04-22 35ADA	2857.54	19391020	19850207	5.73	19580128	41.6	19901211	13	
SAF	D-05-23 02DBC	2720	19680509	19820125	11.2	19901211	30.72	19901211	30.72	
SAF	D-05-23 03CAB	2790	19641100	19810120	61.53	19740218	90.1	19901211	75.7	
SAF	D-05-23 25DCD	2778	19680509	19820124	49	19710119	55.64	19901211	52.4	
SAF	D-05-24 08CCB2	2749	19680327	19791219	36.46	19780209	41.08	19901211	39.7	
SAF	D-05-24 25BBC	3065	19680516	19791219	99.3	19770118	178.38	19901211	159.22	
SAF	D-06-25 25CDD	2875	19580113	19680509	13.76	19891128	42.8	19901211	41.7	
SAF	D-06-25 30DAC	2885	19391030	19860519	12.8	19440929	18.81	19901213	17.8	
SAF	D-07-26 22BAB	2951.17	19400109	19430112	23.19	19480428	58.23	19901212	33.82	
SAF	D-07-27 02ADD1	3065	19521201	19840119	20.1	19570930	134.94	19901212	24.3	
SAF	D-08-26 33CCC1	3340	19500313	19500313	16.98	19760109	53.38	19901211	38.58	
SAF	D-08-30 25DCB2	3965	19860623	19870202	465.9	19901212	467.1	19901212	467.1	
SBV	D-24-30 16CCC	3800	19710701	19830218	29	19850301	30.7	19901204	29.6	
SFP	A-20-06 02BBC	7187	19630622	19831214	1076	19901106	1145.9	19901106	1145.9	
SFP	A-20-08 18BBB	6839.75	19621010	19840306	557.7	19650206	606.6	19901106	603.1	
SFP	A-21-06 35CBA	7140	19541208	19811102	1221	19901106	1271.2	19901106	1271.2	
SFP	A-22-06 27ADA1	7310	19671024	19790214	23.5	19780208	61.95	19901108	50.4	
SFP	A-22-07 32CBB	7175	19681008	19730409	48.65	19760119	137.4	19901108	130.4	
SFP	A-25-06 20ACC	6965	19661003	19760119	86.05	19780824	97.3	19901108	89.1	
SNO	A-12-22E19ADD	5733	19720223	19860417	70.7	19721207	90.1	19901107	78.7	
SNO	A-13-21 10CDA	5632	19640608	19640608	122.72	19901106	154.6	19901106	154.6	
SNO	A-13-21 24CCB	5618	19520424	19580424	60.21	19700305	97.28	19901106	93.9	
SNO	A-13-21 34DCC2	5658	19500914	19530114	74.33	19820216	136.8	19901107	134.4	
SRV	A-01-01 04AAA2	1028	19530202	19860109	81.7	19641216	193.32	19901022	108	
SRV	A-01-01 04AAA2							19901127	101.7	
SRV	A-01-01 04AAA2							19901128	102.19	
SRV	A-01-01 04AAA2							19901227	108.73	
SRV	A-01-01 04AAA2							19910129	114.83	
SRV	A-01-01 04AAA2							19910228	104.6	
SRV	A-01-01 04AAA2							19910326	99.85	
SRV	A-01-01 04AAA2							19910426	126.92	
SRV	A-01-01 04AAA2							19910529	123.03	
SRV	A-01-01 04AAA2							19910627	130.29	
SRV	A-01-01 04AAA2							19910730	131.35	
SRV	A-01-01 04AAA2							19910827	132.72	
SRV	A-01-01 04AAA2							19910926	124.23	
SRV	A-01-01 19DCD1	965	19520124	19850626	24.8	19640214	59.7	19901127	31.4	
SRV	A-01-02 09AAB2	1058	19590108	19840112	78.3	19620201	145.79	19901217	96.2	
SRV	A-01-02 19BAA	1025	19570208	19840112	43.4	19620131	113.12	19901217	61.9	
SRV	A-01-02 26AAA	1042	19480713	19790122	27.7	19590109	74.42	19910103	48.4	
SRV	A-01-03 05BAA	1087	19830210	19850624	65.5	19891206	77.7	19901207	77.6	
SRV	A-01-03 18BBC	1058	19720111	19851211	51.9	19880608	98.4	19901217	64.5	
SRV	A-01-03 28ABD	1089	19820913	19841203	48.7	19861201	67.3	19910122	63.01	
SRV	A-01-04 18DAD	1130	19511119	19830527	18.93	19761216	61.8	19901203	49.9	
SRV	A-01-05 06BDD	1201	19570212	19831212	77.1	19901203	165.4	19901203	165.4	
SRV	A-01-05 26DDD	1225	19451210	19451210	66	19790100	227	19901123	174.8	
SRV	A-01-06 03ADA	1400	19590100	19590100	422.14	19760109	519.8	19901207	444.5	
SRV	A-01-06 08CCD2	1288	19490309	19490309	165	19780200	388	19901123	295.9	
SRV	A-01-06 14AAA2	1426	19640228	19880608	476.7	19790110	579.6	19901203	487.7	

WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	LAND- SURFACE ALTITUDE	DATE RECORDS BEGAN	DATE	WATER LEVEL IN FEET BELOW LAND SURFACE					1991
					HIGHEST	DATE	LOWEST	DATE		
SRV	A-01-07 11CAA	1712	19711223	19881207	357.4	19711223	363	19901211	357.7	
SRV	A-01-07 18ACC	1481	19830420	19891205	532.8	19830420	601.1	19901203	536.4	
SRV	A-01-07 26AAC2	1570	19770805	19770805	496	19851218	523.3	19901210	522.8	
SRV	A-01-07 32ACA	1431	19861201	19881206	481	19861201	510	19901203	489.1	
SRV	A-01-08 10DCC	1867	19821209	19850626	83.6	19821209	93	19901211	92.1	
SRV	A-01-08 25CBA	1745	19750110	19750110	280	19870609	284.3	19901211	281.1	
SRV	A-02-01 14BBA	1085	19490211	19490211	74.2	19770609	241	19901022	151.8	
SRV	A-02-01 31DAA	1018	19620213	19860106	88	19620213	167.63	19901127	108	
SRV	A-02-02 18DDD	1122	19630218	19880608	164	19790100	230	19901022	170.6	
SRV	A-02-03 07CAA	1160.4	19250901	19250901	9	19821201	131.8	19901218	114	
SRV	A-02-04 22BDD	1290	19520722	19520722	155	19660920	387.1	19901205	357.4	
SRV	A-02-04 23BCC2	1270	19660923	19880111	337.4	19790100	403	19901022	355.6	
SRV	A-02-04 29DAB	1241	19840710	19891205	10.6	19900427	13.3	19901204	12.2	
SRV	A-02-05 19ABA	1259	19660720	19871221	237	19660720	311.66	19901012	251.5	
SRV	A-02-06 32ACD	1298	19590210	19851210	282	19790109	402.7	19901023	313	
SRV	A-02-07 33BCB	1820	19830420	19850620	30	19881205	37.9	19901203	37.9	
SRV	A-03-01 21CBB	1127	19680402	19680402	209.5	19850624	278.6	19901126	245.9	
SRV	A-03-02 22BAA	1249	19480907	19481229	186.17	19820901	349.16	19901218	330.3	
SRV	A-03-02 24CCB	1257	19740116	19891204	318.4	19780216	364.7	19901218	321.1	
SRV	A-03-02 29DDA2	1195	19680111	19700128	224.7	19871223	346.3	19901022	264.7	
SRV	A-03-03 32DAA	1244	19821129	19891204	245	19821129	286.8	19901217	257.6	
SRV	A-03-04 17BAA	1414	19630116	19630116	283.9	19850104	448.4	19901207	432.5	
SRV	A-03-04 24CAA	1375	19570212	19570212	205.17	19901205	301	19901205	301	
SRV	A-03-05 21BBA	1435	19660824	19660824	240	19891208	338.1	19901207	325.7	
SRV	A-03-05 25CAB	1555	19660823	19660823	450	19860603	547.6	19901207	508.3	
SRV	A-03-07 06CDA	1415	19850110	19901206	27.6	19860530	40.5	19901206	27.6	
SRV	A-04-01 18DAA	1250	19620222	19620222	206.72	19901014	354.1	19901014	354.1	
SRV	A-04-01 22AAA	1280.6	19481229	19481229	199.4	19841205	493.3	19901218	479.3	
SRV	A-04-01 30AAB2	1230	19491103	19491103	174.26	19901014	511	19901014	511	
SRV	A-04-02 19BCC	1276	19481104	19481229	221.47	19871222	468	19901218	449.3	
SRV	A-04-02 20CDD	1290	19481104	19481104	246.7	19870609	446.8	19901218	437.5	
SRV	A-04-02 32DDA	1274	19821130	19910515	437.65	19870706	472.35	19901112	440.55	
SRV	A-04-02 32DDA							19910214	438.55	
SRV	A-04-02 32DDA							19910515	437.65	
SRV	A-04-02 32DDA							19910814	438.45	
SRV	A-04-02 36AAA	1376	19481220	19481220	273.11	19870304	573.8	19901014	531.1	
SRV	A-05-01 33BCC	1391	19821022	19841211	194.4	19901014	213.4	19901014	213.4	
SRV	A-05-04 25DBD	2250	19660916	19740121	292.1	19720112	297.4	19901206	297.3	
SRV	B-01-01 10AAA2	983	19560116	19860108	61.2	19640121	117.2	19901127	73.1	
SRV	B-01-01 12BAA2	980	19460306	19460306	30.89	19620214	130.48	19901127	62.7	
SRV	B-01-02 05CBB	1063	19470214	19471106	168.95	19761220	272.1	19901127	222.1	
SRV	B-01-02 16BBB	987	19620200	19901127	136	19710208	230.2	19901127	136	
SRV	B-01-02 23AAB	943	19620225	19841214	58.1	19621228	108.1	19901127	61.2	
SRV	B-01-02 28CBD	890	19560109	19870601	19.7	19660121	64.38	19901127	23.2	
SRV	B-01-02 36BBC	891	19510901	19830209	6	19650203	70.53	19901127	10.9	
SRV	B-01-03 19CBB	995	19560110	19570116	130.11	19650203	148.3	19901128	134.4	
SRV	B-01-03 21DBB	987	19560110	19560110	137.3	19780510	167	19901128	147.1	
SRV	B-01-03 34BBB	917	19280430	19440501	54.6	19660121	81.85	19901128	67	
SRV	B-01-04 27ABB	988	19560110	19870220	118.95	19720114	159.5	19901128	127.9	
SRV	B-02-01 14CBB	1057	19601229	19651221	130.08	19800116	218.8	19901128	203.7	
SRV	B-02-01 18CBB2	1078	19761223	19901128	359.6	19821025	413	19901128	359.6	
SRV	B-02-01 20BCC	1042	19630109	19881206	275.6	19871214	381.9	19901128	280.7	
SRV	B-02-01 33BBB2	1009	19560215	19881206	110.2	19680119	159.9	19901128	121.9	
SRV	B-02-02 02BAD	1175	19600209	19600209	285.78	19821201	472.3	19901129	446.7	
SRV	B-02-02 04DCB	1204	19460207	19460207	202.8	19901129	363.4	19901129	363.4	
SRV	B-02-02 22ABB	1119	19620223	19620223	337.62	19821201	410.1	19901129	358.4	
SRV	B-03-01 05ABB	1238	19820112	19851205	393.9	19820112	418.7	19901014	417	
SRV	B-03-01 08ABB1	1217	19511114	19520129	246.13	19761216	439.8	19901129	358.2	
SRV	B-03-01 24BBB3	1118	19770117	19850115	292.5	19901206	340.2	19901206	340.2	
SRV	B-03-01 27BBB	1136	19821220	19860225	345.3	19821220	362.5	19901206	349.8	
SRV	B-03-01 29BCC	1153	19760719	19861208	416.9	19891128	452.2	19901129	433.1	
SRV	B-03-01 34DBB1	1100	19570128	19570128	224.07	19841218	340.6	19901206	326.1	
SRV	B-03-02 21ABA	1332	19500321	19500321	298.72	19651120	466.4	19901206	406.8	
SRV	B-04-01 09BCD	1341	19381101	19381101	180	19901014	395.5	19901014	395.5	
SRV	B-04-01 19BDC	1320	19470401	19470401	230	19821203	489.6	19901014	477.4	
SRV	B-04-02 05DBB	1478	19821102	19821102	313.4	19901013	323.8	19901013	323.8	
SRV	B-04-02 16AAD	1411	19830913	19830913	311.2	19901013	321.1	19901013	321.1	
SRV	B-04-02 27DCD	1332	19381201	19381201	203	19901014	480.8	19901014	480.8	
SRV	B-04-02 36BCB	1306	19570129	19570129	354.45	19820112	490.8	19901014	466.5	
SRV	B-04-03 04BDB	1595	19821008	19881207	358.7	19821008	369.57	19901013	362	
SRV	B-04-03 14ABA	1500	19841219	19841219	300.6	19901013	309.7	19901013	309.7	
SRV	B-05-02 24BAB	1580	19830112	19830112	499.7	19901013	510.3	19901013	510.3	
SRV	B-05-02 35BAA	1491	19550215	19550215	330.41	19810129	388.4	19901014	386.5	
SRV	B-05-03 22ADD	1649	19821104	19881207	422.2	19821104	424.9	19901013	424.8	
SRV	B-06-02 18DBB	2105	19830111	19881207	516	19851211	519.7	19901013	516.4	
SRV	B-06-02 31BDD	1862	19821103	19841221	650.8	19851211	655.7	19901013	652	
SRV	B-06-03 05ADD	2220	19841219	19881207	170.1	19841219	171.9	19901012	171	
SRV	B-06-03 33DCB	1850	19830111	19880602	569.9	19830111	603.9	19901013	595.2	
SRV	C-01-02 08CDA	885	19560116	19841221	41.2	19650208	67.65	19901206	42.5	
SRV	C-01-03 08CBD	838	19821007	19821206	3.8	19880601	17.39	19901206	16.1	
SRV	C-01-04 03ABB	900	19780328	19830209	52.6	19790510	66.4	19901128	61.9	
SRV	C-01-04 07BDD	867	19810218	19821130	37.5	19870611	43.3	19901207	42.9	
SRV	C-01-04 26ABB	823	19821129	19850626	21.5	19891129	25.7	19901207	23.6	

WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	LAND- SURFACE ALTITUDE	DATE RECORDS BEGAN	DATE	WATER LEVEL IN FEET BELOW LAND SURFACE					1991
					HIGHEST	DATE	LOWEST	DATE		
SRV	D-01-01 13DDD1	1010	19630423	19690129	38	19781219	65.15	19901114	57.3	
SRV	D-01-01 13DDD1							19910212	56	
SRV	D-01-01 13DDD1							19910515	54.6	
SRV	D-01-01 13DDD1							19910814	54.1	
SRV	D-01-03 02BDB	1203	19640310	19710212	123.7	19780424	148.2	19901205	141.1	
SRV	D-01-04 03BBE2	1182	19730400	19881205	106.7	19780200	134	19910122	116.4	
SRV	D-01-04 36DDD	1183	19560117	19891205	97.9	19780424	133.1	19901204	104.2	
SRV	D-01-05 23DDD	1232	19570213	19881206	149.2	19660126	211.6	19901204	163.8	
SRV	D-01-05 36DDD	1252	19490106	19490106	131.64	19711222	230.6	19901204	158.3	
SRV	D-01-06 04DAA	1276	19630219	19891206	204.1	19771228	344.2	19901205	228.9	
SRV	D-01-06 11CDD2	1295	19560302	19570205	265.05	19771228	402.6	19901205	315.6	
SRV	D-01-06 24CCC2	1312	19590101	19630121	156.21	19771229	378.9	19901205	275.3	
SRV	D-01-06 27DDD2	1298	19821202	19891201	94.4	19821202	110	19901205	96.3	
SRV	D-01-07 25ADD	1458	19770928	19800131	315.7	19901211	337.5	19901211	337.5	
SRV	D-01-07 31BAC1	1337	19540331	19540331	172.29	19580729	219.55	19901203	190.8	
SRV	D-01-08 21ADB PZ1	1565	19790217	19790217	308.7	19901214	440.5	19901214	440.5	
SRV	D-01-08 21ADB PZ2	1565	19790217	19861205	315.2	19790217	396.8	19901214	324.4	
SRV	D-02-03 22DDD	1113	19551001	19551001	50	19790110	89.4	19901211	63.4	
SRV	D-02-05 07ADD	1196	19560117	19881206	109.3	19751205	146.4	19910102	117.8	
SRV	D-02-05 20DDA	1203	19560117	19881205	87.8	19640220	158.65	19910103	91.7	
SRV	D-02-05 33AAD2	1213	19680124	19871214	99	19790108	180.62	19910103	99.2	
SRV	D-02-06 12DDA1	1349	19390915	19390915	119.6	19880608	371.9	19901203	288.8	
SRV	D-02-06 26DDD	1372	19490107	19490107	151.1	19741226	362	19901013	186.5	
SRV	D-02-07 03CDD	1408	19290111	19290111	117	19860612	447.1	19901203	334.1	
SRV	D-02-07 04ADD	1390	19520117	19520117	181.51	19860612	415.7	19910102	318.9	
SRV	D-02-07 12DDD	1457	19490217	19491020	196.7	19850626	391.7	19901212	347.7	
SRV	D-02-07 25DDD3	1464	19660127	19660127	350.4	19850627	606.8	19901212	453.8	
SRV	D-02-07 27DDA	1427	19490117	19490117	170.79	19860604	539.7	19901212	426.2	
SRV	D-02-08 02CBB PZ1	1573	19790217	19790217	418.2	19910117	451.8	19910117	451.8	
SRV	D-02-08 02CBB PZ2	1573.3	19851217	19880607	426.2	19881208	447.5	19910117	444.3	
SRV	D-02-08 20DDA	1507	19490118	19490118	207.54	19850628	575.6	19901212	460.2	
SRV	D-02-08 27DDD	1552	19490119	19490119	231.74	19860604	524.5	19901212	486.2	
SRV	D-02-08E07DDD	1480	19490118	19490118	192.04	19901212	380.8	19901212	380.8	
SRV	D-02-09 36DED	1750	19741201	19741201	510	19910117	588.5	19910117	588.5	
SRV	D-02-10 16BCB	1884	19750101	19861202	319	19750101	340	19901213	337	
SRV	D-02-10 21ADB	1903	19841219	19841219	541.3	19901213	547.2	19901213	547.2	
SRV	D-02-12 07ABA	2440	19830711	19891204	9.2	19850624	28.2	19901213	10.5	
SRV	D-03-08 04BBA	1510	19520218	19520218	215.73	19850627	578.4	19901212	472.3	
SRV	D-03-08 19ADD	1541	19841205	19880607	519.9	19851219	538.1	19901214	524.5	
SRV	D-03-08 20BDC	1522	19511121	19511121	216.04	19841205	503.8	19901212	500.3	
SRV	D-03-08 35BAA	1518	19821129	19880606	432.2	19821129	467	19901214	445.4	
SRV	D-03-09 09DCD PZ1	1628	19790220	19790220	475.4	19860605	498.2	19901214	496.1	
SRV	D-03-09 09DCD PZ2	1628	19790220	19790220	480.1	19880609	508.1	19901214	500.5	
SRV	D-03-09 20DAA	1595	19630213	19630213	364	19850625	490.2	19901214	478.8	
SRV	D-03-09 32ABA	1566	19481201	19481201	230	19821201	514.3	19910117	413.8	
SRV	D-04-09 05AAB2	1550	19821130	19881207	407.7	19851219	419.7	19910117	408.1	
SRV RES	A-02-05 08AAA	1308	19720111	19871221	253.6	19790509	313.8	19901116	275.8	
SRV RES	A-02-05 08AAA							19910212	274.2	
SRV RES	A-02-05 08AAA							19910516	278.4	
SRV RES	A-02-05 08AAA							19910814	281.5	
SRV RES	A-02-05 10DDD1	1328	19660909	19870601	301.8	19760112	352	19901205	311	
SRV RES	D-02-04 08DBA	1148	19710101	19710101	87	19891205	159.5	19901203	107.3	
SRV RES	D-02-04 25DDD	1181	19720114	19871214	84.1	19870603	169.4	19910103	84.8	
SSI	27S 21W 07 232A	4019	19531216	19610117	80.71	19830218	116.4	19901212	111.9	
SSI	27S 21W S06 443	4001	19800114	19800114	95.05	19870217	117.4	19901212	114.3	
SSI	28S 21W 31 133	4137	19540127	19540127	99.32	19740116	161.7	19901212	116.4	
SSI	29S 22W 11 243A	4164	19540127	19540127	115.84	19810212	180.4	19901212	137.32	
SSI	D-12-27 32AAB1	3979	19520121	19901213	131.1	19880128	139.4	19901213	131.1	
SSI	D-12-28 15BCB	3684	19540127	19540127	83.36	19891129	328.5	19901213	323.9	
SSI	D-12-28 25DCC	3645	19630314	19630314	126.65	19900919	289.3	19901115	280.3	
SSI	D-12-28 25DCC							19910214	270.8	
SSI	D-12-28 25DCC							19910514	269.4	
SSI	D-12-28 25DCC							19910603	274.4	
SSI	D-12-28 25DCC							19910812	281.9	
SSI	D-12-30 02CCA	3741	19621126	19621126	21.7	19840223	280.3	19901213	272.6	
SSI	D-13-28 22BCC	3838	19630000	19630000	316.6	19901213	496	19901213	496	
SSI	D-13-29 18BDB	3718	19151211	19151211	40	19901213	329.5	19901213	329.5	
SSI	D-13-29 24DCC2	3655	19520423	19590123	0.15	19891129	143.1	19901212	127.4	
SSI	D-13-29 28BBB	3738	19580301	19580301	115	19880128	146.1	19901212	141.6	
SSI	D-13-31 29DDA	3620	19540101	19790205	47.4	19550202	64.04	19901212	50.7	
SSI	D-14-31 08ABC1	3632	19540128	19560112	38.15	19621018	69.49	19901212	57	
SSI	D-14-31 19BAC	3713	19461119	19481220	13.68	19901212	65.02	19901212	65.02	
SSI	D-14-31 22ADC	3690	19621017	19621017	54.68	19800305	131	19901212	98.6	
SSI	D-14-31 25ADC2	3720	19621017	19840222	37.3	19760323	156.8	19901212	43.5	
SSI	D-14-31 34ACC	3774	19850130	19890209	134.6	19850130	151.9	19901212	145.8	
SSI	D-14-31 35BCC	3772	19621017	19630226	101.3	19760225	188.3	19901212	158.7	
SSI	D-16-32 21CCB	4088	19531215	19540128	150.84	19800305	207	19901212	189.6	
SSI	D-17-32N06AAB	4215	19461001	19461001	269.25	19741204	328.7	19901212	307.8	
SSI	D-18-32 26BBC	4125	19491128	19491128	74.85	19790216	133.7	19901212	113.76	

See p. 351 for Ground-Water Areas and Abbreviations.

WATER-LEVEL INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	LAND-SURFACE ALTITUDE	DATE RECORDS BEGAN	WATER LEVEL IN FEET BELOW LAND SURFACE					1991
				DATE	HIGHEST	DATE	LOWEST	DATE	
STJ	A-11-28 22BDA2	6062	19801210	19801210	50	19901106	64.79	19901106	64.79
STJ	A-12-28 07CDB	5925	19560518	19570406	28.6	19750912	55.18	19901106	39.8
STJ	A-13-27 15BDC	5845	19750211	19790213	256.32	19860107	273.4	19901106	265.5
STJ	A-13-28 27BDC	5670	19440607	19500807	0.95	19520702	8.93	19901106	7.4
STJ	A-13-29 35AAA	6176	19570200	19810925	148.3	19570200	212	19901106	189.9
TON	A-05-11 18AAA	2145	19700805	19850118	4	19700805	12	19901109	10.48
TON	A-06-11 05CAD	2720	19781102	19810325	31.5	19781102	57.5	19901109	49.5
TON	A-09-10 05AAA	4200	19780905	19810324	74.9	19901107	97.9	19901107	97.9
TON	A-09-10 20BAA	3155	19780912	19890119	57.9	19901107	74.2	19901107	74.2
TON	A-09-10 32BDB	3030	19720421	19730301	23.5	19750131	44	19901108	38.4
TON	A-10-10 02DDB1	4960	19820119	19830525	44.2	19900830	60.33	19901107	57.81
TON	A-10-10 02DDB1							19910312	57.39
TON	A-10-10 02DDB1							19910717	57.8
TON	A-10-10 22CAB2	4860	19841030	19850320	50.8	19900104	60.38	19901106	59.74
TON	A-10-10 22CAB2							19910312	59.5
TON	A-10-10 22CAB2							19910717	60.2
TON	A-10-10 23DDB	4700	19841114	19850524	22.92	19901106	35.04	19901106	35.04
TON	A-10-10 23DDB							19910312	33.64
TON	A-10-10 25BBA	4650	19841030	19850320	18.73	19900104	24.3	19901106	24.9
TON	A-10-10 25BBA							19910312	20.95
TON	A-10-10 25BBA							19910717	22.7
TON	A-10-10 27CAA	4760	19780910	19840119	20.97	19900208	29.2	19901106	28.7
TON	A-10-10 28BDC2	4640	19841030	19850320	8.22	19900705	20.35	19901106	18.8
TON	A-10-10 28BDC2							19910312	15.35
TON	A-10-10 28BDC2							19910717	15.2
TON	A-10-10 29ACA	4570	19841030	19850320	5.44	19900705	14.19	19901106	12.72
TON	A-10-10 29ACA							19910312	8.6
TON	A-10-10 29ACA							19910717	12.25
TUB RES	03 077-07.55X06.55	5108	19550900	19910409	55.8	19661013	85.65	19910409	55.8
TUB RES	03 077-13.05X06.81	5120	19690212	19750320	28.39	19800417	70.45	19910409	60.4
TUB RES	03 077-13.36X06.44	5175	19711108	19780207	29.9	19910409	57.5	19910409	57.5
TUB RES	03 077-13.38X05.87	5220	19710806	19730417	30.45	19900302	67.9	19910409	62.3
TUB RES	03 077-13.77X08.52	4940	19551202	19551202	23	19850717	36.7	19910409	29.5
USC	D-10-13 12DDA	3418	19590315	19881206	446.7	19790212	458.35	19901213	447.5
USC	D-10-14 29DCA	3273	19540603	19861210	301.9	19770208	328.4	19901213	303.9
USC	D-11-13 33DCC	2772	19570304	19570617	525.5	19770100	546.4	19901211	545.1
USC	D-11-14 04BBC2	3158	19820322	19901213	222.8	19820322	226	19901213	222.8
USC	D-12-12 22ADC	2139	19420426	19420514	92.4	19891128	131.2	19901211	119.65
USC	D-12-12 22DCD	2122	19550120	19680124	83.7	19800801	114.2	19901109	111.4
USC	D-12-13 12DAA	2570	19790108	19861218	140.2	19790108	174.7	19901214	159.27
USC	D-12-13 17AAA	2578	19811223	19811223	411.5	19890105	418.5	19901214	418.43
USC	D-12-13 18BCC	2412	19800201	19820201	322.2	19841029	330.6	19901214	328.81
USC	D-12-13 20DAD	2454	19820201	19820201	241	19901214	336.3	19901214	336.3
USC	D-12-13 22BBB	2422	19360729	19360729	193.41	19881209	256.6	19901211	254.85
USC	D-12-13 240BB1	2628.5	19800512	19840103	312.4	19901221	324.16	19901221	324.16
USC	D-12-13 30DAC	2328	19470923	19470923	215.48	19901214	249.75	19901214	249.75
USC	D-12-13 31DCD1	2240	19811228	19850104	134.6	19901227	156.96	19901227	156.96
USC	D-12-13 32BCD	2320	19811228	19850104	217.6	19901221	239.68	19901221	239.68
USC	D-12-13 36BCC	2540	19811222	19821201	347.5	19890106	357.7	19901221	357.36
USC	D-13-12 02BBA	2200	19811228	19850107	99.7	19901227	117.32	19901227	117.32
USC	D-13-12 12ABA	2183	19620119	19850107	57.3	19901227	87.71	19901227	87.71
USC	D-13-12 12CAA	2282	19570130	19670120	151.22	19901227	179.24	19901227	179.24
USC	D-13-13 06DDD	2224	19811228	19850107	88.7	19901227	123.56	19901227	123.56
USC	D-13-13 08DCB	2228	19811228	19850107	87.3	19901231	115.78	19901231	115.78
USC	D-13-13 13BBA	2395	19480130	19480130	141.91	19901211	226.3	19901211	226.3
USC	D-13-13 14ABA	2407	19811228	19851230	245.9	19901231	266.81	19901231	266.81
USC	D-13-13 16AAA	2261	19550125	19550125	85.93	19901211	142.6	19901211	142.6
USC	D-13-13 16BDB	2248	19700501	19700501	98.38	19901231	129.91	19901231	129.91
USC	D-13-13 16CCD	2248	19600126	19670411	83.88	19901231	123.65	19901231	123.65
USC	D-13-13 17AAA	2240	19530618	19530618	92.32	19901231	131.06	19901231	131.06
USC	D-13-13 17ABC	2233	19811228	19840105	92.8	19901231	118.5	19901231	118.5
USC	D-13-13 19CDC	2360	19670125	19670125	188.3	19901231	222.23	19901231	222.23
USC	D-13-13 21BAA	2251	19600126	19680129	82.45	19901231	123.58	19901231	123.58
USC	D-13-13 240BDD2	2320	19811229	19840105	97	19901228	138.65	19901228	138.65
USC	D-13-13 28CCB	2308	19811228	19860102	157.4	19901231	175.66	19901231	175.66
USC	D-13-13 33ABB	2285	19490131	19490131	47.29	19901231	126.98	19901231	126.98
USC	D-13-13 33DAC	2296.4	19460125	19460125	33.03	19901211	120.3	19901211	120.3
USC	D-13-13 34CDC	2292	19570205	19570205	71.3	19821201	173.6	19901231	113.79
USC	D-13-13 36DDC	2393	19500518	19500518	102.1	19901106	203.05	19901106	203.05
USC	D-13-14 21CDC2	2370	19851209	19860501	75	19910102	139.7	19901001	137.3
USC	D-13-14 21CDC2							19901101	138.7
USC	D-13-14 21CDC2							19901210	139.25
USC	D-13-14 21CDC2							19910102	139.7
USC	D-13-14 21CDC2							19910201	138.5
USC	D-13-14 21CDC2							19910228	138.3
USC	D-13-14 21CDC2							19910402	136.2
USC	D-13-14 21CDC2							19910501	130.4
USC	D-13-14 21CDC2							19910603	129
USC	D-13-14 21CDC2							19910802	129.5

See p. 351 for Ground-Water Areas and Abbreviations.

WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	LAND- SURFACE ALTITUDE	DATE RECORDS BEGAN	DATE	WATER LEVEL IN FEET BELOW LAND SURFACE					1991
					HIGHEST	DATE	LOWEST	DATE		
USC	D-13-14 22DCD	2425	19811221	19831227	49	19821201	56.2	19901218	56.1	
USC	D-13-14 26BBB	2464	19600315	19860801	67.2	19710800	84.08	19901001	78.8	
USC	D-13-14 26BBB							19901101	78.44	
USC	D-13-14 26BBB							19901130	78.37	
USC	D-13-14 26BBB							19901218	79.63	
USC	D-13-14 26BBB							19910102	78.08	
USC	D-13-14 26BBB							19910201	76.92	
USC	D-13-14 26BBB							19910228	76.37	
USC	D-13-14 26BBB							19910402	75.82	
USC	D-13-14 26BBB							19910501	74.76	
USC	D-13-14 26BBB							19910625	73.67	
USC	D-13-14 26BBB							19910802	73.07	
USC	D-13-14 26CCC2	2418	19851210	19910501	34.08	19900727	113.6	19901001	79.3	
USC	D-13-14 26CCC2							19901101	81.4	
USC	D-13-14 26CCC2							19901210	84.1	
USC	D-13-14 26CCC2							19910102	83.8	
USC	D-13-14 26CCC2							19910201	62	
USC	D-13-14 26CCC2							19910228	60.6	
USC	D-13-14 26CCC2							19910402	41	
USC	D-13-14 26CCC2							19910501	34.08	
USC	D-13-14 26CCC2							19910603	43.4	
USC	D-13-14 26CCC2							19910802	52.25	
USC	D-13-14 26CCD1	2418	19851210	19910501	46.75	19900702	117.4	19901001	85.3	
USC	D-13-14 26CCD1							19901101	85.3	
USC	D-13-14 26CCD1							19910102	88.4	
USC	D-13-14 26CCD1							19910228	70.85	
USC	D-13-14 26CCD1							19910402	55.35	
USC	D-13-14 26CCD1							19910501	46.75	
USC	D-13-14 26CCD1							19910603	54.2	
USC	D-13-14 26CCD1							19910802	62.9	
USC	D-13-14 26DAC1	2429	19851217	19851217	14.5	19861210	17.4	19901212	15.89	
USC	D-13-14 26DAC2	2430	19851217	19860331	10.6	19900702	26.1	19901001	14.25	
USC	D-13-14 26DAC2							19901101	16.2	
USC	D-13-14 26DAC2							19901210	17.46	
USC	D-13-14 26DAC2							19910102	11.9	
USC	D-13-14 26DAC2							19910201	12.56	
USC	D-13-14 26DAC2							19910228	12.68	
USC	D-13-14 26DAC2							19910402	11.16	
USC	D-13-14 26DAC2							19910501	12.34	
USC	D-13-14 26DAC2							19910603	14.74	
USC	D-13-14 26DAC2							19910802	17.95	
USC	D-13-14 26DDC	2425	19851211	19910501	15	19900430	84.1	19901001	27.6	
USC	D-13-14 26DDC							19901101	28.7	
USC	D-13-14 26DDC							19901210	30.4	
USC	D-13-14 26DDC							19910102	29.2	
USC	D-13-14 26DDC							19910201	21.35	
USC	D-13-14 26DDC							19910228	21.25	
USC	D-13-14 26DDC							19910402	16.1	
USC	D-13-14 26DDC							19910501	15	
USC	D-13-14 26DDC							19910603	18.45	
USC	D-13-14 26DDC							19910802	25.2	
USC	D-13-14 27ADA1	2440	19851213	19910501	33.1	19900702	69.7	19901001	54.7	
USC	D-13-14 27ADA1							19901101	52.8	
USC	D-13-14 27ADA1							19901210	52.7	
USC	D-13-14 27ADA1							19910102	52	
USC	D-13-14 27ADA1							19910201	45.25	
USC	D-13-14 27ADA1							19910228	43.9	
USC	D-13-14 27ADA1							19910402	35.7	
USC	D-13-14 27ADA1							19910501	33.1	
USC	D-13-14 27ADA1							19910603	36.7	
USC	D-13-14 27ADA1							19910802	41.4	
USC	D-13-14 27BAC2	2411	19811223	19831227	22.3	19890105	61.9	19901218	45.39	
USC	D-13-14 27BAC4	2418	19550505	19700801	19.7	19651013	80.38	19901001	54.6	
USC	D-13-14 27BAC4							19901101	51.8	
USC	D-13-14 27BAC4							19901210	54.4	
USC	D-13-14 27BAC4							19910102	44.8	
USC	D-13-14 27BAC4							19910201	41.75	
USC	D-13-14 27BAC4							19910228	46.55	
USC	D-13-14 27BAC4							19910402	31.9	
USC	D-13-14 27BAC4							19910501	36.9	
USC	D-13-14 27BAC4							19910603	43.85	
USC	D-13-14 27BAC4							19910802	49.4	
USC	D-13-14 27DDC3	2412	19851211	19860602	98.7	19900828	157.15	19901001	150.5	
USC	D-13-14 27DDC3							19901101	173.4	
USC	D-13-14 27DDC3							19910102	150.25	
USC	D-13-14 27DDC3							19910201	145.4	
USC	D-13-14 27DDC3							19910402	145.2	
USC	D-13-14 27DDC3							19910802	137.7	

See p. 351 for Ground-Water Areas and Abbreviations.

WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL		LAND- SURFACE ALTITUDE	DATE		WATER LEVEL IN FEET BELOW LAND SURFACE				
	NUMBER			RECORDS BEGAN	DATE	HIGHEST	DATE	LOWEST	DATE	1991
USC	D-13-14	28DAD	2390	19811201	19860331	72.6	19900702	146.5	19901001	128.4
USC	D-13-14	28DAD							19901101	127.8
USC	D-13-14	28DAD							19901210	130.7
USC	D-13-14	28DAD							19910102	132
USC	D-13-14	28DAD							19910201	116.3
USC	D-13-14	28DAD							19910228	117
USC	D-13-14	28DAD							19910402	83.7
USC	D-13-14	28DAD							19910501	83.5
USC	D-13-14	28DAD							19910603	91.9
USC	D-13-14	28DAD							19910802	104
USC	D-13-14	29CBB2	2374	19690930	19690930	95.4	19901107	187	19901107	187
USC	D-13-14	30CCC2	2356	19811229	19811229	137.2	19901219	174.27	19901219	174.27
USC	D-13-14	32ADA	2402	19810201	19810201	153.8	19901220	219.75	19901220	219.75
USC	D-13-14	34AAA1	2412	19851211	19860702	89.1	19900727	141.1	19901001	133.8
USC	D-13-14	34AAD	2421	19640114	19650413	61.59	19900828	169.7	19901001	168
USC	D-13-14	34AAD							19901101	167
USC	D-13-14	34AAD							19901210	165.7
USC	D-13-14	34AAD							19910102	165.7
USC	D-13-14	34AAD							19910201	164.8
USC	D-13-14	34AAD							19910228	164.1
USC	D-13-14	34AAD							19910402	160.7
USC	D-13-14	34AAD							19910501	156.1
USC	D-13-14	34AAD							19910603	150.25
USC	D-13-14	34AAD							19910802	144.8
USC	D-13-14	34ABB	2424	19650309	19660419	68	19910201	191.2	19901001	189.77
USC	D-13-14	34ABB							19901101	190.8
USC	D-13-14	34ABB							19901130	190.8
USC	D-13-14	34ABB							19910102	191.05
USC	D-13-14	34ABB							19910201	191.2
USC	D-13-14	34ABB							19910228	191.05
USC	D-13-14	34ABB							19910402	190.87
USC	D-13-14	34ABB							19910501	189.9
USC	D-13-14	34ABB							19910802	180.62
USC	D-13-14	34ACB2	2432	19611018	19620412	86.16	19901221	213.37	19901221	213.37
USC	D-13-14	34DCC2	2450	19620301	19620301	111.94	19880930	233.8	19901001	249.8
USC	D-13-14	35ADD	2454	19630308	19650706	81.3	19901220	204.08	19901220	204.08
USC	D-13-14	35CCA	2454	19650826	19660322	109.5	19890302	239.7	19901001	231.2
USC	D-13-14	35CCA							19901101	231.1
USC	D-13-14	35CCA							19901210	231.25
USC	D-13-14	35CCA							19901221	231
USC	D-13-14	35CCA							19910102	231.6
USC	D-13-14	35CCA							19910201	232.3
USC	D-13-14	35CCA							19910228	232.95
USC	D-13-14	35CCA							19910402	232.9
USC	D-13-14	35CCA							19910501	232.6
USC	D-13-14	35CCA							19910603	233
USC	D-13-14	35CCA							19910802	233.1
USC	D-13-14	35DDD	2474	19851213	19860303	208.8	19910802	251.3	19901001	246.4
USC	D-13-14	35DDD							19901210	246.4
USC	D-13-14	35DDD							19910228	245.35
USC	D-13-14	35DDD							19910501	301.8
USC	D-13-14	35DDD							19910802	251.3
USC	D-13-14	36CBD	2476	19580515	19580515	93.5	19901224	239.64	19901224	239.64
USC	D-13-14	36CCD	2482	19550502	19550502	97.55	19901224	251.68	19901224	251.68
USC	D-13-15	21ABB	2666	19610315	19861215	115.9	19650415	138.08	19901217	119.21
USC	D-13-15	22CDA	2576	19800123	19831227	16.2	19901217	37.46	19901217	37.46
USC	D-13-15	22CDC	2557	19560418	19831227	22.6	19610315	32.46	19901217	31.71
USC	D-13-15	27DDC	2586	19500423	19680409	59.01	19901217	95.4	19901217	95.4
USC	D-13-15	30BBD	2484	19640408	19831227	12	19901217	36.57	19901217	36.57
USC	D-13-15	30DDC	2476	19530128	19570130	11.07	19901217	28.93	19901217	28.93
USC	D-13-15	31ADA2	2475	19820621	19851231	17.1	19820621	119.5	19901217	37.61
USC	D-13-15	31DDC	2526	19560419	19560419	113.2	19901218	249.15	19901218	249.15
USC	D-13-15	33CBB	2500	19390922	19420117	8.76	19901217	63.95	19901217	63.95
USC	D-13-15	34AAC	2590	19480409	19480409	65.12	19901217	104.02	19901217	104.02
USC	D-13-15	34CDB1	2536	19811223	19850109	21.6	19901217	90.6	19901217	90.6
USC	D-13-16	29CCD	2734	19500317	19871130	131.25	19780200	188.01	19901212	143.5
USC	D-14-13	01DAB2	2395	19850109	19850109	178.6	19901226	190.53	19901226	190.53
USC	D-14-13	11BAB	2335	19600108	19600108	77.3	19901226	121.86	19901226	121.86
USC	D-14-13	13CBC	2367	19500209	19500209	30.35	19821201	90.4	19901221	87.85
USC	D-14-13	23ABD	2370	19820105	19851230	66.3	19820105	87.4	19901226	84.62
USC	D-14-13	24DAA	2438	19490210	19490210	84.87	19821201	149.4	19901221	140.56
USC	D-14-13	27ADD2	2396	19461104	19470227	33.59	19901228	107.47	19901228	107.47
USC	D-14-13	35CAB	2410	19310316	19320215	27.55	19820105	130.95	19901228	128.68
USC	D-14-13	35CAC1	2415	19310515	19340100	22.35	19821201	139.9	19901228	129.83
USC	D-14-13	35CDB	2425	19310915	19320215	28.6	19821201	141.3	19901228	130.77
USC	D-14-13	35DCB	2435	19820105	19870102	127.4	19821201	158.2	19901228	148.83
USC	D-14-13	36ACA1	2473	19540208	19560216	89.97	19821201	133.2	19901228	129.72
USC	D-14-13	36ACA2	2475	19611001	19611001	111	19821201	135.1	19901228	131.8
USC	D-14-14	02BDB	2480	19530319	19530319	97.38	19901217	261.59	19901217	261.59
USC	D-14-14	03CBC	2474	19460605	19460605	94.62	19901214	265.96	19901214	265.96
USC	D-14-14	04DAC2	2469	19811201	19811201	214.3	19901217	268.75	19901217	268.75
USC	D-14-14	08ADA	2485	19411000	19411000	118.1	19901217	262.76	19901217	262.76
USC	D-14-14	08BAA	2472	19301114	19400200	102.1	19901220	256.96	19901220	256.96
USC	D-14-14	08BAB	2477	19220101	19220101	111	19901220	262.05	19901220	262.05

WATER-LEVEL INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	LAND-SURFACE ALTITUDE	DATE RECORDS BEGAN	WATER LEVEL IN FEET BELOW LAND SURFACE					1991
				DATE	HIGHEST	DATE	LOWEST	DATE	
USC	D-14-14 09ABC	2482.39	19460607	19680400	165.85	19901217	271.18	19901217	271.18
USC	D-14-14 09BCD	2495	19811229	19811229	229.2	19901217	269.54	19901217	269.54
USC	D-14-14 14CAA	2565	19550331	19550331	181.82	19901214	321.07	19901214	321.07
USC	D-14-14 14CAC	2563	19550331	19651215	179	19901214	310.03	19901214	310.03
USC	D-14-14 16CCC PZ1	2480	19671206	19671206	140.71	19901211	218.9	19901211	218.9
USC	D-14-14 16CCC PZ2	2480	19671206	19690213	140.7	19901211	224.5	19901211	224.5
USC	D-14-14 16CCC PZ3	2480	19671206	19690213	156.4	19901211	225.1	19901211	225.1
USC	D-14-14 16CCC PZ4	2480	19671206	19671206	156.18	19901211	228.6	19901211	228.6
USC	D-14-14 17DBD	2469	19530516	19530516	115.42	19901220	223.33	19901220	223.33
USC	D-14-14 20CBB	2475	19490604	19500309	105.59	19901219	216.7	19901219	216.7
USC	D-14-14 21BCC	2500	19540404	19560323	132.85	19901219	236.64	19901219	236.64
USC	D-14-14 21CAA	2515	19550330	19560323	141.1	19901219	246.29	19901219	246.29
USC	D-14-14 24CAA1	2618	19540402	19540402	202.45	19901219	338.28	19901219	338.28
USC	D-14-14 24CDD	2633	19540402	19540402	209.36	19901219	323.68	19901219	323.68
USC	D-14-14 24DDD	2650	19550330	19550330	222.38	19901219	329.58	19901219	329.58
USC	D-14-14 35AAA	2643	19441107	19620323	247.59	19891130	305.8	19901212	305.15
USC	D-14-15 01ADD1	2599	19811222	19831227	5.2	19881229	23.9	19901213	19.33
USC	D-14-15 02DDA1	2572	19550411	19850101	6.3	19821001	45.4	19901213	37.08
USC	D-14-15 06BBB	2488	19831229	19831229	199.5	19901214	241.97	19901214	241.97
USC	D-14-15 07BBA2	2558	19811221	19811221	271.3	19901221	323.2	19901221	323.2
USC	D-14-15 08CBD	2575	19610323	19610323	177.8	19901210	316.13	19901210	316.13
USC	D-14-15 15DAD	2755	19811221	19811221	288	19910103	327.43	19910103	327.43
USC	D-14-15 16CDB	2620	19811221	19811221	251.3	19901110	289.84	19901110	289.84
USC	D-14-15 17CAA	2640	19650316	19650316	263.13	19901210	372.73	19901210	372.73
USC	D-14-15 17CCD	2643	19650316	19650316	267.66	19901210	375.87	19901210	375.87
USC	D-14-15 18CDA	2612	19811222	19811222	314.8	19901119	355.4	19901119	355.4
USC	D-14-15 18DDD	2636	19630304	19630304	257.39	19901126	380.8	19901126	380.8
USC	D-14-15 20BAB	2645	19640331	19640331	269.45	19901127	360.7	19901127	360.7
USC	D-14-15 21ADB	2675.2	19610415	19610415	213.37	19910108	293.35	19910108	293.35
USC	D-14-15 26CBC	2750	19811221	19811221	260.5	19910108	277.96	19910108	277.96
USC	D-14-15 28CBA	2726	19630716	19630716	259.3	19910109	303.87	19910109	303.87
USC	D-14-15 28CCC	2745	19640330	19640330	281.07	19910109	328.36	19910109	328.36
USC	D-14-15 28DAA	2688	19811221	19850115	226.3	19910108	242.35	19910108	242.35
USC	D-14-15 28DDD	2716	19630724	19630724	200.48	19910108	249.05	19910108	249.05
USC	D-14-15 29CBB	2701	19550405	19550405	244.21	19861230	318	19910109	316.13
USC	D-14-15 30ABC	2680	19610323	19610323	261.32	19861230	323.3	19910109	321.78
USC	D-14-16 05DBD2	2646	19811221	19850116	10.1	19871214	14.6	19910104	10.65
USC	D-14-16 19CCB	2962	19720307	19901212	252	19720307	266.4	19901212	252
USC	D-15-13 01ACC	2494	19491022	19491022	59.67	19811228	88.5	19910108	85.18
USC	D-15-13 01BCB1	2471	19520201	19520201	82.45	19821201	174.6	19910108	134.24
USC	D-15-13 02ACB	2464	19550214	19560213	75.94	19820105	165.8	19910109	159.62
USC	D-15-13 02BBA1	2422	19820101	19861226	111.5	19820101	137.1	19910109	132.07
USC	D-15-13 02BDA	2450	19660801	19690214	92.86	19821201	159.5	19910109	148.95
USC	D-15-13 02CAA	2465	19550209	19560213	73.39	19820105	164.5	19910109	158.11
USC	D-15-13 02DAB	2465	19610202	19610202	94.4	19821201	174.3	19910108	163.9
USC	D-15-13 12DBA	2508	19811222	19861223	94.5	19811222	103	19910108	97.3
USC	D-15-13 13ABC1	2524	19570215	19570215	71.7	19701201	102.4	19910108	94.45
USC	D-15-13 13CBA	2515	19620130	19620130	68.81	19840105	107.7	19910108	89.52
USC	D-15-13 13CCC	2510	19720615	19860109	74.9	19720615	149.7	19910108	77.7
USC	D-15-14 03DAD	2653.23	19630429	19630429	273.23	19901211	381.9	19901211	381.9
USC	D-15-14 06CAA	2524	19811222	19841212	95.4	19870603	108.6	19901212	102.8
USC	D-15-14 06DCB2	2528	19811222	19861210	204.87	19831209	234.7	19901212	226.4
USC	D-15-14 07CBC	2531	19540308	19560329	66.24	19910109	104.37	19910109	104.37
USC	D-15-14 13BBA	2725	19690805	19690805	199	19820101	217.8	19901211	215.81
USC	D-15-14 13CBC	2722	19480825	19480825	181.5	19871214	208.8	19901211	207.91
USC	D-15-14 18CBB	2550	19850104	19861226	102.2	19890104	113.4	19901111	113.3
USC	D-15-15 04BBA	2803	19730600	19730600	323.8	19860109	431.4	19910109	345.38
USC	D-15-15 06BBB	2715	19511023	19511023	243.01	19891130	340.8	19901212	337
USC	D-15-15 16CBB PZ1	2842	19670105	19680109	282.89	19871210	299.49	19901212	294.89
USC	D-15-15 16CBB PZ2	2842	19670105	19690212	288.73	19830104	308	19901212	303.15
USC	D-15-15 16CBB PZ3	2842	19670105	19670724	341.66	19901212	377.99	19901212	377.99
USC	D-15-15 25DBC2	3025	19460620	19460620	397.78	19811220	416.4	19901212	411.4
USC	D-16-13 34AAB2	2815	19600112	19600112	221.04	19831216	363.7	19901213	356.2
USC	D-16-14 07DCB2	2610	19620725	19630129	74.41	19910111	134.05	19901111	134.05
USC	D-16-14 17DAD	2684	19541028	19541028	107.31	19791121	215.15	19901111	191.4
USC	D-16-14 20ADA	2700	19540716	19550217	125.9	19791001	222.7	19901111	199.38
USC	D-16-14 20BBB	2635	19541028	19550217	64.84	19901111	144.39	19901111	144.39
USC	D-16-14 25DDD2	2845	19701119	19760200	223.81	19901111	259.74	19901111	259.74
USC	D-16-14 33BDD	2990	19740625	19861222	169.2	19901111	175.55	19901111	175.55
USC	D-16-14S06CCD	2580	19640208	19640208	65.33	19901212	118.3	19901212	118.3
USC	D-16-15 05CBC PZ1	2867	19670104	19670104	296.56	19881208	312.05	19901212	311.65
USC	D-16-15 05CBC PZ2	2867	19661214	19661214	256.87	19891130	290.87	19901212	285.57
USC	D-16-15 05CBC PZ3	2867	19661214	19661214	252	19850619	270.65	19901212	265.65
USC	D-16-15 09BBB	2905	19680123	19710106	302.73	19871214	317.1	19901114	315.74
USC	D-16-16 09DCD2	3235	19851205	19851205	537.7	19901212	552.3	19901212	552.3
USC	D-17-14 21ACD	2800	19701214	19701214	179.82	19901213	199.8	19901213	199.8
USC	D-17-15 02DCD	3194	19621003	19621003	538.5	19790200	563.4	19901212	554.8
USC	D-17-18 09BCC	3843	19721107	19900403	102.2	19811024	274.3	19901211	102.7
USC	D-17-18 13DDD	4240	19811228	19870128	335.5	19890216	345.7	19901211	340.4
USC	D-18-13 01CDA	2799	19461010	19470122	48.8	19840229	181.6	19901212	168.8
USC	D-18-13 24CB2UNSURV	2860	19811221	19851203	132.4	19811221	165.7	19901212	153.4
USC	D-18-17 32DEA	4520	19721113	19890216	90.8	19891130	111	19901211	110

WATER-LEVEL INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	LAND-SURFACE ALTITUDE	DATE RECORDS BEGAN	DATE	HIGHEST	DATE	LOWEST	DATE	1991
USC	D-19-13 05ACA2	3080	19790305	19870604	228	19831206	252.6	19901212	236.5
USC	D-19-13 09CAA	2955	19391011	19391011	26.26	19771215	137.6	19901212	77.8
USC	D-19-16 15ABA	4900	19520130	19901211	202.4	19870130	234.5	19901211	202.4
USC	D-20-11 21DAA	3449	19640622	19850619	31.3	19640622	56.38	19901212	47.1
USC	D-20-12 02DAC	3112	19550103	19881208	118.6	19791203	158	19901212	120.1
USC	D-20-12 03BBB	3175	19511023	19840110	157	19630304	184.35	19901212	160.7
USC	D-20-13 06CBA	3064	19471117	19841211	27.8	19520709	59.39	19901212	29.3
USC	D-20-16 24DAD2	4875	19820128	19901211	208.6	19820128	212.7	19901211	208.6
USC	D-21-13 19DBC	3240	19730207	19831206	21.04	19761207	29.6	19901212	22
USC	D-21-16 09ABA	4420	19491108	19750114	29.8	19610407	49	19901211	44.8
USC	D-22-13 25DDD UNSURV	3482	19390707	19851202	39.3	19550311	99.7	19901212	54.8
USC	D-22-13 35DCD UNSURV	3430	19340512	19690205	1.3	19520918	53.27	19901212	11.6
USC	D-22-15 12AAD2	4034	19490831	19831208	8.42	19540608	25.97	19901211	14
USC	D-22-17 31ADA1	5145	19691106	19890217	107.6	19691106	124.89	19901211	111.1
USC	D-23-13 36ADB	3675	19820219	19820219	100.5	19891127	119.1	19901212	118.4
USC	D-23-14 22CDD1	3575	19391031	19831206	11.68	19830105	24.2	19901212	14.66
USC	D-23-14 36BCB1	3620	19400315	19680300	0	19760130	49.15	19901211	13.3
USC	D-23-17 16DAC	4915	19820312	19901211	120.1	19820312	125.2	19901211	120.1
USC	D-23-17 26BDD UNSURV	4755	19481005	19901211	7.2	19550921	18.24	19901211	7.2
USC	D-24-14 18CBC	3960	19820218	19901212	205.8	19831221	245.9	19901212	205.8
USC	D-24-15 04DDD1UNSURV	4018	19820223	19851202	88.4	19820223	99.8	19901212	92.1
USC	D-24-15 04DDD2UNSURV	4018	19730226	19730226	208.1	19901212	333.4	19901212	333.4
USC RES	D-15-13 23AAD2	2525	19720800	19860529	177.1	19811228	224.1	19901211	197.5
USC RES	D-15-13 23CCB2	2504.24	19600200	19600200	56.9	19811217	153.7	19901211	124.7
USC RES	D-16-13S02BBA2	2561	19340100	19340100	19.67	19871203	115.8	19901211	111.22
USP	D-17-21 05CAC	3795	19631115	19700119	216.7	19861204	239.85	19901128	239.17
USP	D-17-21 32BAB	3705	19440907	19461209	16.92	19860313	48	19901128	46.2
USP	D-18-20 06BDD	4450	19661215	19860313	240.6	19770803	276	19901126	248.1
USP	D-18-21 06AAB1	3635	19440728	19880225	24.5	19560927	37.93	19901128	25.8
USP	D-19-21 12DBA2	4045	19611124	19680327	212.1	19700114	226.84	19901127	224.6
USP	D-20-17 24CDD	4810	19520924	19760114	143.6	19690410	159.8	19901211	149.6
USP	D-20-17 35AAB	4890	19721108	19890216	187.7	19780803	201.5	19901211	187.7
USP	D-20-18 03CAA	4890	19870129	19870129	130.8	19901211	132.4	19901211	132.4
USP	D-20-18 17BCB	4802	19820317	19891130	150.1	19820317	181.2	19901211	169.3
USP	D-20-18 33BBB	4700	19820330	19820330	19.72	19871208	24.4	19901211	24.3
USP	D-20-20 02DDD	4183	19601013	19740521	85.3	19880224	116	19901129	96.7
USP	D-20-20 07BDB	4340	19691015	19900213	216.6	19830315	228.69	19901114	218.1
USP	D-20-20 07BDB							19910213	220.2
USP	D-20-20 07BDB							19910513	218.3
USP	D-20-20 07BDB							19910809	218.3
USP	D-21-20 16ADA1	4400	19711201	19711201	277	19880224	297.6	19901114	285.3
USP	D-21-20 16ADA1							19910213	285.3
USP	D-21-20 16ADA1							19910514	292.6
USP	D-21-20 16ADA1							19910809	289.4
USP	D-21-20 30BA UNSURV	4710	19711100	19711100	559	19910809	575.2	19901114	574.7
USP	D-21-20 30BA UNSURV							19910213	574.6
USP	D-21-20 30BA UNSURV							19910513	573.7
USP	D-21-20 30BA UNSURV							19910809	575.2
USP	D-21-21 27DBB	4226	19830112	19890216	78.5	19861126	92.86	19901129	81.5
USP	D-21-21 31BDC	4440	19730716	19731102	248	19901205	291.5	19901205	290.5
USP	D-21-22 06ACD2	4130	19840302	19880225	26.1	19840302	28.7	19901128	28.1
USP	D-22-20 10ABB	4677	19720819	19720819	525	19830122	558.4	19901204	539.3
USP	D-22-21 23CBA	4320	19630313	19680313	116.9	19830112	124.1	19901206	123.7
USP	D-23-21 06CCC2	4825	19690318	19790226	5.4	19730207	39.55	19901204	14.9
USP	D-23-22 18BBB	4360	19481208	19481208	119.58	19830315	134.48	19901203	128.7
USP	D-24-23 06AAA1	4423	19491208	19540826	197.6	19850905	225.86	19901114	215.4
USP	D-24-23 06AAA1							19910214	211.3
USP	D-24-23 06AAA1							19910513	210.8
USP	D-24-23 06AAA1							19910809	211.3
USR	A-01-15 04CBD1	3187	19841008	19850111	5.56	19901129	59.64	19901129	59.64
USR	A-01-15 04CBD1							19910125	57.45
USR	A-01-15 04CBD1							19910419	41.49
USR	A-01-15 04CBD1							19910516	42.44
USR	A-01-15 04CBD1							19910523	42.68
USR	A-01-15 04CBD1							19910725	46.29
USR	A-01-15 04CBD1							19910924	49.22
USR	A-01-15 04CBD2	3187	19841009	19850111	6.48	19901129	59.97	19901129	59.97
USR	A-01-15 04CBD2							19910125	57.73
USR	A-01-15 04CBD2							19910419	41.88
USR	A-01-15 04CBD2							19910516	43.36
USR	A-01-15 04CBD2							19910523	43.66
USR	A-01-15 04CBD2							19910725	46.68
USR	A-01-15 04CBD2							19910924	49.53
USR	A-01-15 04CBD4	3187	19860529	19860529	9.46	19901129	59.94	19901129	59.94
USR	A-01-15 04CBD4							19910125	57.68
USR	A-01-15 04CBD4							19910419	41.67
USR	A-01-15 04CBD4							19910516	43.15
USR	A-01-15 04CBD4							19910523	43.45
USR	A-01-15 04CBD4							19910725	46.57
USR	A-01-15 04CBD4							19910924	49.43

WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	LAND- SURFACE ALTITUDE	DATE RECORDS BEGAN	WATER LEVEL IN FEET BELOW LAND SURFACE					1991
				DATE	HIGHEST	DATE	LOWEST	DATE	
USR	A-01-15 09DBC1	3232.95	19841013	19850110	8.91	19901129	63.83	19901107	63.4
USR	A-01-15 09DBC1							19901129	63.83
USR	A-01-15 09DBC1							19910125	61.88
USR	A-01-15 09DBC1							19910419	50.66
USR	A-01-15 09DBC1							19910515	51.75
USR	A-01-15 09DBC1							19910516	51.76
USR	A-01-15 09DBC1							19910521	51.92
USR	A-01-15 09DBC1							19910725	53.49
USR	A-01-15 09DBC1							19910924	54.44
USR	A-01-15 09DBC2	3230	19841013	19850110	8.75	19901129	63.72	19901107	63.3
USR	A-01-15 09DBC2							19901129	63.72
USR	A-01-15 09DBC2							19910125	61.77
USR	A-01-15 09DBC2							19910419	50.55
USR	A-01-15 09DBC2							19910515	51.63
USR	A-01-15 09DBC2							19910516	51.65
USR	A-01-15 09DBC2							19910521	51.81
USR	A-01-15 09DBC2							19910725	53.36
USR	A-01-15 09DBC2							19910924	54.32
USR	A-01-15 09DBC3	3230	19841013	19850110	8.62	19910125	61.8	19910125	61.8
USR	A-01-15 09DBC3							19910419	50.54
USR	A-01-15 09DBC3							19910515	51.64
USR	A-01-15 09DBC3							19910516	51.65
USR	A-01-15 09DBC3							19910521	51.79
USR	A-01-15 09DBC3							19910725	53.37
USR	A-01-15 09DBC3							19910924	54.31
USR	A-01-15 09DBC5	3230	19860529	19860529	9.13	19901129	63.63	19901107	63.14
USR	A-01-15 09DBC5							19901129	63.63
USR	A-01-15 09DBC5							19910125	61.69
USR	A-01-15 09DBC5							19910419	50.28
USR	A-01-15 09DBC5							19910515	51.44
USR	A-01-15 09DBC5							19910516	51.46
USR	A-01-15 09DBC5							19910521	51.62
USR	A-01-15 09DBC5							19910725	53.19
USR	A-01-15 09DBC5							19910924	54.19
USR	A-01-15 09DBC7	3232.95	19881214	19881214	30.69	19901129	63.53	19901129	63.53
USR	A-01-15 09DBC7							19910125	61.57
USR	A-01-15 09DBC7							19910419	50.35
USR	A-01-15 09DBC7							19910515	51.44
USR	A-01-15 09DBC7							19910516	51.45
USR	A-01-15 09DBC7							19910521	51.61
USR	A-01-15 09DBC7							19910725	53.15
USR	A-01-15 09DBC7							19910924	54.1
USR	A-01-15 09DCD1	3240	19841012	19850110	3.96	19901129	61.95	19901106	61.38
USR	A-01-15 09DCD1							19901129	61.95
USR	A-01-15 09DCD1							19910125	60.1
USR	A-01-15 09DCD1							19910419	50.07
USR	A-01-15 09DCD1							19910516	50.52
USR	A-01-15 09DCD1							19910521	50.59
USR	A-01-15 09DCD1							19910725	51.78
USR	A-01-15 09DCD1							19910924	52.8
USR	A-01-15 09DCD2	3240	19841012	19850110	3.28	19901129	61.68	19901106	61.12
USR	A-01-15 09DCD2							19901129	61.68
USR	A-01-15 09DCD2							19910125	59.82
USR	A-01-15 09DCD2							19910419	49.75
USR	A-01-15 09DCD2							19910516	50.2
USR	A-01-15 09DCD2							19910521	50.28
USR	A-01-15 09DCD2							19910725	51.5
USR	A-01-15 09DCD2							19910924	52.55
USR	A-01-15 09DCD3	3240	19841012	19850110	3.61	19901129	61.75	19901106	61.16
USR	A-01-15 09DCD3							19901129	61.75
USR	A-01-15 09DCD3							19910125	59.89
USR	A-01-15 09DCD3							19910419	49.74
USR	A-01-15 09DCD3							19910516	50.23
USR	A-01-15 09DCD3							19910521	50.3
USR	A-01-15 09DCD3							19910725	51.58
USR	A-01-15 09DCD3							19910924	52.63
USR	A-01-15 34BDD1	3465	19890109	19910419	11.76	19900724	58.12	19901129	55.82
USR	A-01-15 34BDD1							19910125	42.88
USR	A-01-15 34BDD1							19910419	11.76
USR	A-01-15 34BDD1							19910516	13.76
USR	A-01-15 34BDD1							19910520	14.5
USR	A-01-15 34BDD1							19910725	30.98
USR	A-01-15 34BDD1							19910924	46.62
USR	A-02-07 02BAA	1382	19830329	19880613	51.6	19891211	61.5	19901205	61.5
USR	A-02-15 07BDD1	2941.5	19860528	19870106	3.51	19910924	7.48	19901108	6.81
USR	A-02-15 07BDD1							19901129	7.02
USR	A-02-15 07BDD1							19910125	6.55
USR	A-02-15 07BDD1							19910419	5.13
USR	A-02-15 07BDD1							19910516	5.61
USR	A-02-15 07BDD1							19910522	5.72
USR	A-02-15 07BDD1							19910725	6.86
USR	A-02-15 07BDD1							19910924	7.48

See p. 351 for Ground-Water Areas and Abbreviations.

WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	LAND- SURFACE ALTITUDE	DATE RECORDS BEGAN	WATER LEVEL IN FEET BELOW LAND SURFACE					
				DATE	HIGHEST	DATE	LOWEST	DATE	1991
USR	A-02-15 07BDD2	2941.5	19860528	19870210	3.51	19910924	7.43	19901108	6.76
USR	A-02-15 07BDD2							19901129	6.98
USR	A-02-15 07BDD2							19910125	6.52
USR	A-02-15 07BDD2							19910419	5.09
USR	A-02-15 07BDD2							19910516	5.58
USR	A-02-15 07BDD2							19910522	6.68
USR	A-02-15 07BDD2	2941.5	19860528	19870106	3.83	19910924	7.71	19910725	6.84
USR	A-02-15 07BDD2							19910924	7.43
USR	A-02-15 07BDD3							19901108	7.06
USR	A-02-15 07BDD3							19901129	7.27
USR	A-02-15 07BDD3							19910125	6.81
USR	A-02-15 07BDD3							19910419	5.39
USR	A-02-15 07BDD3	2941.5	19860724	19870310	2.8	19860724	8.94	19910516	5.86
USR	A-02-15 07BDD3							19910522	5.95
USR	A-02-15 07BDD3							19910725	7.11
USR	A-02-15 07BDD3							19910924	7.71
USR	A-02-15 07BDD4							19901108	6.33
USR	A-02-15 07BDD4							19901129	6.52
USR	A-02-15 07BDD4	2941.5	19881217	19890111	4.06	19910924	7.6	19910125	6.08
USR	A-02-15 07BDD4							19910419	4.75
USR	A-02-15 07BDD4							19910516	5.2
USR	A-02-15 07BDD4							19910522	5.33
USR	A-02-15 07BDD4							19910725	6.38
USR	A-02-15 07BDD4							19910924	6.99
USR	A-02-15 07BDD5	2941.5	19881215	19881215	3.89	19910924	7.5	19901108	6.84
USR	A-02-15 07BDD5							19901129	7.04
USR	A-02-15 07BDD5							19910125	6.55
USR	A-02-15 07BDD5							19910419	5.11
USR	A-02-15 07BDD5							19910516	5.63
USR	A-02-15 07BDD5							19910522	5.76
USR	A-02-15 07BDD6	2980.2	19881221	19890126	11.4	19910924	19.2	19910725	6.88
USR	A-02-15 07BDD6							19910924	7.5
USR	A-02-15 18ACA1							19901107	18.27
USR	A-02-15 18ACA1							19901129	18.71
USR	A-02-15 18ACA1							19910125	18.03
USR	A-02-15 18ACA1							19910419	15.13
USR	A-02-15 18ACA1	2990	19881217	19881221	11.24	19910924	18.99	19910516	16.02
USR	A-02-15 18ACA1							19910524	16.25
USR	A-02-15 18ACA1							19910725	17.88
USR	A-02-15 18ACA1							19910924	19.2
USR	A-02-15 18ACA2							19901107	18.15
USR	A-02-15 18ACA2							19901129	18.58
USR	A-02-15 18ACA2	2980.2	19900510	19910419	14.76	19910924	18.87	19910125	17.9
USR	A-02-15 18ACA2							19910419	14.92
USR	A-02-15 18ACA2							19910516	15.85
USR	A-02-15 18ACA2							19910524	16.1
USR	A-02-15 18ACA2							19910725	17.73
USR	A-02-15 18ACA2							19910924	18.99
USR	A-02-15 18ACA3	3092.7	19841010	19850320	4.18	19901129	45.36	19901107	18
USR	A-02-15 18ACA3							19901129	18.46
USR	A-02-15 18ACA3							19910125	17.75
USR	A-02-15 18ACA3							19910419	14.76
USR	A-02-15 18ACA3							19910516	15.71
USR	A-02-15 18ACA3							19910522	15.94
USR	A-02-15 29DBD1	3092.7	19841011	19850320	3.69	19901129	45.58	19910524	15.96
USR	A-02-15 29DBD1							19910725	17.6
USR	A-02-15 29DBD1							19910924	18.87
USR	A-02-15 29DBD1							19901109	44.58
USR	A-02-15 29DBD1							19901129	45.36
USR	A-02-15 29DBD1							19910125	43.88
USR	A-02-15 29DBD2	3092.7	19841011	19850320	3.69	19901129	45.58	19910419	36.81
USR	A-02-15 29DBD2							19910516	38.53
USR	A-02-15 29DBD2							19910523	38.87
USR	A-02-15 29DBD2							19910725	41.29
USR	A-02-15 29DBD2							19910924	43.14
USR	A-02-15 29DBD2							19901109	44.82
USR	A-02-15 29DBD2	3092.7	19841011	19850320	3.69	19901129	45.58	19901129	45.58
USR	A-02-15 29DBD2							19910125	44.11
USR	A-02-15 29DBD2							19910419	37
USR	A-02-15 29DBD2							19910516	38.71
USR	A-02-15 29DBD2							19910523	39.07
USR	A-02-15 29DBD2							19910725	41.49
USR	A-02-15 29DBD2							19910924	43.33

WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	LAND- SURFACE ALTITUDE	DATE RECORDS BEGAN	DATE	WATER LEVEL IN FEET BELOW LAND SURFACE					1991
					HIGHEST	DATE	LOWEST	DATE		
USR	A-02-15 29DBD4	3092.7	19860923	19861215	16.66	19901129	44.29	19901109	43.56	
USR	A-02-15 29DBD4							19901129	44.29	
USR	A-02-15 29DBD4							19910125	42.88	
USR	A-02-15 29DBD4							19910419	35.97	
USR	A-02-15 29DBD4							19910516	37.68	
USR	A-02-15 29DBD4							19910523	38.06	
USR	A-02-15 29DBD4							19910725	40.6	
USR	A-02-15 29DBD4							19910924	42.21	
VER	A-13-05 05BDC	3110	19590715	19590820	54.05	19870312	61.3	19901105	56.2	
VER	A-14-10 32DBD	6855	19660609	19760120	315.5	19770131	348.6	19901107	329.8	
VER	A-15-03 12ADB1	3265	19581014	19591110	15.95	19890502	39.8	19901105	36.1	
VER	A-15-04 02CCB4	3420	19770726	19780124	81.9	19830401	91.19	19901105	90.4	
VER	A-15-04 04DDC1	3355	19590818	19591015	36.76	19770125	60.4	19901105	54.9	
VER	A-17-05 15ABD	4385	19731024	19850329	267.1	19740801	503.22	19901105	283.5	
VER	A-17-06 30BBB	4300	19601214	19770125	436	19620419	453.92	19901106	441.4	
VER	A-18-07 15CCB2	6450	19650722	19870511	65.6	19760122	157.6	19901106	74.1	
VER	A-18-07 15CCC1	6435	19670111	19880511	113.8	19760122	168	19901108	128.3	
VER	A-18-07 22BAA2	6455	19771031	19870511	704	19800109	714.6	19901108	712.7	
VRG	B-41-15 33CAB	1910	19761103	19820303	54.2	19761103	74.6	19901105	62.5	
VRG	B-41-15 33CAB							19910205	60.1	
WAT	C-02-01 19ADA	1111	19590114	19590114	265.71	19820121	389.3	19901212	330.3	
WAT	C-02-01 20BAD	1130	19600927	19610118	300.39	19820121	399	19901212	344.4	
WAT	C-02-01 33AAA	1169	19520601	19520601	266.3	19820125	391.7	19901212	360.3	
WAT	C-02-01 33CDD	1142	19510215	19510215	298.8	19820125	362.7	19901212	317.6	
WAT	C-02-02 05CDC	990	19600928	19610100	145.31	19901212	212.5	19901212	212.5	
WAT	C-02-02 09CCC	1023	19801229	19901212	307	19801229	342.8	19901212	307	
WAT	C-02-02 10CCC	1015	19550125	19550125	142.29	19820119	318.9	19901212	274.4	
WAT	C-02-02 12ACC	1070	19600928	19610118	258.16	19801222	354	19901212	310.2	
WAT	C-02-02 25CCC	1078	19560103	19570228	222.8	19820119	368.2	19901212	325.3	
WAT	C-02-02 27CCC	1135	19540218	19540218	260.15	19810102	425.3	19901212	393.4	
WAT	C-03-01 07ACC	1153	19700128	19700128	322.6	19820125	362.5	19901213	329.7	
WAT	C-03-01 19DCC	1225	19721003	19721003	372.5	19891128	398.9	19901213	395.4	
WAT	C-03-01 21DCC	1182	19590114	19590114	293.4	19850107	365.5	19901213	347.2	
WAT	C-03-01 28DDD	1208	19620301	19620301	297.75	19860529	373.9	19901213	369.7	
WAT	C-04-01 23CDB	1345	19810220	19840719	475.1	19910515	482.3	19901116	481.9	
WAT	C-04-01 23CDB							19910212	481.8	
WAT	C-04-01 23CDB							19910515	482.3	
WAT	C-04-01 23CDB							19910814	481.8	
WAT	D-03-01 07BBB2	1272.3	19790504	19790504	405.22	19891128	424.5	19901212	422.7	
WAT	D-04-01 28CDD	1338	19520403	19520403	398.5	19901213	420.2	19901213	420.2	
WHM	A-05-30 13DBC	8020	19711017	19880316	86.1	19791206	155.2	19901107	93	
WHM	A-05-31 17CAA	7880	19730822	19830316	0.29	19730822	21.5	19901107	6.1	
WHM	A-07-27 01CCA1	8280	19730726	19770112	41.1	19730726	55	19901107	54.8	
WHM	A-07-27 01CDB	8260	19730726	19850403	20	19830316	28	19901107	26.4	
WHM	A-07-30 14BDD	8021	19730806	19890420	153.5	19770112	192.9	19901106	155.2	
WHM	A-10-22 30ABA	6485	19690327	19850404	521.6	19740213	532	19901107	525.1	
WIL	D-09-23 08ABC	5150	19540520	19630205	209.35	19570124	295.87	19901213	214.6	
WIL	D-11-24 17DAA	4475	19660204	19660204	274.5	19800130	388.7	19901210	373.8	
WIL	D-11-24 30AAA	4369	19650212	19650212	170.44	19900116	365.8	19901210	268.4	
WIL	D-12-23 12DBA	4280	19540129	19540129	92.42	19901210	173.9	19901210	173.9	
WIL	D-12-24 20CBB	4245	19650210	19840124	122.8	19800130	150.3	19901210	138.7	
WIL	D-13-24 03ADA	4224	19540126	19540126	75.78	19640205	116.41	19901210	102	
WIL	D-13-24 05CCB2	4225	19540126	19540126	81.58	19770202	139	19901210	116.5	
WIL	D-13-24 16BBB	4209	19420513	19420513	29.69	19770202	129.4	19901210	105.3	
WIL	D-14-24 14BBA2	4167	19630206	19630206	9	19901207	33.9	19901207	33.9	
WIL	D-14-24 30DBA	4187	19420513	19551221	16.41	19740114	33.94	19901211	27.2	
WIL	D-14-26 18BDD	4278	19540127	19540127	69.08	19790214	227.4	19901206	203.2	
WIL	D-15-24 08CAD	4165	19750212	19750212	41.4	19901211	56	19901211	56	
WIL	D-15-25 25ADA	4220	19540126	19540126	41.75	19750210	243.9	19901206	198	
WIL	D-15-25 25CDD	4220	19531002	19540126	39.33	19761222	241.6	19901206	192.3	
WIL	D-16-24 21CCC	4240	19590101	19590101	102.8	19750213	172.5	19901211	166	
WIL	D-16-25 09ADD	4187	19530716	19680220	25.3	19901206	57.3	19901206	57.3	
WIL	D-16-25 13CDD	4235	19530305	19530305	42.8	19761222	246.3	19901206	201.8	
WIL	D-16-25 14AAD	4220	19660624	19890119	175	19761222	221.5	19901206	189.3	
WIL	D-16-25 36AAA	4248	19590101	19590101	103.32	19760113	255.7	19901206	215.7	
WIL	D-16-26 02AAD	4395	19590101	19590101	215.71	19820113	319.5	19901206	276.3	
WIL	D-16-26 05DAD	4285	19540127	19540127	101.9	19800228	315.4	19901206	268	
WIL	D-16-26 06DDA	4257.8	19640130	19640130	188.8	19750210	283.5	19901206	224.8	
WIL	D-16-26 14DAA	4375	19540127	19540127	159.82	19760113	380.8	19901206	323	
WIL	D-16-26 29AAA	4291	19531002	19540127	91.05	19750211	300.4	19901114	266.7	
WIL	D-16-26 29AAA							19910214	261.1	
WIL	D-16-26 29AAA							19910513	264.2	
WIL	D-16-26 29AAA							19910811	267.6	
WIL	D-16-28 04BBB	4716	19490218	19490218	248.2	19700106	339.6	19901211	334.1	
WIL	D-17-24 01DAC	4245	19530716	19530716	68.68	19901211	102.3	19901211	102.3	
WIL	D-17-25 08BCC	4230	19530716	19540716	43.5	19901211	134.21	19901211	134.21	
WIL	D-17-26 04ADD	4300	19630206	19800228	129.5	19810220	299.9	19901206	245.3	
WIL	D-17-26 12BAA	4335	19540126	19550201	65.15	19820113	250.4	19901206	232	
WIL	D-17-27 21BCA	4420	19690304	19690304	188	19790213	255.8	19901211	235.7	
WIL	D-17-27 28BAA	4420	19660303	19660303	145.62	19810220	259	19901211	220.9	
WIL	D-17-27 35BCB	4495	19690303	19690303	175.65	19800227	218.8	19901211	208.27	
WIL	D-17-27 35CCB	4500	19690303	19690303	179.6	19810220	235	19901211	216.8	
WIL	D-17-28 06CDA	4632	19700107	19700107	300.6	19810220	337.9	19901211	311.9	

See p. 351 for Ground-Water Areas and Abbreviations.

WATER-LEVEL INFORMATION--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER		LAND- SURFACE ALTITUDE	DATE RECORDS BEGAN	DATE	WATER LEVEL IN FEET BELOW LAND SURFACE					1991
						HIGHEST	DATE	LOWEST	DATE		
WMD	C-17-08 09ADD UNSURV		1000	19740206	19761018	48.3	19910910	60.32	19901102	60.07	
WMD	C-17-08 09ADD UNSURV								19910116	60.1	
WMD	C-17-08 09ADD UNSURV								19910615	60.01	
WMD	C-17-08 09ADD UNSURV								19910817	60.29	
WMD	C-17-08 09ADD UNSURV								19910910	60.32	
WMD	C-17-08 11DCD UNSURV		981	19740209	19790101	13.31	19890614	18.12	19901102	16.39	
WMD	C-17-08 11DCD UNSURV								19910116	16.83	
WMD	C-17-08 11DCD UNSURV								19910615	16.4	
WMD	C-17-08 11DCD UNSURV								19910910	16.6	
WMD	C-18-05 07AAA		1400	19811022	19840215	63.7	19860717	77.8	19901102	71.42	
WMD	C-18-05 07AAA								19910116	68.4	
WMD	C-18-05 07AAA								19910615	73	
WMD	C-18-05 07AAA								19910817	76.13	
WMD	C-18-05 07AAA								19910910	72.46	
WMD	C-18-06 01DBB2		1432	19740807	19811216	78.3	19910910	85.63	19901102	83.98	
WMD	C-18-06 01DBB2								19910116	83.05	
WMD	C-18-06 01DBB2								19910817	86.17	
WMD	C-18-06 01DBB2								19910910	85.63	
WMN	B-16-04 14BBB		4600	19521009	19730320	0.15	19561023	7.78	19901106	4.8	
YUM	C-08-22 25DAC3		155	19540302	19780209	13.08	19540302	25.8	19910110	15.7	
YUM	C-08-23 27DDD		134	19570131	19770131	10.6	19740110	20.63	19910110	13.3	
YUM	C-09-21 07AAD		279	19601101	19690915	130	19601101	149	19910110	139.9	
YUM	C-09-22 11BBB		217	19620501	19910110	70.5	19620501	84	19910110	70.5	
YUM	C-10-23 15AAA		194	19610710	19660325	67.2	19840124	90.3	19910110	85.4	
YUM	C-10-23 31BBB1		173	19611128	19660930	79.01	19910110	97	19910110	97	
YUM	C-11-24 23ECB		160	19630201	19651014	68.03	19910110	104	19910110	104	
YUM	C-12-22 06DAA		202	19611219	19690307	126.43	19910110	148.3	19910110	148.3	

See p. 351 for Ground-Water Areas and Abbreviations.

QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

SITE INFORMATION

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
AGF	A-09-02 27CBB1	04	025	340527	1120858	15070102	H	100	--	--
AGF	A-11-02 25BDD	04	025	341816	1120613	15070102	P	200	--	--
AGF	A-12-01 25CCC	04	025	342315	1121257	15070102	P	260	15	100.
AGF	B-14-01 14ACC	04	025	343533	1121959	15070102	P	496	26	496
ALT	D-20-08 35BDB	04	019	313850	1112957	15050304	H	650	495 598	595 650
ARA	D-08-21 20BAD	04	009	324343	1101315	15050203	S	--	--	--
AVR	D-15-10 33DBC1	04	019	320434	1111937	15050304	I	616	302	353
BIC	B-17-02 02CAC	04	025	345302	1122647	15060202	H	480	20	480
BIC	B-17-02 04AAA	04	025	345342	1122815	15060201	I	298	128	298
BIC	B-17-02 09DDD2	04	025	345157	1122807	15060202	H	130	--	--
BIC	B-17-02 22BCA4	04	025	345041	1122745	15060202	H	--	23	63
BIC	B-18-02 27CBA	04	025	345459	1122756	15060201	H	285	--	--
BIC	B-18-02 27CDA ABRA	04	025	345443	1122744	15060201	P	--	--	--
BIC	B-18-03 25CDA	04	025	345442	1123158	15060201	-	--	--	--
BIC	B-19-03 18CCC	04	025	350138	1123741	15060201	H	200	--	--
BIC	B-19-04 04CAC	04	025	350332	1124137	15060201	I	500	32	--
BIC	B-21-02 14BCC	04	025	351207	1122837	15060201	P	1700	1390	1700
BIC	B-22-07 08DDD	04	025	351750	1130140	15060201	-	1004	704	--
BIC	B-24-08 17DCD2	04	025	352730	1130823	15060201	P	1750	1500	1750
BIS	B-16-13 22CCC1	04	015	344219	1133657	15030201	H	188	--	--
BLM RES	01 076-09.74X02.71	04	005	361238	1105527	15020018	H	408	40	368
BLM RES	03 076-08.73X09.04	04	005	360708	1105419	15020018	H	520	130	520
BLM RES	04 055-10.08X02.20	04	017	362035	1100322	15020012	P	2540	--	--
BLM RES	04 056-02.85X14.19	04	017	361737	1101803	15020017	H	2674	--	--
BLM RES	04 056-08.11X01.15	04	017	362901	1102341	15020018	Z	3737	2091	3735
BLM RES	04 075-05.21X12.23	04	017	360422	1103535	15020017	T	1805	1639	1805
BLM RES	06 094-07.75X11.70	04	017	354951	1102313	15020012	P	1250	1000 1200	1200 1250
BLM RES	06 095-00.01X14.05	04	017	354749	1103001	15020013	T	1090	--	--
BLM RES	06 095-07.28X08.90	04	017	355215	1103750	15020012	P	1155	950	1155
BLM RES	06 095-09.47X05.36	04	017	355518	1104003	15020017	P	1757	--	--
BLM RES	08 038-04.43X15.39	04	017	363137	1100447	14080204	P	1598	1142	1572
BLM RES	08 039-09.84X15.07	04	017	363151	1102538	15020018	N	3418	2460 3180	3180 3418
BLM RES	08 056-02.33X07.44	04	017	362333	1102500	15020018	K	--	--	--
BLM RES	10 054-06.30X06.52	04	001	362418	1095146	14080204	P	1425	1175	1425
BUT	B-07-15 15AAD3	04	012	335718	1134805	15030105	U	585	400	585.
BWM	B-11-16 27CCB2	04	015	341548	1135515	15030204	I	115	--	--
CDI	A-18-14 13ABD2	04	005	345750	1104827	15020008	P	620	20	620
CHI	B-04-19 29BCB1	04	012	333946	1141501	15030106	-	--	--	--
CHI	B-14-20 33DCB	04	015	343019	1142134	15030101	P	509	89	497
CHI	B-17-22 11DCC	04	015	345200	1143520	15030101	I	--	--	--
CHI	B-20-22 24DDC	04	015	350557	1133357	15030101	-	--	--	--
CHI	B-25-20 15AAA	04	015	353337	1142352	15010014	S	700	--	--
CHI	B-30-20 06CAC UNSURV	04	015	360105	1142811	15010014	U	590	--	--
CHI RES	B-09-20 01DBC2	04	012	340853	1141732	15030104	P	400	263	400
DOU	D-19-26N03CCD	04	003	314903	1094126	15080301	-	--	--	--
DOU	D-20-26 25CBC	04	003	313941	1093906	15080301	H	300	--	--
DOU	D-23-27 09DAB	04	003	312638	1093559	15080301	I	500	116	496
DUN	3.20S.21W.17.111	35	023	323426	1090222	15040002	-	--	--	--
DUN	D-06-30 01BAA	04	011	325655	1091350	15040002	P	303	260	--
DUN	D-09-32 03AAA5	04	011	324109	1090252	15040002	I	80	20	80.
GIL	C-02-05 26CDD	04	013	331306	1124418	15070101	I	840	50 658	372 840
GIL	C-03-04 09BAA	04	013	331119	1124033	15070101	I	490	135	490
GIL	C-03-04 20AAA	04	013	330932	1124107	15070101	I	681	125 479	479 681
GIL	C-04-04 04DAA	04	013	330632	1123959	15070101	I	316	--	--
GIL	C-04-04 18DAB	04	013	330446	1124215	15070101	H	195	175	195
GIL	C-04-04 22AAA	04	013	330423	1123859	15070101	I	846	95	846
GIL	C-04-04 32BCD	04	013	330213	1124144	15070101	I	824	365 160	824 360
GIL	C-04-06 36ADC1	04	013	330214	1124927	15070101	I	960	100	300
GIL	C-05-04 10CBC	04	013	330020	1123949	15070101	I	1133	110	1133
GIL	C-05-04 18DDC	04	013	325907	1124209	15070101	I	671	--	--

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
GIL	C-05-04 31ADD	04	013	325700	1124159	15070101	I	1217	80 505	505 1100
GIL	C-05-05 21ACC	04	013	325843	1124639	15070101	I	1681	1100 523	1217 715
GIL	C-05-06 03ACC	04	013	330119	1125148	15070101	I	534	715 1106	1106 1681
GIL	C-05-06 31CBB	04	013	325650	1125527	15070101	I	1875	100 508	508 534
GIL	C-06-03 18AAC	04	013	325424	1123604	15070101	P	--	906 1771	1771 1785
GIL	C-06-04 20ABB	04	013	325353	1124121	15070101	P	--	--	--
GIL	C-06-05 02BDC	04	013	325608	1124441	15070101	I	1000	150 500	500 985
GIL	C-06-05 08BAA	04	013	325534	1124735	15070101	I	1440	985 500	1000 1100
GIL	C-06-05 25BBB2	04	013	325253	1124348	15070101	P	632	1100 340	1440 560
GIL	C-06-06 10BCB	04	013	325518	1125211	15070101	-	--	--	--
GIL	C-06-07 11DCC	04	013	325447	1125648	15070101	I	925	600 920	920 925
GIL	C-07-06 04ADD	04	013	325052	1125222	15070101	I	895	495 705	555 895
GRD	C-07-13 24ADA	04	027	324825	1133228	15070201	-	--	--	--
GRD	C-11-06 24BDA	04	019	322726	1125020	15070202	-	--	--	--
GSK	A-01-16 19BAD	04	007	332507	1104250	15040007	R	1005	500 800	820. 1005.
GTD	C-09-19 04BBB	04	027	324040	1141335	15070201	D	133	80	105
GWA	B-41-14 14BCB	04	015	365725	1134718	15010010	P	343	--	--
HAR	B-01-08 19BCC	04	013	332450	1130735	15070104	I	700	165	--
HAR	B-05-09S02BED	04	013	334830	1131024	15070104	S	--	--	--
HAR	C-01-09 05CCC	04	013	332149	1131246	15070104	P	1100	741 845	831 1100
HAS	B-07-05 01CDB	04	013	335825	1124353	15070103	P	110	50	96
HOP RES	07 093-06.25X03.85	04	017	355638	1100640	15020013	P	1343	1181	1262
HOU	A-41-08 14BCA	04	005	365723	1113028	14070006	P	1200	880 1010	1010 1200
HUA	B-22-16 28BDA2	04	015	351552	1135908	15010007	P	1006	500 740	740. 1006
HUA	B-23-13 20CCD	04	015	352130	1134151	15010007	P	355	--	--
HUA	B-24-12 09AAD	04	015	352904	1133334	15010007	P	385	--	--
HUA	B-26-18 03AAA1	04	015	354036	1141106	15010007	H	705	570	697
HUA	B-29-17 23CCB	04	015	355258	1140503	15010005	P	984	895	975
KAN	B-41-06 06BAD1	04	015	365914	1125900	15010009	P	98	30 30	42 98
KAN	B-42-02 32BCC	04	005	365955	1123217	15010003	U	260	--	--
KAN	B-42-06 31CCC	04	015	365931	1125923	15010009	-	--	--	--
LIC	B-17-02S34BBA	04	025	344818	1122740	15060202	I	628	476	628
LSC	D-03-02 23DAA	04	021	330914	1120658	15050303	U	780	--	--
LSC	D-04-09 04DDD	04	013	330618	1112518	15050100	I	--	330	620.
LSC	D-05-03 16CCC2	04	021	325907	1120350	15050303	I	935	640	905
LSC	D-05-07 23DDA	04	021	325813	1112604	15050100	I	1500	--	--
LSC	D-06-03 17ACC	04	021	325404	1120324	15050303	I	1200	200 600 1044	580 1044 1200
LSC	D-06-03 26BCC	04	021	325218	1120049	15050306	I	1400	650	1175
LSC	D-06-04S04DDD3	04	021	325523	1115544	15050303	P	755	--	--
LSC	D-06-07 15ADC2	04	021	325407	1113617	15050100	I	1500	--	--
LSC	D-07-04W01DAD	04	021	325041	1115342	15050303	I	1458	500 764 1366	822. 1366. 1458
LSC	D-07-06 29DDD2	04	021	324640	1114421	15050303	I	270	115 200	190 270
LSC	D-07-06 34CDD2	04	021	324550	1114249	15050303	I	770	312 657	657. 755.
LSC	D-09-07 02CDD	04	021	323941	1113539	15050303	I	562	416	562
LSC	D-10-09 10AAD2	04	021	323412	1112351	15050303	I	752	--	--
LSC	D-11-11 35DDD	04	019	322530	1111100	15050303	I	502	400	480

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
LSP	D-05-15 23BAA2	04	021	325921	1104702	15050203	K	--	--	--
LSP	D-07-16 10ABC	04	021	325033	1104149	15050203	-	--	--	--
LSP	D-07-17 07ABB	04	021	325043	1103840	15050203	U	85	--	--
LSP	D-08-17 31CCD	04	021	324116	1103904	15050203	H	505	--	--
LSP	D-09-18 31CAD	04	021	323617	1103234	15050203	-	--	--	--
LSP	D-12-18 12BED	04	019	322435	1102751	15050203	S	92.5	--	--
LSP	D-14-20 08CAA	04	003	321347	1101916	15050203	-	--	--	--
LVR	A-03-06 15ABA	04	013	333635	1114321	15060203	P	735	450	735
LVR	A-11-10 34DCA	04	007	341456	1111844	15060105	P	203	103	203
MMU	B-05-13 11CBB	04	012	334725	1133529	15070104	I	708	308	--
MMU	B-06-11 05ADD	04	012	335334	1132507	15070104	U	800	--	--
MMU	B-07-09 11AAA	04	013	335815	1130930	15070104	I	1020	--	--
N-C	A-04-02 11ADB	04	013	334230	1120709	15070102	T	900	425	600
N-C	A-05-02 03DBC	04	013	334803	1120832	15070102	H	410	295	380.
N-C	A-06-04 26DCC	04	013	334943	1115459	15060106	P	485	385	410
									150	435
									423	485.
PRZ	A-18-24 09ABB	04	001	345850	1094750	15020007	P	110	85	105
RAN	B-03-14 12CCC	04	012	333637	1133940	15030105	P	655	--	--
RAN	B-04-16 19BCB	04	012	334040	1135721	15030105	H	530	--	--
SAC	B-17-18 12ABD	04	015	345239	1140840	15030103	N	460	--	--
SAC	B-21-18 05DBD	04	015	351401	1141324	15030103	P	1350	1028	1350
SAF	D-04-22 25BCB	04	009	330330	1100300	15040005	I	93	27	92
SAF	D-06-25 36CBB	04	009	325200	1094456	15040005	I	2161	1550	1905
SAF	D-07-26 15BCC	04	009	324925	1094051	15040005	I	86	30	82
SAF	D-09-26 18DDA	04	009	323850	1094307	15040005	S	--	--	--
SAF	D-10-27 28DCD	04	009	323138	1093507	15040006	S	--	--	--
SNO	A-13-21 26ADB2	04	017	342940	1100451	15020005	P	440	380	440
SRV	A-03-01 27CCC	04	013	333401	1121511	15070102	I	453	60	432
SRV	B-01-02 25BBC2	04	013	332416	1122532	15070101	I	543	400	450.
SRV	B-03-02 14BCB2	04	013	333619	1122635	15070102	I	1607	540	543
SRV	B-06-03 33DCB	04	013	334848	1123429	15070102	C	800	428	993.
SRV	D-01-06 27CDD	04	013	331826	1114345	15050100	I	1000	993	1607.
SRV	D-01-09 07BDC2	04	021	332135	1112818	15050100	P	1002	--	--
SRV	D-01-10 35DBB	04	021	331803	1111736	15050100	P	500	38	500
SRV RES	A-02-05 14AAA	04	013	333126	1114816	15060106	I	1000	--	--
SSI	D-13-29 25CCCC1	04	003	321552	1092051	15040006	-	863	403	--
SSI	D-13-29 25CCC2	04	003	321552	1092051	15040006	I	--	--	--
SSI	D-18-32 33CAA	04	003	314900	1090455	15040006	S	--	--	--
SSI	D-20-32 29ABB	04	003	314001	1090539	15040006	H	412	--	--
SSI	D-21-31 03BCD1	04	003	313754	1091047	15040006	H	700	--	--
USC	D-11-14 32CCC	04	019	322528	1105633	15050301	P	522	160	310.
USC	D-14-14 02BBB	04	019	321457	1105327	15050302	P	251	310	522.
USC	D-16-15 14ACB	04	019	320238	1104654	15050301	C	905	150	251
USC	D-17-14 07DDD	04	019	315728	1105639	15050301	I	1500	445	900
									150	728
									150	720
									700	1499
									1499	1500
USC	D-19-13 29CBB2	04	019	314448	1110233	15050301	-	--	--	--
USC	D-19-17 17BBD	04	019	314715	1103802	15050302	S	845	--	--
USC	D-22-13 34ADD UNSURV	04	023	312818	1105940	15050301	I	200	30	200
USC	D-23-17 14CDD	04	023	312538	1103516	15050301	S	35	--	--
USC	D-24-14 05ADB2	04	023	312223	1105542	15050301	N	550	--	--
USP	D-13-22 33DAC	04	003	321526	1100557	15050202	S	1435	454	1435
USP	D-17-21 31DDA2	04	003	315428	1101348	15050201	-	--	--	--
USP	D-22-20 01BCA	04	003	313203	1101611	15050202	P	710	491	642.
USP	D-24-21 03AAB	04	003	312255	1101133	15050202	H	--	642	710
VER	A-20-07 20CCA	04	005	350547	1114057	15060202	P	1210	637	968
									968	1210

See p. 351 for Ground-Water Areas and Abbreviations.

See codes used to identify State, County, and Primary Use of Water at end of table.

SITE INFORMATION--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
VRG	222 S13 E71 28CCC 1	32	003	364603	1140425	15010010	P	635	520	580
VRG	B-39-16 14CCC	04	015	364625	1135955	15010010	H	490	420	480
VRG	B-39-16 16CDD	04	015	364622	1140138	15010010	H	360	--	--
VRG	B-40-15 05ABD2	04	015	365359	1135601	15010010	I	--	--	--
VRG	B-40-16 33DBC	04	015	364914	1140136	15010010	I	300	--	--
VRG	B-41-15 33CAC	04	015	365429	1135545	15010010	H	--	--	--
WAT	C-02-02 19AAD	04	013	331437	1122944	15070101	H	434	301	351
WAT	D-04-01 21CCC	04	013	330331	1121614	15070101	I	846	--	--
WHM	A-08-29 08ACA2	04	001	340623	1091816	15020001	P	--	--	--
WIL	D-14-25 11CAA	04	003	321322	1094553	15050201	-	--	--	--
WIL	D-15-24 20CAC	04	003	320645	1095515	15050201	-	250	--	--
WIL	D-17-28 14CCB3	04	003	315703	1092823	15050201	-	--	--	--
WMD	C-17-05 17ACB	04	019	315655	1124803	15080102	P	430	--	--
YUM	C-08-22 28CCC	04	027	324158	1143145	15070201	I	169	116	168.70
YUM	C-10-24 12BCC	04	027	323430	1144058	15030108	D	190	150	178

See p. 351 for Ground-Water Areas and Abbreviations.

CODES USED TO IDENTIFY STATE, COUNTY, AND
PRIMARY USE OF WATER

STATE AND COUNTY CODES			PRIMARY USE OF WATER	
04	ARIZONA	32	NEVADA	C COMMERCIAL
	001 APACHE		003 CLARK	D DRAIN
	003 COCHISE			H DOMESTIC
	005 COCONINO			I IRRIGATION
	007 GILA			K MINING
	009 GRAHAM	35	NEW MEXICO	N INDUSTRIAL
	011 GREENLEE			P PUBLIC SUPPLY
	012 LA PAZ		023 HIDALGO	R RECREATION
	013 MARICOPA			S STOCK
	015 MOHAVE			T INSTITUTIONAL
	017 NAVAJO			U UNUSED
	019 PIMA			Z OTHER
	021 PINAL			
	023 SANTA CRUZ			
	025 YAVAPAI			
	027 YUMA			

WATER-QUALITY DATA

GROUND-WATER AREA	LOCAL WELL NUMBER	STATION NUMBER	DATE	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)
AGF	A-09-02 27CBB1	340527112085801	07-08-91	590	7.4	21.5	210	59	15	45
AGF	A-11-02 25BDD	341816112061301	07-08-91	650	7.3	20.0	280	87	16	26
AGF	A-12-01 25CCC	342315112125701	07-08-91	820	7.3	18.0	360	110	21	33
AGF	B-14-01 14ACC	343540112195701	07-08-91	510	7.8	18.5	230	68	15	17
ALT	D-20-08 35BDB	313850111295701	07-08-91	400	8.1	32.5	54	16	3.4	67
ARA	D-08-21 20BAD	324343110131501	03-06-91	340	7.6	19.0	130	36	8.9	22
AVR	D-15-10 33DBC1	320434111193702	03-14-91	635	8.0	27.5	140	44	6.3	74
BIC	B-17-02 02CAC	345302112264701	08-30-91	400	8.1	18.5	180	42	18	23
BIC	B-17-02 04AAA	345342112281501	08-27-91	430	7.8	19.0	180	42	18	20
BIC	B-17-02 09DDD2	345157112280701	08-29-91	530	7.8	16.0	240	61	21	23
BIC	B-17-02 22BCA4	345041112274501	08-28-91	445	7.8	17.5	200	52	16	17
BIC	B-18-02 27CBA	345459112275601	08-29-91	795	7.6	25.0	250	57	27	84
BIC	B-18-02 27CDA	345440112274101	08-30-91	730	7.8	24.0	240	55	26	77
BIC	B-18-03 25CDA	345442112315801	08-27-91	430	8.0	19.0	150	24	22	24
BIC	B-19-03 18CCC	350138112374101	09-10-91	323	8.0	18.5	190	28	28	13
BIC	B-19-04 04CAC	350332112413701	08-27-91	442	7.9	22.0	190	32	26	23
BIC	B-21-02 14BCC	351207112283701	07-09-91	610	7.6	24.5	210	53	18	48
BIC	B-22-07 08DDD	351750113014001	07-09-91	500	7.4	24.0	240	58	23	7.6
BIC	B-24-08 17DCD2	352730113081002	09-10-91	470	7.7	28.5	210	46	24	19
BIS	B-16-13 22CCC1	344219113365701	07-15-91	520	9.0	26.0	8	2.6	0.44	110
BLM RES	01 076-09.74X02.71	361238110552701	08-27-91	625	7.8	18.0	180	51	12	62
BLM RES	03 076-08.73X09.04	360708110541901	08-27-91	365	7.9	18.0	61	16	5.1	53
BLM RES	04 055-10.08X02.20	362035110032201	01-21-91	425	9.8	27.5	2	0.76	0.14	98
BLM RES	04 056-02.85X14.19	361737110180301	01-21-91	350	9.6	29.5	2	0.85	0.09	76
BLM RES	04 056-08.11X01.15	362901110234101	01-25-91	260	9.1	32.0	9	3.5	0.11	55
BLM RES	04 075-05.21X12.23	360422110353501	01-23-91	240	9.4	26.0	1	0.46	0.03	59
BLM RES	06 094-07.75X11.70	354950110231501	01-22-91	740	9.4	22.0	2	0.64	0.11	170
BLM RES	06 095-00.01X14.05	354749110300101	01-24-91	595	9.6	20.5	1	0.50	0.01	140
BLM RES	06 095-07.28X08.90	355215110375001	02-21-91	374	9.9	22.5	2	0.51	0.10	80
BLM RES	06 095-09.47X05.36	355518110400301	01-24-91	300	9.6	26.5	--	0.72	<0.01	68
BLM RES	08 038-04.43X15.39	363137110044702	02-07-91	1470	8.5	19.0	73	17	7.3	280
BLM RES	08 039-09.84X15.07	363130110254501	01-25-91	440	8.1	30.0	73	24	3.2	67
BLM RES	08 056-02.33X07.44	362333110250001	01-25-91	155	9.0	32.5	10	3.9	0.14	32
BLM RES	10 054-06.30X06.52	362418109514601	01-11-91	1210	8.8	21.0	6	2.0	0.32	230
BUT	B-07-15 15AAD3	335718113480501	07-01-91	1550	8.0	28.0	300	94	14	180
BWM	B-11-16 27CCB2	341548113551501	03-14-91	960	7.3	22.0	260	68	22	110
CDI	A-18-14 13ABD2	345750110482501	07-09-91	2300	7.7	17.5	340	73	38	340
CHI	B-04-19 29BCB1	333946114150101	03-13-91	750	7.7	34.0	190	63	8.7	76
CHI	B-14-20 33DCB	343022114213401	07-18-91	1510	7.8	28.0	260	60	26	210
CHI	B-17-22 11DCC	345200114352001	07-17-91	3650	7.8	22.5	800	190	80	510
CHI	B-20-22 24DDC	350557113335701	07-17-91	2450	7.5	37.5	570	200	16	240
CHI	B-25-20 15AAA	353337114235201	07-16-91	330	8.1	29.5	79	19	7.6	39
CHI	B-30-20 06CAC UNSURV	360105114281101	07-03-91	1680	7.7	25.5	510	140	39	160
CHI RES	B-09-20 01DBC2	340853114173201	03-13-91	1440	7.8	28.5	100	39	1.5	240
DOU	D-19-26N03CCD	314903109412601	03-06-91	580	8.0	20.0	200	69	5.9	51
DOU	D-20-26 25CBC	313941109390601	03-06-91	1130	7.6	20.5	440	120	33	57
DOU	D-23-27 09DAB	312638109355901	07-10-91	395	8.6	28.0	12	4.6	0.24	84
DUN	3.20S.21W.17.111	323426109022201	03-05-91	435	8.7	22.0	15	3.9	1.2	95
DUN	D-06-30 01BAA	325655109135001	03-05-91	275	8.2	22.0	74	21	5.2	30
DUN	D-09-32 03AAA5	324108109025401	07-09-91	425	7.6	16.5	130	39	7.5	36
GIL	C-02-05 26CDD	331306112441801	07-22-91	3650	7.5	24.5	800	210	66	450
GIL	C-03-04 09BAA	331119112403301	07-22-91	3900	7.7	30.5	530	170	24	640
GIL	C-03-04 20AAA	330932112410701	07-24-91	3750	7.5	23.0	900	250	67	460
GIL	C-04-04 04DAA	330632112395901	03-12-91	3900	7.3	28.0	960	310	45	470
GIL	C-04-04 18DAB	330446112421501	07-23-91	3900	7.4	28.5	930	230	85	430
GIL	C-04-04 22AAA	330423112385901	07-23-91	2550	7.9	32.0	300	100	11	400
GIL	C-04-04 32BCD	330213112414401	07-22-91	4500	7.5	24.5	1200	330	95	580
GIL	C-04-06 36ADC1	330214112492701	07-23-91	3800	7.5	27.5	720	240	28	510
GIL	C-05-04 10CBC	330020112394901	07-24-91	2570	7.9	32.5	220	77	5.1	430
GIL	C-05-04 18DDC	325907112420901	07-22-91	2450	7.7	29.0	200	74	4.2	440
GIL	C-05-04 31ADD	325700112415901	07-10-91	2600	7.9	28.0	170	63	3.2	460
GIL	C-05-05 21ACC	325843112463901	07-22-91	2600	8.0	33.0	180	62	5.2	460
GIL	C-05-06 03ACC	330119112514801	07-24-91	2350	8.0	25.5	210	59	16	400
GIL	C-05-06 31CBB	325650112552701	07-23-91	1650	8.6	32.5	68	26	0.63	290
GIL	C-06-03 18AAC	325424112360401	07-24-91	1600	8.1	36.0	150	52	4.8	270
GIL	C-06-04 20ABB	325353112412101	07-24-91	1950	8.1	29.5	120	42	3.1	360

< Actual value is known to be less than value shown.

See p. 351 for Ground-Water Areas and Abbreviations.

WATER-QUALITY DATA--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	DATE	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CAC03 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
AGF	A-09-02 27CBB1	07-08-91	1	2.1	208	65	19	0.50	20	363	2.70
AGF	A-11-02 25BDD	07-08-91	0.7	1.3	236	53	32	0.40	36	398	1.10
AGF	A-12-01 25CCC	07-08-91	0.8	0.70	266	110	44	0.30	27	511	1.30
AGF	B-14-01 14ACC	07-08-91	0.5	0.90	154	100	11	0.10	22	335	1.80
ALT	D-20-08 35BDB	07-08-91	4	1.9	146	17	10	7.5	28	244	1.20
ARA	D-08-21 20BAD	03-06-91	0.9	2.8	151	13	6.9	0.30	38	225	1.50
AVR	D-15-10 33DBC1	03-14-91	3	2.3	120	37	76	1.3	30	382	8.70
BIC	B-17-02 02CAC	08-30-91	0.7	2.9	187	13	19	0.20	38	276	1.40
BIC	B-17-02 04AAA	08-27-91	0.7	3.1	183	12	18	0.40	38	268	1.40
BIC	B-17-02 09DDD2	08-29-91	0.6	3.2	231	14	23	0.30	39	332	1.90
BIC	B-17-02 22BCA4	08-28-91	0.5	2.6	178	13	21	0.30	42	278	1.50
BIC	B-18-02 27CBA	08-29-91	2	3.6	379	16	29	0.70	40	492	1.20
BIC	B-18-02 27CDA	08-30-91	2	3.3	334	19	30	0.80	34	452	1.20
BIC	B-18-03 25CDA	08-27-91	0.9	2.3	165	6.1	28	0.80	73	283	0.560
BIC	B-19-03 18CCC	09-10-91	0.4	1.5	184	7.1	12	0.30	22	232	2.10
BIC	B-19-04 04CAC	08-27-91	0.7	2.5	202	7.0	13	0.30	30	267	2.50
BIC	B-21-02 14BCC	07-09-91	1	1.4	172	94	30	0.30	16	377	2.80
BIC	B-22-07 08DDD	07-09-91	0.2	1.5	203	10	23	0.20	13	275	3.90
BIC	B-24-08 17DCD2	09-10-91	0.6	2.8	210	7.5	15	0.50	19	267	1.60
BIS	B-16-13 22CCC1	07-15-91	17	1.6	128	47	44	2.5	19	310	1.30
BLM RES	01 076-09.74X02.71	08-27-91	2	2.1	--	230	3.0	0.20	14	435	1.80
BLM RES	03 076-08.73X09.04	08-27-91	3	1.3	--	43	2.4	0.50	11	211	0.550
BLM RES	04 055-10.08X02.20	01-21-91	27	0.60	205	4.9	6.6	<0.10	24	263	1.20
BLM RES	04 056-02.85X14.19	01-21-91	21	0.60	127	24	10	0.10	21	211	0.600
BLM RES	04 056-08.11X01.15	01-25-91	8	0.70	106	18	3.0	0.20	20	168	0.900
BLM RES	04 075-05.21X12.23	01-23-91	23	0.40	115	6.8	0.70	0.10	20	162	1.30
BLM RES	06 094-07.75X11.70	01-22-91	52	0.60	327	27	29	0.60	14	366	<0.100
BLM RES	06 095-00.01X14.05	01-24-91	54	0.40	287	15	10	0.30	20	359	<0.100
BLM RES	06 095-07.28X08.90	02-21-91	27	0.40	161	7.9	4.4	<0.10	23	219	1.20
BLM RES	06 095-09.47X05.36	01-24-91	--	0.50	142	5.4	0.70	0.10	22	--	1.10
BLM RES	08 038-04.43X15.39	02-07-91	14	4.5	143	620	11	0.50	8.5	1030	<0.100
BLM RES	08 039-09.84X15.07	01-25-91	3	2.7	99	110	6.1	0.20	19	299	1.60
BLM RES	08 056-02.33X07.44	01-25-91	4	0.60	78	3.1	2.7	0.10	19	111	0.700
BLM RES	10 054-06.30X06.52	01-11-91	40	1.4	--	110	130	1.7	12	629	1.00
BUT	B-07-15 15AAD3	07-01-91	5	6.8	125	28	75	0.30	20	499	--
BWM	B-11-16 27CCB2	03-14-91	3	6.8	218	91	110	1.1	32	580	1.80
CDI	A-18-14 13ABD2	07-09-91	8	1.7	213	140	500	0.20	11	1230	0.250
CHI	B-04-19 29BCB1	03-13-91	2	4.0	158	150	41	0.70	38	482	1.30
CHI	B-14-20 33DCB	07-18-91	6	7.3	132	280	240	1.6	22	931	1.10
CHI	B-17-22 11DCC	07-17-91	8	7.9	326	960	560	0.70	23	2530	0.077
CHI	B-20-22 24DDC	07-17-91	4	9.7	79	38	710	2.4	47	1310	0.490
CHI	B-25-20 15AAA	07-16-91	2	3.3	121	11	16	0.60	32	224	5.10
CHI	B-30-20 06CAC UNSURV	07-03-91	3	8.2	120	530	140	0.80	37	1130	--
CHI RES	B-09-20 01DBC2	03-13-91	10	3.9	82	220	230	2.3	21	820	2.70
DOU	D-19-26N03CCD	03-06-91	2	3.1	208	35	15	1.7	32	382	10.0
DOU	D-20-26 25CBC	03-06-91	1	4.1	238	190	70	1.0	37	717	14.0
DOU	D-23-27 09DAB	07-10-91	10	1.3	137	26	11	0.50	23	241	2.00
DUN	3.20S.21W.17.111	03-05-91	11	0.70	188	11	10	1.9	39	276	--
DUN	D-06-30 01BAA	03-05-91	2	2.2	115	12	7.3	0.40	24	175	0.830
DUN	D-09-32 03AAA5	07-09-91	1	2.5	156	36	12	<0.10	31	259	0.370
GIL	C-02-05 26CDD	07-22-91	7	9.5	153	390	900	1.0	27	2170	4.20
GIL	C-03-04 09BAA	07-22-91	12	10	119	600	870	3.7	26	2460	9.40
GIL	C-03-04 20AAA	07-24-91	7	6.4	185	450	930	0.60	24	2340	7.70
GIL	C-04-04 04DAA	03-12-91	7	11	168	230	1200	1.0	25	2430	7.30
GIL	C-04-04 18DAB	07-23-91	6	9.4	185	490	890	0.20	15	2270	1.20
GIL	C-04-04 22AAA	07-23-91	10	10	130	180	630	3.5	26	1450	2.20
GIL	C-04-04 32BCD	07-22-91	7	11	196	490	1200	0.90	25	2930	17.0
GIL	C-04-06 36ADC1	07-23-91	8	11	146	290	1000	3.0	27	2230	6.10
GIL	C-05-04 10CBC	07-24-91	13	9.9	96	200	650	5.5	23	1480	4.10
GIL	C-05-04 18DDC	07-22-91	13	9.0	140	200	590	3.3	23	1450	3.70
GIL	C-05-04 31ADD	07-10-91	15	8.7	58	180	630	4.0	24	1420	2.70
GIL	C-05-05 21ACC	07-22-91	15	7.0	60	170	690	4.0	32	1480	3.60
GIL	C-05-06 03ACC	07-24-91	12	5.6	136	150	580	3.4	33	1340	1.10
GIL	C-05-06 31CBB	07-23-91	15	1.8	38	190	350	5.0	31	932	2.80
GIL	C-06-03 18AAC	07-24-91	10	4.1	73	150	360	5.9	25	928	2.10
GIL	C-06-04 20ABB	07-24-91	14	6.2	60	120	500	5.2	36	1120	2.70

< Actual value is known to be less than value shown.
See p. 351 for Ground-Water Areas and Abbreviations.

WATER-QUALITY DATA--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	DATE	PHOS-PHURUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	ARSENIC, DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHROMIUM, HEXA-VALENT, DIS. (UG/L AS CR) (01032)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
AGF	A-09-02 27CBB1	07-08-91	0.020	0.06	--	--	--	300	--	--	--
AGF	A-11-02 25BDD	07-08-91	0.010	0.03	--	--	--	50	--	--	--
AGF	A-12-01 25CCC	07-08-91	0.030	0.09	--	--	--	40	--	--	--
AGF	B-14-01 14ACC	07-08-91	0.020	0.06	--	--	--	20	--	--	--
ALT	D-20-08 35BDB	07-08-91	<0.010	--	--	--	--	120	--	--	--
ARA	D-08-21 20BAD	03-06-91	0.030	0.09	--	--	--	30	--	--	--
AVR	D-15-10 33DBC1	03-14-91	<0.010	--	--	--	--	90	--	--	--
BIC	B-17-02 02CAC	08-30-91	<0.010	--	13	31	0.7	80	<1.0	3	<1
BIC	B-17-02 04AAA	08-27-91	<0.010	--	12	30	0.7	70	<1.0	4	<1
BIC	B-17-02 09DDD2	08-29-91	0.020	0.06	10	55	1	70	<1.0	4	<1
BIC	B-17-02 22BCA4	08-28-91	<0.010	--	12	26	0.9	50	<1.0	6	<1
BIC	B-18-02 27CBA	08-29-91	0.020	0.06	38	74	1	390	<1.0	4	<1
BIC	B-18-02 27CDA	08-30-91	0.010	0.03	33	70	<0.5	330	<1.0	6	<1
BIC	B-18-03 25CDA	08-27-91	<0.010	--	--	56	--	130	--	--	--
BIC	B-19-03 18CCC	09-10-91	<0.010	--	7	150	<0.5	40	<1.0	32	<1
BIC	B-19-04 04CAC	08-27-91	<0.010	--	14	130	1	60	<1.0	15	<1
BIC	B-21-02 14BCC	07-09-91	<0.010	--	--	--	--	140	--	--	--
BIC	B-22-07 08DDD	07-09-91	<0.010	--	--	--	--	50	--	--	--
BIC	B-24-08 17DCD2	09-10-91	<0.010	--	--	--	--	100	--	--	--
BIS	B-16-13 22CCC1	07-15-91	<0.010	--	--	--	--	280	--	--	--
BLM RES	01 076-09.74X02.71	08-27-91	0.020	0.06	1	--	--	40	--	--	--
BLM RES	03 076-08.73X09.04	08-27-91	<0.010	--	<1	--	--	40	--	--	--
BLM RES	04 055-10.08X02.20	01-21-91	<0.010	--	4	--	--	50	--	--	--
BLM RES	04 056-02.85X14.19	01-21-91	<0.010	--	3	--	--	60	--	--	--
BLM RES	04 056-08.11X01.15	01-25-91	<0.010	--	3	--	--	40	--	--	--
BLM RES	04 075-05.21X12.23	01-23-91	0.020	0.06	3	--	--	20	--	--	--
BLM RES	06 094-07.75X11.70	01-22-91	<0.010	--	16	--	--	250	--	--	--
BLM RES	06 095-00.01X14.05	01-24-91	0.010	0.03	15	--	--	90	--	--	--
BLM RES	06 095-07.28X08.90	02-21-91	0.020	0.06	3	--	--	30	--	--	--
BLM RES	06 095-09.47X05.36	01-24-91	0.020	0.06	3	--	--	20	--	--	--
BLM RES	08 038-04.43X15.39	02-07-91	0.010	0.03	<1	--	--	200	--	--	--
BLM RES	08 039-09.84X15.07	01-25-91	<0.010	--	2	--	--	40	--	--	--
BLM RES	08 056-02.33X07.44	01-25-91	0.030	0.09	3	--	--	20	--	--	--
BLM RES	10 054-06.30X06.52	01-11-91	<0.010	--	46	--	--	400	--	--	--
BUT	B-07-15 15AAD3	07-01-91	--	--	--	--	--	1300	--	--	--
BWM	B-11-16 27CCB2	03-14-91	0.040	0.12	--	--	--	300	--	--	--
CDI	A-18-14 13ABD2	07-09-91	<0.010	--	--	--	--	60	--	--	--
CHI	B-04-19 29BCB1	03-13-91	<0.010	--	--	--	--	240	--	--	--
CHI	B-14-20 33DCB	07-18-91	<0.010	--	--	--	--	440	--	--	--
CHI	B-17-22 11DCC	07-17-91	<0.010	--	--	--	--	340	--	--	--
CHI	B-20-22 24DDC	07-17-91	<0.010	--	--	--	--	540	--	--	--
CHI	B-25-20 15AAA	07-16-91	<0.010	--	--	--	--	70	--	--	--
CHI	B-30-20 06CAC UNSURV	07-03-91	--	--	--	--	--	360	--	--	--
CHI RES	B-09-20 01DBC2	03-13-91	<0.010	--	--	--	--	460	--	--	--
DOU	D-19-26N03CCD	03-06-91	<0.010	--	--	--	--	80	--	--	--
DOU	D-20-26 25CBC	03-06-91	<0.010	--	--	--	--	80	--	--	--
DOU	D-23-27 09DAB	07-10-91	<0.010	--	--	--	--	100	--	--	--
DUN	3.20S.21W.17.111	03-05-91	--	--	--	--	--	180	--	--	--
DUN	D-06-30 01BAA	03-05-91	<0.010	--	--	--	--	40	--	--	--
DUN	D-09-32 03AAA5	07-09-91	0.060	0.18	--	--	--	60	--	--	--
GIL	C-02-05 26CDD	07-22-91	<0.010	--	4	<100	<10	840	<1.0	<1	<1
GIL	C-03-04 09BAA	07-22-91	<0.010	--	5	<100	<10	1800	<1.0	<1	1
GIL	C-03-04 20AAA	07-24-91	<0.010	--	3	<100	<10	580	<1.0	<1	<1
GIL	C-04-04 04DAA	03-12-91	<0.010	--	--	--	--	480	--	--	--
GIL	C-04-04 18DAB	07-23-91	<0.010	--	<1	<100	<10	680	<1.0	1	<1
GIL	C-04-04 22AAA	07-23-91	<0.010	--	4	<100	<10	750	<1.0	<1	<1
GIL	C-04-04 32BCD	07-22-91	<0.010	--	2	<100	<10	840	<1.0	<1	<1
GIL	C-04-06 36ADC1	07-23-91	<0.010	--	6	<100	<10	850	<1.0	<1	<1
GIL	C-05-04 10CBC	07-24-91	<0.010	--	3	<100	<10	1200	<1.0	<1	<1
GIL	C-05-04 18DDC	07-22-91	<0.010	--	2	<100	<10	720	<1.0	<1	<1
GIL	C-05-04 31ADD	07-10-91	<0.010	--	--	--	--	1000	--	--	--
GIL	C-05-05 21ACC	07-22-91	<0.010	--	7	100	<10	950	<1.0	1	<1
GIL	C-05-06 03ACC	07-24-91	<0.010	--	6	<100	<10	630	<1.0	<1	<1
GIL	C-05-06 31CBB	07-23-91	<0.010	--	28	13	<0.5	2100	<1.0	6	<1
GIL	C-06-03 18AAC	07-24-91	<0.010	--	47	57	<0.5	430	<1.0	2	<1
GIL	C-06-04 20ABB	07-24-91	<0.010	--	7	<100	<10	670	<1.0	<1	<1

< Actual value is known to be less than value shown.
See p. 351 for Ground-Water Areas and Abbreviations.

WATER-QUALITY DATA--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	DATE	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
AGF	A-09-02 27CBB1	07-08-91	--	8	--	--	<1	--	--	--	--
AGF	A-11-02 25BDD	07-08-91	--	10	--	--	<1	--	--	--	--
AGF	A-12-01 25CCC	07-08-91	--	25	--	--	<1	--	--	--	--
AGF	B-14-01 14ACC	07-08-91	--	<3	--	--	<1	--	--	--	--
ALT	D-20-08 35BDB	07-08-91	--	4	--	--	<1	--	--	--	--
ARA	D-08-21 20BAD	03-06-91	--	5	--	--	9	--	--	--	--
AVR	D-15-10 33DBC1	03-14-91	--	7	--	--	2	--	--	--	--
BIC	B-17-02 02CAC	08-30-91	<1	7	<1	21	<1	<1	410	12	120
BIC	B-17-02 04AAA	08-27-91	<1	4	<1	20	<1	<1	420	13	130
BIC	B-17-02 09DDD2	08-29-91	<1	5	<1	15	<1	<1	590	11	65
BIC	B-17-02 22BCA4	08-28-91	<1	3	<1	14	<1	1	450	13	4
BIC	B-18-02 27CBA	08-29-91	3	4	2	79	<1	1	390	10	370
BIC	B-18-02 27CDA	08-30-91	10	9	<1	66	1	<1	380	11	30
BIC	B-18-03 25CDA	08-27-91	--	<3	--	--	<1	--	720	--	--
BIC	B-19-03 18CCC	09-10-91	1	<3	<1	10	<1	<1	230	15	24
BIC	B-19-04 04CAC	08-27-91	2	<3	3	12	<1	1	330	13	<3
BIC	B-21-02 14BCC	07-09-91	--	8	--	--	<1	--	--	--	--
BIC	B-22-07 08DDD	07-09-91	--	<3	--	--	<1	--	--	--	--
BIC	B-24-08 17DCD2	09-10-91	--	4	--	--	<1	--	--	--	--
BIS	B-16-13 22CCC1	07-15-91	--	8	--	--	<1	--	--	--	--
BLM RES	01 076-09.74X02.71	08-27-91	--	10	--	--	--	--	--	--	--
BLM RES	03 076-08.73X09.04	08-27-91	--	8	--	--	--	--	--	--	--
BLM RES	04 055-10.08X02.20	01-21-91	--	5	--	--	--	--	--	--	--
BLM RES	04 056-02.85X14.19	01-21-91	--	44	--	--	--	--	--	--	--
BLM RES	04 056-08.11X01.15	01-25-91	--	<3	--	--	--	--	--	--	--
BLM RES	04 075-05.21X12.23	01-23-91	--	7	--	--	--	--	--	--	--
BLM RES	06 094-07.75X11.70	01-22-91	--	4	--	--	--	--	--	--	--
BLM RES	06 095-00.01X14.05	01-24-91	--	<3	--	--	--	--	--	--	--
BLM RES	06 095-07.28X08.90	02-21-91	--	<3	--	--	--	--	--	--	--
BLM RES	06 095-09.47X05.36	01-24-91	--	<3	--	--	--	--	--	--	--
BLM RES	08 038-04.43X15.39	02-07-91	--	20	--	--	--	--	--	--	--
BLM RES	08 039-09.84X15.07	01-25-91	--	6	--	--	--	--	--	--	--
BLM RES	08 056-02.33X07.44	01-25-91	--	28	--	--	--	--	--	--	--
BLM RES	10 054-06.30X06.52	01-11-91	--	39	--	--	--	--	--	--	--
BUT	B-07-15 15AAD3	07-01-91	--	11	--	--	6	--	4600	--	--
BWM	B-11-16 27CCB2	03-14-91	--	8	--	--	<1	--	--	--	--
CDI	A-18-14 13ABD2	07-09-91	--	20	--	--	<10	--	--	--	--
CHI	B-04-19 29BCB1	03-13-91	--	36	--	--	<1	--	--	--	--
CHI	B-14-20 33DCB	07-18-91	--	14	--	--	<1	--	--	--	--
CHI	B-17-22 11DCC	07-17-91	--	1200	--	--	1400	--	--	--	--
CHI	B-20-22 24DDC	07-17-91	--	40	--	--	<10	--	--	--	--
CHI	B-25-20 15AAA	07-16-91	--	3	--	--	<1	--	--	--	--
CHI	B-30-20 06CAC UNSURV	07-03-91	--	13	--	99	2	--	--	--	--
CHI RES	B-09-20 01DBC2	03-13-91	--	12	--	--	<1	--	--	--	--
DOU	D-19-26N03CCD	03-06-91	--	12	--	--	<1	--	--	--	--
DOU	D-20-26 25CBC	03-06-91	--	50	--	--	4	--	--	--	--
DOU	D-23-27 09DAB	07-10-91	--	<3	--	--	<1	--	--	--	--
DUN	3.20S.21W.17.111	03-05-91	--	9	--	--	<1	--	--	--	--
DUN	D-06-30 01BAA	03-05-91	--	4	--	--	<1	--	--	--	--
DUN	D-09-32 03AAA5	07-09-91	--	4	--	--	<1	--	--	--	--
GIL	C-02-05 26CDD	07-22-91	<1	20	<1	210	<10	3	3200	28	<10
GIL	C-03-04 09BAA	07-22-91	<1	10	<1	340	<10	32	3200	22	<10
GIL	C-03-04 20AAA	07-24-91	<1	<10	<1	190	<10	3	1900	24	<10
GIL	C-04-04 04DAA	03-12-91	--	30	--	--	<10	--	--	--	--
GIL	C-04-04 18DAB	07-23-91	<1	2100	<1	190	350	<1	2700	18	<10
GIL	C-04-04 22AAA	07-23-91	<1	20	<1	250	<10	18	2000	12	<10
GIL	C-04-04 32BCD	07-22-91	1	40	<1	240	<10	2	4000	29	<10
GIL	C-04-06 36ADC1	07-23-91	<1	<10	<1	250	<10	6	4700	23	<10
GIL	C-05-04 10CBC	07-24-91	1	20	<1	270	<10	27	1700	13	<10
GIL	C-05-04 18DDC	07-22-91	<1	<10	<1	270	<10	8	1800	13	<10
GIL	C-05-04 31ADD	07-10-91	--	20	--	--	<10	--	--	--	--
GIL	C-05-05 21ACC	07-22-91	<1	<10	<1	300	<10	18	1200	20	<10
GIL	C-05-06 03ACC	07-24-91	<1	10	<1	270	10	11	870	18	<10
GIL	C-05-06 31CBB	07-23-91	<1	13	<1	260	<1	28	210	30	<3
GIL	C-06-03 18AAC	07-24-91	2	13	<1	170	3	9	1800	8	59
GIL	C-06-04 20ABB	07-24-91	<1	30	<1	210	<10	13	580	17	<10

< Actual value is known to be less than value shown.
See p. 351 for Ground-Water Areas and Abbreviations.

WATER-QUALITY DATA--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	STATION NUMBER	DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
GIL	C-06-05 02BDC	325608112444101	07-23-91	2200	8.0	36.0	140	50	3.1	400
GIL	C-06-05 08BAA	325534112473501	07-23-91	2000	8.2	32.0	130	47	3.5	370
GIL	C-06-05 25BBB2	325253112434801	07-23-91	2100	8.1	33.5	140	49	4.1	360
GIL	C-06-06 10BCB	325518112521101	07-10-91	1750	8.4	31.0	89	33	1.6	320
GIL	C-06-07 11DCC	325447112564801	07-22-91	3050	8.5	33.5	290	110	4.5	530
GIL	C-07-06 04ADD	325052112522201	07-22-91	1550	8.2	30.5	110	39	3.0	300
GRD	C-07-13 24ADA	324825113322801	03-13-91	2450	8.0	30.5	150	46	7.7	450
GRD	C-11-06 24BDA	322726112502001	03-12-91	970	8.3	40.5	51	15	3.3	170
GSK	A-01-16 19BAD	332507110425001	03-04-91	480	7.7	30.0	230	41	30	26
GTD	C-09-19 04BBB	324040114133501	03-13-91	5100	7.7	22.5	860	210	82	800
GWA	B-41-14 14BCB	365725113471801	02-07-91	2430	7.7	16.0	810	220	63	210
HAR	B-01-08 19BCC	332450113073501	07-01-91	3250	8.1	24.0	160	24	24	680
HAR	B-05-09S02BBD	334830113102401	03-12-91	720	7.2	24.5	210	49	21	73
HAR	C-01-09 05CCC	332149113124601	03-12-91	1030	7.8	36.5	89	19	10	190
HAS	B-07-05 01CDB	335825112435301	03-07-91	490	7.7	18.0	200	54	17	30
HOP RES	07 093-06.25X03.85	355638110064001	01-18-91	1480	9.0	20.5	6	1.6	0.50	330
HOU	A-41-08 14BCA	365723111302801	06-26-91	1180	7.7	22.0	380	83	43	91
HUA	B-22-16 28BDA2	351552113590801	07-15-91	420	8.0	29.5	130	27	16	30
HUA	B-23-13 20CCD	352130113413901	07-11-91	760	7.6	19.0	310	63	38	42
HUA	B-24-12 09AAD	352904113333401	07-10-91	540	8.0	--	230	37	33	18
HUA	B-26-18 03AAA1	354036114110601	07-16-91	485	8.1	31.5	150	23	22	34
HUA	B-29-17 23CCB	355258114050301	07-16-91	380	8.2	22.0	100	14	16	41
KAN	B-41-06 06BAD1	365914112590001	06-27-91	1290	8.0	15.0	400	100	37	130
KAN	B-42-02 32BCC	365955112321701	06-27-91	1530	8.0	13.5	480	85	66	160
KAN	B-42-06 31CCC	365931112592301	06-27-91	570	8.0	18.0	190	34	25	50
LIC	B-17-02S34BBA	344822112274301	08-28-91	325	8.0	19.5	130	37	9.2	14
LSC	D-03-02 23DAA	330914112065801	06-24-91	740	8.6	27.0	28	10	0.65	130
LSC	D-04-09 04DDD	330618111251801	03-13-91	1340	7.6	22.5	340	98	22	140
LSC	D-05-03 16CCC2	325909112035001	07-08-91	650	8.4	29.5	49	11	5.3	100
LSC	D-05-07 23DDA	325813111360401	03-05-91	4500	7.3	25.5	1000	340	47	590
LSC	D-06-03 17ACC	3254071112032401	03-04-91	1240	8.0	27.5	120	28	13	210
LSC	D-06-03 26BCC	325221112004501	03-04-91	1020	8.0	28.5	85	21	7.8	180
LSC	D-06-04S04DDD3	325523111554301	03-05-91	1240	7.7	25.0	350	110	18	100
LSC	D-06-07 15ADC2	335407111361501	03-04-91	1100	9.1	53.0	--	3.9	<0.01	210
LSC	D-07-04W01DAD	325041111534201	03-05-91	495	8.5	31.0	26	7.3	2.0	96
LSC	D-07-06 29DDD2	324645111442301	07-08-91	3300	7.3	25.0	1200	390	60	280
LSC	D-07-06 34CDD2	324550111424901	03-08-91	1060	7.7	27.5	230	73	11	120
LSC	D-09-07 02CDD	323954111353101	03-06-91	960	7.7	25.0	300	97	15	85
LSC	D-10-09 10AAD2	323413111235101	07-11-91	680	7.7	28.0	210	69	8.4	72
LSC	D-11-11 35DDD	322530111110001	03-13-91	940	7.3	23.5	340	110	16	61
LSP	D-05-15 23BAA2	325921110470201	07-22-91	1570	7.4	20.0	350	100	23	180
LSP	D-07-16 10ABC	325033110414901	07-11-91	670	7.8	19.5	280	94	10	31
LSP	D-07-17 07ABB	325043110384001	07-22-91	480	7.9	23.0	180	57	9.2	29
LSP	D-08-17 31CCD	324116110390401	07-23-91	470	7.8	23.0	180	48	14	26
LSP	D-09-18 31CAD	323617110323401	07-24-91	380	8.4	26.5	34	12	0.85	66
LSP	D-12-18 12BBD	322435110275101	07-25-91	850	7.4	18.0	290	87	18	67
LSP	D-14-20 08CAA	321347110191601	07-11-91	1400	7.6	21.0	360	96	30	160
LVR	A-03-06 15ABA	333639111433101	03-05-91	610	7.5	32.0	200	60	12	47
LVR	A-11-10 34DCA	341456111184401	07-10-91	340	7.2	17.5	150	39	12	14
MMU	B-05-13 11CBB	334725113352901	03-12-91	1200	8.1	33.5	65	23	1.8	200
MMU	B-06-11 05ADD	335334113250701	07-02-91	470	9.2	25.5	5	1.7	0.18	110
MMU	B-07-09 11AAA	335815113093001	03-12-91	495	7.8	29.5	100	22	11	66
N-C	A-04-02 11ADB	334230112070901	03-06-91	395	8.0	28.5	130	28	15	35
N-C	A-05-02 03DBC	334803112083201	03-06-91	495	8.1	29.5	80	16	9.8	79
N-C	A-06-04 26DCC	334943111545901	03-05-91	440	8.0	27.0	130	24	18	46
PRZ	A-18-24 09ABB	345850109475001	07-09-91	1480	8.0	16.0	86	25	5.8	320
RAN	B-03-14 12CCC	333637113394001	03-13-91	1490	7.9	30.0	160	60	3.4	250
RAN	B-04-16 19BCB	334040113572101	03-13-91	640	7.9	30.0	91	15	13	100
SAC	B-17-18 12ABD	345239114084001	07-17-91	580	7.9	34.5	180	39	19	40
SAC	B-21-18 05DBD	351401114132401	07-16-91	510	8.0	38.5	100	26	9.5	58

< Actual value is known to be less than value shown.

See p. 351 for Ground-Water Areas and Abbreviations.

WATER-QUALITY DATA--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	DATE	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CAC03 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
GIL	C-06-05 02BDC	07-23-91	15	7.5	56	150	610	5.5	31	1300	2.70
GIL	C-06-05 08BAA	07-23-91	14	6.0	46	170	540	5.9	38	1220	2.50
GIL	C-06-05 25BBB2	07-23-91	13	4.8	49	150	530	5.4	38	1200	6.20
GIL	C-06-06 10BCB	07-10-91	15	3.4	43	150	410	5.7	31	995	3.00
GIL	C-06-07 11DCC	07-22-91	13	2.9	22	370	780	4.7	20	1870	6.00
GIL	C-07-06 04ADD	07-22-91	12	3.5	43	150	400	5.1	33	977	3.40
GRD	C-07-13 24ADA	03-13-91	16	5.7	90	360	470	4.8	21	1430	2.80
GRD	C-11-06 24BDA	03-12-91	10	3.9	108	85	150	4.8	47	560	3.60
GSK	A-01-16 19BAD	03-04-91	0.8	2.4	233	8.1	16	0.30	32	301	1.30
GTD	C-09-19 04BBB	03-13-91	12	8.4	401	960	1100	2.2	30	--	0.390
GWA	B-41-14 14BCB	02-07-91	3	17	203	700	290	0.40	14	1640	0.600
HAR	B-01-08 19BCC	07-01-91	23	1.2	421	590	350	9.4	36	1970	--
HAR	B-05-09S02BBD	03-12-91	2	2.8	166	26	89	0.20	25	439	12.0
HAR	C-01-09 05CCC	03-12-91	9	4.2	--	110	130	2.5	23	606	3.40
HAS	B-07-05 01CDB	03-07-91	0.9	1.9	195	40	17	0.50	24	305	0.710
HOP RES	07 093-06.25X03.85	01-18-91	58	1.1	373	75	210	2.8	11	856	<0.100
HOU	A-41-08 14BCA	06-26-91	2	9.3	219	260	87	0.30	12	717	--
HUA	B-22-16 28BDA2	07-15-91	1	5.2	150	16	25	1.0	51	273	2.70
HUA	B-23-13 20CCD	07-11-91	1	3.3	304	35	48	0.60	52	469	1.10
HUA	B-24-12 09AAD	07-10-91	0.5	2.9	179	19	41	0.40	30	308	4.40
HUA	B-26-18 03AAA1	07-16-91	1	7.4	151	29	37	0.70	40	301	4.00
HUA	B-29-17 23CCB	07-16-91	2	4.1	161	9.8	14	1.0	22	237	4.10
KAN	B-41-06 06BAD1	06-27-91	3	6.8	359	260	58	0.20	11	820	--
KAN	B-42-02 32BCC	06-27-91	3	5.2	368	360	32	0.50	11	942	--
KAN	B-42-06 31CCC	06-27-91	2	2.4	259	20	15	0.60	13	316	--
LIC	B-17-02S34BBA	08-28-91	0.5	1.6	110	9.2	21	0.30	33	201	2.00
LSC	D-03-02 23DAA	06-24-91	11	1.6	62	98	100	7.0	23	412	0.880
LSC	D-04-09 04DDD	03-13-91	3	4.8	187	140	210	0.80	34	787	5.80
LSC	D-05-03 16CCC2	07-08-91	6	2.0	76	120	53	5.1	18	369	2.00
LSC	D-05-07 23DDA	03-05-91	8	7.5	153	1000	1000	0.60	32	3190	17.0
LSC	D-06-03 17ACC	03-04-91	8	3.0	163	120	180	2.0	27	743	14.0
LSC	D-06-03 26BCC	03-04-91	9	2.7	224	110	93	2.6	33	625	9.10
LSC	D-06-04S04DDD3	03-05-91	2	3.3	123	180	170	0.30	32	750	14.0
LSC	D-06-07 15ADC2	03-04-91	--	1.2	77	120	190	4.3	34	--	1.30
LSC	D-07-04W01DAD	03-05-91	8	1.3	139	59	29	1.5	25	314	2.10
LSC	D-07-06 29DDD2	07-08-91	3	6.7	213	870	460	0.30	41	2400	38.0
LSC	D-07-06 34CDD2	03-08-91	3	3.6	121	170	130	0.50	33	662	11.0
LSC	D-09-07 02CDD	03-06-91	2	3.4	134	95	94	0.30	30	606	24.0
LSC	D-10-09 10AAD2	07-11-91	2	2.6	177	93	45	0.80	31	463	7.80
LSC	D-11-11 35DDD	03-13-91	1	2.7	203	120	81	0.30	34	582	7.80
LSP	D-05-15 23BAA2	07-22-91	4	5.3	256	340	140	1.6	36	990	2.10
LSP	D-07-16 10ABC	07-11-91	0.8	2.3	181	160	10	1.0	38	458	0.580
LSP	D-07-17 07ABB	07-22-91	0.9	2.6	177	54	9.8	0.80	33	305	0.680
LSP	D-08-17 31CCD	07-23-91	0.8	1.9	151	36	27	0.70	32	291	3.20
LSP	D-09-18 31CAD	07-24-91	5	2.2	130	38	11	3.8	33	247	0.350
LSP	D-12-18 12BED	07-25-91	2	4.4	293	130	19	0.90	31	544	2.10
LSP	D-14-20 08CAA	07-11-91	4	4.0	283	330	62	1.2	29	893	2.40
LVR	A-03-06 15ABA	03-05-91	1	2.3	191	31	61	1.7	44	379	1.20
LVR	A-11-10 34DCA	07-10-91	0.5	0.40	161	10	14	0.60	34	226	1.10
MMU	B-05-13 11CBB	03-12-91	11	3.8	94	48	230	1.5	20	655	16.0
MMU	B-06-11 05ADD	07-02-91	21	0.20	130	23	43	3.1	15	274	--
MMU	B-07-09 11AAA	03-12-91	3	3.1	142	27	45	2.6	28	306	3.50
N-C	A-04-02 11ADB	03-06-91	1	3.2	177	17	14	0.80	39	275	3.80
N-C	A-05-02 03DBC	03-06-91	4	3.6	207	19	18	3.5	51	339	3.30
N-C	A-06-04 26DCC	03-05-91	2	3.2	173	19	24	0.90	40	296	3.90
PRZ	A-18-24 09ABB	07-09-91	15	1.4	443	210	91	1.2	20	942	<0.050
RAN	B-03-14 12CCC	03-13-91	9	3.0	76	310	190	3.7	21	913	5.70
RAN	B-04-16 19BCB	03-13-91	5	5.3	287	11	28	0.40	31	399	5.20
SAC	B-17-18 12ABD	07-17-91	1	4.2	134	50	61	1.3	32	336	2.10
SAC	B-21-18 05DBD	07-16-91	2	8.3	109	68	44	0.80	48	334	1.50

< Actual value is known to be less than value shown.
See p. 351 for Ground-Water Areas and Abbreviations.

QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

WATER-QUALITY DATA--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, HEXA- VALENT, DIS- (UG/L AS CR) (01032)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
GIL	C-06-05 02BDC	07-23-91	<0.010	--	12	<100	<10	900	<1.0	8	<1
GIL	C-06-05 08BAA	07-23-91	<0.010	--	19	<100	<10	1100	<1.0	7	<1
GIL	C-06-05 25BBB2	07-23-91	<0.010	--	15	<100	<10	1100	<1.0	2	<1
GIL	C-06-06 10BCB	07-10-91	<0.010	--	--	--	--	1400	--	--	--
GIL	C-06-07 11DCC	07-22-91	<0.010	--	10	<100	<10	2100	<1.0	4	<1
GIL	C-07-06 04ADD	07-22-91	<0.010	--	24	29	<0.5	1700	<1.0	7	<1
GRD	C-07-13 24ADA	03-13-91	<0.010	--	--	--	--	2200	--	--	--
GRD	C-11-06 24BDA	03-12-91	<0.010	--	62	--	--	480	--	--	--
GSK	A-01-16 19BAD	03-04-91	<0.010	--	--	--	--	40	--	--	--
GTD	C-09-19 04BBB	03-13-91	0.030	0.09	32	--	--	1400	--	--	--
GWA	B-41-14 14BCB	02-07-91	<0.010	--	--	--	--	540	--	--	--
HAR	B-01-08 19BCC	07-01-91	--	--	--	--	--	1800	--	--	--
HAR	B-05-09S02BBD	03-12-91	<0.010	--	--	--	--	130	--	--	--
HAR	C-01-09 05CCC	03-12-91	<0.010	--	--	--	--	460	--	--	--
HAS	B-07-05 01CDB	03-07-91	0.050	0.15	--	--	--	90	--	--	--
HOP RES	07 093-06.25X03.85	01-18-91	<0.010	--	79	--	--	1200	--	--	--
HOU	A-41-08 14BCA	06-26-91	--	--	--	--	--	110	--	--	--
HUA	B-22-16 28BDA2	07-15-91	<0.010	--	--	--	--	100	--	22	--
HUA	B-23-13 20CCD	07-11-91	0.030	0.09	--	--	--	150	--	--	--
HUA	B-24-12 09AAD	07-10-91	<0.010	--	--	--	--	80	--	--	--
HUA	B-26-18 03AAA1	07-16-91	<0.010	--	--	--	--	140	--	--	--
HUA	B-29-17 23CCB	07-16-91	<0.010	--	--	--	--	210	--	--	--
KAN	B-41-06 06BAD1	06-27-91	--	--	--	--	--	330	--	--	--
KAN	B-42-02 32BCC	06-27-91	--	--	--	--	--	380	--	--	--
KAN	B-42-06 31CCC	06-27-91	--	--	--	--	--	260	--	--	--
LIC	B-17-02S34BBA	08-28-91	<0.010	--	12	5	0.9	40	<1.0	5	<1
LSC	D-03-02 23DAA	06-24-91	<0.010	--	--	--	--	370	--	--	--
LSC	D-04-09 04DDD	03-13-91	<0.010	--	--	--	--	170	--	--	--
LSC	D-05-03 16CCC2	07-08-91	<0.010	--	--	--	--	160	--	--	--
LSC	D-05-07 23DDA	03-05-91	<0.010	--	--	--	--	1200	--	--	--
LSC	D-06-03 17ACC	03-04-91	<0.010	--	13	--	--	530	--	--	--
LSC	D-06-03 26BCC	03-04-91	<0.010	--	21	--	--	470	--	--	--
LSC	D-06-04S04DDD3	03-05-91	<0.010	--	--	--	--	220	--	--	--
LSC	D-06-07 15ADC2	03-04-91	<0.010	--	--	--	--	530	--	--	--
LSC	D-07-04W01DAD	03-05-91	<0.010	--	43	--	--	200	--	--	--
LSC	D-07-06 29DDD2	07-08-91	0.020	0.06	--	--	--	750	--	--	--
LSC	D-07-06 34CDD2	03-08-91	<0.010	--	--	--	--	180	--	--	--
LSC	D-09-07 02CDD	03-06-91	<0.010	--	--	--	--	90	--	--	--
LSC	D-10-09 10AAD2	07-11-91	<0.010	--	--	--	--	30	--	--	--
LSC	D-11-11 35DDD	03-13-91	<0.010	--	--	--	--	70	--	--	--
LSP	D-05-15 23BAA2	07-22-91	0.010	0.03	3	41	<0.5	260	<1.0	<1	<1
LSP	D-07-16 10ABC	07-11-91	0.020	0.06	--	--	--	710	--	--	--
LSP	D-07-17 07ABB	07-22-91	0.020	0.06	2	10	<0.5	50	<1.0	<1	<1
LSP	D-08-17 31CCD	07-23-91	<0.010	--	3	<2	<0.5	70	<1.0	<1	1
LSP	D-09-18 31CAD	07-24-91	<0.010	--	17	<2	<0.5	90	<1.0	<1	1
LSP	D-12-18 12BBD	07-25-91	0.020	0.06	4	92	<0.5	110	<1.0	<1	1
LSP	D-14-20 08CAA	07-11-91	0.020	0.06	--	--	--	290	--	--	--
LVR	A-03-06 15ABA	03-05-91	0.020	0.06	--	--	--	80	--	--	--
LVR	A-11-10 34DCA	07-10-91	<0.010	--	--	--	--	20	--	--	--
MMU	B-05-13 11CBB	03-12-91	<0.010	--	--	--	--	230	--	--	--
MMU	B-06-11 05ADD	07-02-91	--	--	--	--	--	270	--	--	--
MMU	B-07-09 11AAA	03-12-91	<0.010	--	--	--	--	160	--	--	--
N-C	A-04-02 11ADB	03-06-91	<0.010	--	--	--	--	80	--	--	--
N-C	A-05-02 03DBC	03-06-91	<0.010	--	32	--	--	150	--	--	--
N-C	A-06-04 26DCC	03-05-91	<0.010	--	--	--	--	90	--	--	--
PRZ	A-18-24 09ABB	07-09-91	0.130	0.40	--	--	--	600	--	--	--
RAN	B-03-14 12CCC	03-13-91	<0.010	--	--	--	--	810	--	--	--
RAN	B-04-16 19BCB	03-13-91	0.010	0.03	--	--	--	400	--	--	--
SAC	B-17-18 12ABD	07-17-91	<0.010	--	--	--	--	130	--	--	--
SAC	B-21-18 05DBD	07-16-91	<0.010	--	--	--	--	160	--	25	--

< Actual value is known to be less than value shown.

See p. 351 for Ground-Water Areas and Abbreviations.

WATER-QUALITY DATA--Continued

GROUND-WATER AREA	LOCAL WELL NUMBER	DATE	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
GIL	C-06-05 02BDC	07-23-91	<1	10	<1	250	<10	23	1100	19	<10
GIL	C-06-05 08BAA	07-23-91	<1	10	<1	280	<10	32	790	26	<10
GIL	C-06-05 25BBB2	07-23-91	<1	40	<1	270	<10	24	870	22	<10
GIL	C-06-06 10BCB	07-10-91	--	100	--	--	5	--	--	--	--
GIL	C-06-07 11DCC	07-22-91	<1	50	<1	390	<10	18	980	31	<10
GIL	C-07-06 04ADD	07-22-91	<1	21	<1	280	1	19	430	28	<3
GRD	C-07-13 24ADA	03-13-91	--	10	--	--	<10	--	--	--	--
GRD	C-11-06 24BDA	03-12-91	--	9	--	--	2	--	--	--	--
GSK	A-01-16 19BAD	03-04-91	--	<3	--	--	<1	--	--	--	--
GTD	C-09-19 04BBB	03-13-91	--	480	--	--	1300	--	--	--	--
GWA	B-41-14 14BCB	02-07-91	--	20	--	--	10	--	--	--	--
HAR	B-01-08 19BCC	07-01-91	--	90	--	--	<10	--	--	--	--
HAR	B-05-09S02BBD	03-12-91	--	98	--	--	10	--	--	--	--
HAR	C-01-09 05CCC	03-12-91	--	14	--	--	7	--	--	--	--
HAS	B-07-05 01CDB	03-07-91	--	<3	--	--	<1	--	--	--	--
HOP RES	07 093-06.25X03.85	01-18-91	--	14	--	--	--	--	--	--	--
HOU	A-41-08 14BCA	06-26-91	--	10	--	--	<1	--	--	--	--
HUA	B-22-16 28BDA2	07-15-91	--	<3	--	--	<1	--	--	--	--
HUA	B-23-13 20CCD	07-11-91	--	3	--	--	<1	--	--	--	--
HUA	B-24-12 09AAD	07-10-91	--	<3	--	--	<1	--	--	--	--
HUA	B-26-18 03AAA1	07-16-91	--	5	--	--	<1	--	--	--	--
HUA	B-29-17 23CCB	07-16-91	--	6	--	--	1	--	--	--	--
KAN	B-41-06 06BAD1	06-27-91	--	150	--	--	920	--	--	--	--
KAN	B-42-02 32BCC	06-27-91	--	890	--	--	140	--	--	--	--
KAN	B-42-06 31CCC	06-27-91	--	220	--	--	77	--	--	--	--
LIC	B-17-02S34BBA	08-28-91	<1	<3	<1	9	<1	1	270	14	<3
LSC	D-03-02 23DAA	06-24-91	--	32	--	--	<1	--	--	--	--
LSC	D-04-09 04DDD	03-13-91	--	11	--	--	<1	--	--	--	--
LSC	D-05-03 16CCC2	07-08-91	--	21	--	--	<1	--	--	--	--
LSC	D-05-07 23DDA	03-05-91	--	70	--	--	10	--	--	--	--
LSC	D-06-03 17ACC	03-04-91	--	13	--	--	3	--	--	--	--
LSC	D-06-03 26BCC	03-04-91	--	5	--	--	<1	--	--	--	--
LSC	D-06-04S04DDD3	03-05-91	--	7	--	--	1	--	--	--	--
LSC	D-06-07 15ADC2	03-04-91	--	<3	--	--	<1	--	--	--	--
LSC	D-07-04W01DAD	03-05-91	--	<3	--	--	<1	--	--	--	--
LSC	D-07-06 29DDD2	07-08-91	--	10	--	--	10	--	--	--	--
LSC	D-07-06 34CDD2	03-08-91	--	17	--	--	6	--	--	--	--
LSC	D-09-07 02CDD	03-06-91	--	<3	--	--	<1	--	--	--	--
LSC	D-10-09 10AAD2	07-11-91	--	6	--	--	<1	--	--	--	--
LSC	D-11-11 35DDD	03-13-91	--	6	--	--	1	--	--	--	--
LSP	D-05-15 23BAA2	07-22-91	1	8	<1	150	<1	11	910	9	28
LSP	D-07-16 10ABC	07-11-91	--	4	--	--	<1	--	--	--	--
LSP	D-07-17 07ABB	07-22-91	<1	<3	<1	24	2	3	170	7	<3
LSP	D-08-17 31CCD	07-23-91	<1	13	<1	65	4	2	340	9	170
LSP	D-09-18 31CAD	07-24-91	<1	5	<1	150	<1	5	140	9	10
LSP	D-12-18 12BBD	07-25-91	2	7	<1	53	<1	3	870	6	11
LSP	D-14-20 08CAA	07-11-91	--	3	--	--	<1	--	--	--	--
LVR	A-03-06 15ABA	03-05-91	--	<3	--	--	<1	--	--	--	--
LVR	A-11-10 34DCA	07-10-91	--	570	--	--	18	--	--	--	--
MMU	B-05-13 11CBB	03-12-91	--	8	--	--	<1	--	--	--	--
MMU	B-06-11 05ADD	07-02-91	--	12	--	--	<1	--	--	--	--
MMU	B-07-09 11AAA	03-12-91	--	<3	--	--	<1	--	--	--	--
N-C	A-04-02 11ADB	03-06-91	--	<3	--	--	<1	--	--	--	--
N-C	A-05-02 03DBC	03-06-91	--	27	--	--	<1	--	--	--	--
N-C	A-06-04 26DCC	03-05-91	--	9	--	--	<1	--	--	--	--
PRZ	A-18-24 09ABB	07-09-91	--	350	--	--	230	--	--	--	--
RAN	B-03-14 12CCC	03-13-91	--	35	--	--	4	--	--	--	--
RAN	B-04-16 19BCB	03-13-91	--	8	--	--	<1	--	--	--	--
SAC	B-17-18 12ABD	07-17-91	--	62	--	--	3	--	--	--	--
SAC	B-21-18 05DBD	07-16-91	--	7	--	--	<1	--	--	--	--

< Actual value is known to be less than value shown.
See p. 351 for Ground-Water Areas and Abbreviations.

WATER-QUALITY DATA--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	STATION NUMBER	DATE	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
SAF	D-04-22 25BCB	330330110030001	07-09-91	525	7.6	19.5	110	36	5.7	67
SAF	D-06-25 36CBB	325200109445601	03-04-91	11500	7.9	45.0	280	99	6.9	2400
SAF	D-07-26 15BCC	324926109405201	03-05-91	3100	7.5	19.0	260	71	19	600
SAF	D-09-26 18DDA	323850109430701	03-04-91	303	7.2	21.5	100	30	7.1	20
SAF	D-10-27 28DCD	323138109350701	03-05-91	350	9.1	25.0	6	2.2	0.10	81
SNO	A-13-21 26ADB2	342940110045101	07-08-91	310	7.5	15.5	120	25	13	16
SRV	A-03-01 27CCC	333401112151101	03-06-91	1510	7.4	23.5	640	150	65	57
SRV	B-01-02 25BBC2	332416112253201	07-09-91	2200	8.0	38.0	86	27	4.6	410
SRV	B-03-02 14BCB2	333619112263501	07-09-91	350	9.0	40.0	9	2.8	0.38	76
SRV	B-06-03 33DCB	334848112342901	03-07-91	645	8.2	29.0	130	32	13	78
SRV	D-01-06 27CDD	331826111434501	03-13-91	1680	7.6	27.5	560	160	38	91
SRV	D-01-09 07BDC2	332135111281801	03-04-91	505	9.1	50.0	3	0.95	0.06	110
SRV	D-01-10 35DBB	331754111173601	03-04-91	1370	7.2	22.0	710	210	46	46
SRV RES	A-02-05 14AAA	333126111481601	03-05-91	2250	7.6	24.5	520	130	47	260
SSI	D-13-29 25CCC1	321552109205101	07-10-91	560	9.4	33.0	5	1.5	0.30	120
SSI	D-13-29 25CCC2	321550109205201	07-10-91	490	7.8	23.5	160	54	5.1	41
SSI	D-18-32 33CAA	314900109045501	03-05-91	215	7.4	19.0	57	18	2.9	24
SSI	D-20-32 29ABB	314001109054201	03-05-91	295	8.2	23.5	82	23	5.9	30
SSI	D-21-31 03BCD1	313754109104701	07-10-91	380	7.9	27.5	110	34	7.2	32
USC	D-11-14 32CCC	322528110563301	03-04-91	280	7.5	23.0	96	28	6.4	18
USC	D-14-14 02BBB	321457110532701	03-05-91	380	7.1	24.0	100	34	4.0	41
USC	D-16-15 14ACB	320238110465201	03-05-91	1010	7.4	25.5	400	120	25	59
USC	D-17-14 07DDD	315728110563901	07-08-91	720	7.9	24.5	280	95	10	42
USC	D-19-13 29CBB2	314448111023301	03-06-91	980	7.4	20.5	320	100	17	110
USC	D-19-17 17BBD	314719110383001	03-05-91	320	8.6	16.5	20	7.6	0.29	61
USC	D-22-13 34ADD UNSURV	312818110594501	03-06-91	720	7.3	19.0	250	79	13	43
USC	D-23-17 14CDD	312538110351601	03-05-91	310	7.5	17.5	130	41	6.9	12
USC	D-24-14 05ADB2	312223110554201	03-06-91	650	7.2	16.5	230	73	12	44
USP	D-13-22 33DAC	321526110055701	03-04-91	330	7.8	22.0	100	32	5.1	38
USP	D-17-21 31DDA2	315428110134801	03-07-91	1090	7.3	18.0	290	79	23	130
USP	D-22-20 01BCA	313253110162401	03-07-91	350	7.7	23.0	170	49	11	14
USP	D-24-21 03AAB	312255110113301	03-06-91	400	7.6	24.5	180	63	5.7	22
VER	A-20-07 20CCA	350547111405701	09-11-91	370	7.8	11.0	200	49	19	5.1
VRG	222 S13 E71 28CCC 1	3646101114043501	02-07-91	1830	7.6	27.0	590	140	57	160
VRG	B-39-16 14CCC	364625113595501	02-07-91	1180	8.2	27.0	280	61	31	130
VRG	B-39-16 16CDD	364622114013801	02-07-91	453	7.9	27.5	140	31	16	36
VRG	B-40-15 05ABD2	365359113560101	02-07-91	665	8.2	20.0	270	70	22	36
VRG	B-40-16 33DBC	364914114013601	02-07-91	3350	7.8	24.5	1100	250	120	330
VRG	B-41-15 33CAC	365429113554501	02-07-91	3200	7.4	22.0	1100	260	120	280
WAT	C-02-02 19AAD	331437112294401	07-09-91	1210	8.2	28.0	49	17	1.5	220
WAT	D-04-01 21CCC	330331112161401	03-15-91	1050	7.8	30.0	180	52	13	150
WHM	A-08-29 08ACA2	340623109181601	07-08-91	540	7.7	17.0	200	41	24	40
WIL	D-14-25 11CAA	321322109455301	03-05-91	655	8.0	20.0	160	38	17	78
WIL	D-15-24 20CAC	320645109551501	03-04-91	3080	7.6	22.0	1100	230	120	260
WIL	D-17-28 14CCB3	315703109282301	03-06-91	270	7.9	20.0	95	30	4.8	20
WMD	C-17-05 17ACB	315655112480301	03-12-91	834	8.1	32.0	130	30	13	130
YUM	C-08-22 28CCC	324158114314501	03-13-91	3700	7.7	22.5	530	120	57	610
YUM	C-10-24 12BCC	323430114405801	03-14-91	2400	7.7	25.0	530	140	45	310

See p. 351 for Ground-Water Areas and Abbreviations.

WATER-QUALITY DATA--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
SAF	D-04-22 25BCB	07-09-91	3	1.2	138	48	47	<0.10	28	322	1.30
SAF	D-06-25 36CBB	03-04-91	63	10	65	730	3000	7.8	54	6350	<0.050
SAF	D-07-26 15BCC	03-05-91	16	6.3	435	350	490	5.0	53	1890	7.20
SAF	D-09-26 18DDA	03-04-91	0.9	1.0	86	48	5.9	0.70	37	211	2.20
SAF	D-10-27 28DCD	03-05-91	15	0.80	137	13	9.8	5.4	35	230	0.130
SNO	A-13-21 26ADB2	07-08-91	0.6	2.6	107	35	13	0.10	22	192	0.150
SRV	A-03-01 27CCC	03-06-91	1	3.8	208	100	290	0.10	30	869	11.0
SRV	B-01-02 25BBC2	07-09-91	19	5.1	94	150	470	5.0	25	1170	4.70
SRV	B-03-02 14BCB2	07-09-91	11	1.2	105	26	20	3.9	21	218	0.730
SRV	B-06-03 33DCB	03-07-91	3	2.8	142	86	63	1.6	28	394	0.970
SRV	D-01-06 27CDD	03-13-91	2	6.7	78	100	400	0.20	34	905	6.30
SRV	D-01-09 07BDC2	03-04-91	30	0.40	153	15	43	0.60	31	318	5.60
SRV	D-01-10 35DBB	03-04-91	0.7	3.4	271	470	54	0.30	40	1040	1.20
SRV RES	A-02-05 14AAA	03-05-91	5	6.8	127	180	490	0.20	28	1330	25.0
SSI	D-13-29 25CCC1	07-10-91	23	0.50	110	100	24	2.6	20	336	0.240
SSI	D-13-29 25CCC2	07-10-91	1	1.6	142	48	29	1.4	28	301	1.90
SSI	D-18-32 33CAA	03-05-91	1	2.3	62	12	14	0.70	57	177	1.90
SSI	D-20-32 29ABB	03-05-91	1	4.1	130	9.5	4.9	2.3	47	207	0.550
SSI	D-21-31 03BCD1	07-10-91	1	7.9	174	8.7	7.6	1.5	50	255	0.450
USC	D-11-14 32CCC	03-04-91	0.8	1.5	104	20	6.1	0.30	35	185	1.60
USC	D-14-14 02BBB	03-05-91	2	1.5	153	25	9.6	0.10	35	247	1.10
USC	D-16-15 14ACB	03-05-91	1	2.8	188	320	20	0.20	30	694	0.940
USC	D-17-14 07DDD	07-08-91	1	3.3	177	130	20	0.40	31	469	7.00
USC	D-19-13 29CBB2	03-06-91	3	3.5	261	230	29	0.60	38	694	2.10
USC	D-19-17 17BBB	03-05-91	6	1.2	124	35	4.6	0.40	11	196	<0.050
USC	D-22-13 34ADD UNSURV	03-06-91	1	3.4	241	77	30	0.40	29	425	0.920
USC	D-23-17 14CDD	03-05-91	0.5	1.7	136	7.1	5.9	0.50	25	187	1.10
USC	D-24-14 05ADB2	03-06-91	1	3.1	210	47	28	0.50	33	393	5.80
USP	D-13-22 33DAC	03-04-91	2	1.5	168	9.4	11	0.40	39	239	0.340
USP	D-17-21 31DDA2	03-07-91	3	1.9	385	93	35	3.0	39	697	14.0
USP	D-22-20 01BCA	03-07-91	0.5	0.70	175	5.5	5.8	0.10	31	225	0.560
USP	D-24-21 03AAB	03-06-91	0.7	1.0	186	20	9.8	0.20	34	270	0.550
VER	A-20-07 20CCA	09-11-91	0.2	0.70	201	1.6	5.5	0.10	15	219	0.440
VRG	222 S13 E71 28CCC 1	02-07-91	3	9.8	174	760	130	0.30	28	1390	<0.100
VRG	B-39-16 14CCC	02-07-91	3	3.8	122	290	120	0.80	20	757	6.00
VRG	B-39-16 16CDD	02-07-91	1	3.0	115	39	28	0.30	19	245	0.800
VRG	B-40-15 05ABD2	02-07-91	1	4.1	211	98	22	0.60	36	423	1.70
VRG	B-40-16 33DBC	02-07-91	4	15	163	1200	480	0.70	26	2570	11.0
VRG	B-41-15 33CAC	02-07-91	4	16	291	1100	390	0.30	31	2380	0.800
WAT	C-02-02 19AAD	07-09-91	14	4.7	62	110	230	5.8	16	667	5.40
WAT	D-04-01 21CCC	03-15-91	5	4.5	154	120	130	0.50	27	613	5.20
WFM	A-08-29 08ACA2	07-08-91	1	1.3	263	11	17	0.60	23	321	1.10
WIL	D-14-25 11CAA	03-05-91	3	1.5	202	46	66	2.1	32	404	0.340
WIL	D-15-24 20CAC	03-04-91	3	6.4	129	390	860	0.40	23	1980	1.90
WIL	D-17-28 14CCB3	03-06-91	0.9	1.3	87	37	10	0.30	41	201	0.910
WMD	C-17-05 17ACB	03-12-91	5	4.4	166	57	100	2.1	64	520	4.40
YUM	C-08-22 28CCC	03-13-91	11	6.6	271	440	910	1.0	26	2340	0.260
YUM	C-10-24 12BCC	03-14-91	6	5.7	220	340	460	0.40	26	1460	<0.050

< Actual value is known to be less than value shown.
See p. 351 for Ground-Water Areas and Abbreviations.

WATER-QUALITY DATA--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR) (01032)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
SAF	D-04-22 25BCB	07-09-91	0.030	0.09	--	--	--	50	--	--	--
SAF	D-06-25 36CBB	03-04-91	<0.010	--	--	--	--	1600	--	--	--
SAF	D-07-26 15BCC	03-05-91	0.050	0.15	--	--	--	700	--	--	--
SAF	D-09-26 18DDA	03-04-91	<0.010	--	--	--	--	20	--	--	--
SAF	D-10-27 28DCD	03-05-91	0.020	0.06	--	--	--	220	--	--	--
SNO	A-13-21 26ADB2	07-08-91	0.010	0.03	--	--	--	20	--	--	--
SRV	A-03-01 27CCC	03-06-91	<0.010	--	--	--	--	180	--	--	--
SRV	B-01-02 25BBC2	07-09-91	0.020	0.06	--	--	--	710	--	--	--
SRV	B-03-02 14BCB2	07-09-91	0.010	0.03	--	--	--	130	--	--	--
SRV	B-06-03 33DCB	03-07-91	<0.010	--	--	--	--	300	--	--	--
SRV	D-01-06 27CDD	03-13-91	<0.010	--	--	--	--	150	--	--	--
SRV	D-01-09 07BDC2	03-04-91	0.010	0.03	--	--	--	70	--	--	--
SRV	D-01-10 35DBB	03-04-91	0.020	0.06	--	--	--	60	--	--	--
SRV RES	A-02-05 14AAA	03-05-91	<0.010	--	--	--	--	210	--	--	--
SSI	D-13-29 25CCC1	07-10-91	<0.010	--	--	--	--	90	--	--	--
SSI	D-13-29 25CCC2	07-10-91	<0.010	--	2	--	--	50	--	--	--
SSI	D-18-32 33CAA	03-05-91	0.100	0.31	--	--	--	20	--	--	--
SSI	D-20-32 29ABB	03-05-91	<0.010	--	--	--	--	40	--	--	--
SSI	D-21-31 03BCD1	07-10-91	0.010	0.03	--	--	--	20	--	--	--
USC	D-11-14 32CCC	03-04-91	0.040	0.12	--	--	--	20	--	--	--
USC	D-14-14 02BBB	03-05-91	0.010	0.03	--	--	--	40	--	--	--
USC	D-16-15 14ACB	03-05-91	<0.010	--	--	--	--	90	--	--	--
USC	D-17-14 07DDD	07-08-91	<0.010	--	--	--	--	70	--	--	--
USC	D-19-13 29CBB2	03-06-91	0.040	0.12	--	--	--	160	--	--	--
USC	D-19-17 17BBD	03-05-91	<0.010	--	--	--	--	190	--	--	--
USC	D-22-13 34ADD UNSURV	03-06-91	0.100	0.31	--	--	--	80	--	--	--
USC	D-23-17 14CDD	03-05-91	<0.010	--	--	--	--	20	--	--	--
USC	D-24-14 05ADB2	03-06-91	0.280	0.86	--	--	--	90	--	--	--
USP	D-13-22 33DAC	03-04-91	<0.010	--	--	--	--	50	--	--	--
USP	D-17-21 31DDA2	03-07-91	<0.010	--	--	--	--	390	--	--	--
USP	D-22-20 01BCA	03-07-91	<0.010	--	--	--	--	10	--	--	--
USP	D-24-21 03AAB	03-06-91	0.010	0.03	--	--	--	20	--	--	--
VER	A-20-07 20CCA	09-11-91	<0.010	--	--	--	--	10	--	--	--
VRG	222 S13 E71 28CCC 1	02-07-91	<0.010	--	18	15	<0.5	430	<1.0	<1	<1
VRG	B-39-16 14CCC	02-07-91	<0.010	--	--	--	--	370	--	--	--
VRG	B-39-16 16CDD	02-07-91	<0.010	--	--	--	--	60	--	--	--
VRG	B-40-15 05ABD2	02-07-91	<0.010	--	--	--	--	90	--	--	--
VRG	B-40-16 33DBC	02-07-91	<0.010	--	8	<100	<10	890	<1.0	<1	<1
VRG	B-41-15 33CAC	02-07-91	<0.010	--	2	<100	<10	1200	<1.0	<1	<1
WAT	C-02-02 19AAD	07-09-91	<0.010	--	--	--	--	470	--	--	--
WAT	D-04-01 21CCC	03-15-91	<0.010	--	--	--	--	330	--	--	--
WHM	A-08-29 08ACA2	07-08-91	0.020	0.06	--	--	--	80	--	--	--
WIL	D-14-25 11CAA	03-05-91	<0.010	--	--	--	--	80	--	--	--
WIL	D-15-24 20CAC	03-04-91	<0.010	--	--	--	--	70	--	--	--
WIL	D-17-28 14CCB3	03-06-91	0.010	0.03	--	--	--	30	--	--	--
WMD	C-17-05 17ACB	03-12-91	<0.010	--	--	--	--	430	--	--	--
YUM	C-08-22 28CCC	03-13-91	0.070	0.21	--	--	--	840	--	--	--
YUM	C-10-24 12BCC	03-14-91	<0.010	--	--	--	--	300	--	--	--

< Actual value is known to be less than value shown.
See p. 351 for Ground-Water Areas and Abbreviations.

WATER-QUALITY DATA--Continued

GROUND- WATER AREA	LOCAL WELL NUMBER	DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
SAF	D-04-22 25BCB	07-09-91	--	7	--	--	<1	--	--	--	--
SAF	D-06-25 36CBB	03-04-91	--	30	--	--	110	--	--	--	--
SAF	D-07-26 15BCC	03-05-91	--	20	--	--	110	--	--	--	--
SAF	D-09-26 18DDA	03-04-91	--	15	--	--	1	--	--	--	--
SAF	D-10-27 28DCD	03-05-91	--	14	--	--	<1	--	--	--	--
SNO	A-13-21 26ADB2	07-08-91	--	<3	--	--	<1	--	--	--	--
SRV	A-03-01 27CCC	03-06-91	--	<3	--	--	<1	--	--	--	--
SRV	B-01-02 25BBC2	07-09-91	--	<10	--	--	<10	--	--	--	--
SRV	B-03-02 14BCB2	07-09-91	--	27	--	--	<1	--	--	--	--
SRV	B-06-03 33DCB	03-07-91	--	13	--	--	14	--	--	--	--
SRV	D-01-06 27CDD	03-13-91	--	40	--	--	<1	--	--	--	--
SRV	D-01-09 07BDC2	03-04-91	--	<3	--	--	<1	--	--	--	--
SRV	D-01-10 35DBB	03-04-91	--	<3	--	--	<1	--	--	--	--
SRV RES	A-02-05 14AAA	03-05-91	--	10	--	--	<10	--	--	--	--
SSI	D-13-29 25CCC1	07-10-91	--	8	--	--	<1	--	--	--	--
SSI	D-13-29 25CCC2	07-10-91	--	5	--	--	<1	--	--	--	--
SSI	D-18-32 33CAA	03-05-91	--	27	--	--	2	--	--	--	--
SSI	D-20-32 29ABB	03-05-91	--	5	--	--	2	--	--	--	--
SSI	D-21-31 03BCD1	07-10-91	--	<3	--	--	<1	--	--	--	--
USC	D-11-14 32CCC	03-04-91	--	7	--	--	<1	--	--	--	--
USC	D-14-14 02BBB	03-05-91	--	10	--	--	4	--	--	--	--
USC	D-16-15 14ACB	03-05-91	--	69	--	--	7	--	--	--	--
USC	D-17-14 07DDD	07-08-91	--	7	--	--	<1	--	--	--	--
USC	D-19-13 29CBB2	03-06-91	--	9	--	--	3	--	--	--	--
USC	D-19-17 17BBD	03-05-91	--	130	--	--	16	--	--	--	--
USC	D-22-13 34ADD UNSURV	03-06-91	--	86	--	--	1300	--	--	--	--
USC	D-23-17 14CDD	03-05-91	--	14	--	--	4	--	--	--	--
USC	D-24-14 05ADB2	03-06-91	--	13	--	--	3	--	--	--	--
USP	D-13-22 33DAC	03-04-91	--	36	--	--	12	--	--	--	--
USP	D-17-21 31DDA2	03-07-91	--	<3	--	--	5	--	--	--	--
USP	D-22-20 01BCA	03-07-91	--	<3	--	--	<1	--	--	--	--
USP	D-24-21 03AAB	03-06-91	--	<3	--	--	<1	--	--	--	--
VER	A-20-07 20CCA	09-11-91	--	4	--	--	<1	--	--	--	--
VRG	222 S13 E71 28CCC 1	02-07-91	<1	270	<1	120	40	3	3700	2	11
VRG	B-39-16 14CCC	02-07-91	--	14	--	--	6	--	--	--	--
VRG	B-39-16 16CDD	02-07-91	--	14	--	--	1	--	--	--	--
VRG	B-40-15 05ABD2	02-07-91	--	5	--	--	1	--	--	--	--
VRG	B-40-16 33DBC	02-07-91	<1	20	<1	240	10	4	4600	20	10
VRG	B-41-15 33CAC	02-07-91	2	10	<1	410	10	1	4100	14	50
WAT	C-02-02 19AAD	07-09-91	--	12	--	--	<1	--	--	--	--
WAT	D-04-01 21CCC	03-15-91	--	6	--	--	11	--	--	--	--
WHM	A-08-29 08ACA2	07-08-91	--	5	--	--	<1	--	--	--	--
WIL	D-14-25 11CAA	03-05-91	--	22	--	--	18	--	--	--	--
WIL	D-15-24 20CAC	03-04-91	--	20	--	--	20	--	--	--	--
WIL	D-17-28 14CCB3	03-06-91	--	34	--	--	2	--	--	--	--
WMD	C-17-05 17ACB	03-12-91	--	8	--	--	2	--	--	--	--
YUM	C-08-22 28CCC	03-13-91	--	10	--	--	1300	--	--	--	--
YUM	C-10-24 12BCC	03-14-91	--	260	--	--	600	--	--	--	--

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See p. 351 for Ground-Water Areas and Abbreviations.

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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